

SAFETY DATA SHEETS (SDS)

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STEEL FRAMING AND SCREWS

1. GALVANIZED CARBON STEEL

- a. US Steel – Sheet Steel**
- b. ClarkDietrich – Sheet Steel**
- c. Telling Buildstrong – Sheet Steel**

2. SCREWS

- a. Grabber - Screws**



United States Steel Corporation

Galvanized (Hot Dipped) Sheet – Carbon Steel
Safety Data Sheet (SDS)

USS IHS Number: 1650
(Replaces USS Code Number: 3C012)

Locations: Irvin, Fairfield, Gary, Granite City, Great Lakes, Hamilton

Section 1 – Identification

1(a) Product Identifier Used on Label: Galvanized (Hot Dipped) Sheet – Carbon Steel

1(b) Other Means of Identification: Galvannealed (Hot Dipped) Sheet – Carbon Steel, ACRYZINC Sheet – Carbon Steel

1(c) Recommended Use of the Chemical and Restrictions on Use: None

1(d) Name, Address, and Telephone Number:

United States Steel Corporation Phone number : (412) 433-6840 (8:00 am to 5:00 pm)
600 Grant Street, Room 1662 FAX: (412) 433-5019
Pittsburgh, PA 15219-2800

1(e) Emergency Phone Number: 1-800-262-8200 (CHEMTREC)

Section 2 – Hazard(s) Identification

2(a) Classification of the Chemical: As sold, this product, **Galvanized (Hot Dipped) Sheet – Carbon Steel** is not hazardous according to the criteria specified in REACH [REGULATION (EC) No 1907/2006] and CLP [REGULATION (EC) No 1272/2008]. Under 29 CFR 1910.1200 Hazard Communication Standard, steel products are considered mixtures due to further processing which may produce dusts and or fume. The categories of Health Hazards as defined in “GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS), Third revised edition ST/SG/AC.10/30/Rev. 3” United Nations, New York and Geneva, 2009 have been evaluated. Refer to Section 3, 8 and 11 for additional information. Precautionary Statement/Emergency Overview: This formed solid metal product poses little or no immediate health or fire hazard. When product is subjected to welding, burning, melting, sawing, brazing, grinding or other similar processes, potentially hazardous airborne particulate and fumes may be generated.

2(b) Signal Word, Hazard Statement(s), Symbols and Precautionary Statement(s):

Hazard Symbol	Hazard Classification	Signal Word	Hazard Statement(s)	Precautionary Statement(s)
	Carcinogenicity-2 Toxic to Reproduction - 2 Single Target Organ Toxicity (STOT) Repeat Exposure - 1	Danger	Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Causes damage to lungs through prolonged or repeated inhalation exposure.	Do not breathe dusts / fume / spray. Wear protective gloves / protective clothing / eye protection / face protection. Contaminated work clothing must not be allowed out of the workplace.
	Acute Toxicity-Oral 4 Skin Sensitization - 1 STOT Single Exposure - 3		Harmful if swallowed. May cause an allergic skin reaction. May cause respiratory irritation.	Use only outdoors or in well ventilated areas. Wash thoroughly after handling. Obtain special instructions before use.
NA	Eye Irritation - 2B		Causes eye irritation.	Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed, concerned or feel unwell: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If on skin: Wash with plenty of water. If irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Dispose of contents in accordance with federal, state and local regulations.

2(c) Hazards Not Otherwise Classified: None Known

2(d) Unknown Acute Toxicity Statement (mixture): None Known

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Section 3 – Composition/Information on Ingredients

3(a-c) Chemical Name, Common Name (synonyms), CAS Number and Other Identifiers, and Concentration:

Chemical Name	CAS Number	EC Number	% weight
Iron	7439-89-6	231-096-4	>95
Manganese	7439-96-5	231-105-1	≤2.0
Nickel	7440-02-0	231-111-4	≤0.2

Metallic Coating			
Iron	7439-89-6	231-096-4	≤0.8
Zinc	7440-66-6	231-175-3	0.15 – 9.1

EC- European Community
CAS- Chemical Abstract Service

Section 4 – First-aid Measures

4(a) Description of Necessary Measures: If exposed, concerned or feel unwell: Get medical advice/attention.

- **Inhalation: Galvanized (Hot Dipped) Sheet – Carbon Steel** as sold/shipped is not a likely form of exposure. However during further processing (welding, grinding, burning, etc.). If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed, concerned or feel unwell: Get medical advice/attention.
- **Eye Contact:** This product as sold/shipped is not a likely form of exposure. However during further processing (welding, grinding, burning, etc.). If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing. If eye irritation persists: Get medical advice attention. If exposed, concerned or feel unwell: Get medical advice/attention.
- **Skin Contact:** If on skin: Wash thoroughly after handling. Wash with plenty of water. If irritation or rash occurs: Get medical advice/attention. Take off and wash contaminated clothing before reuse.
- **Ingestion:** This product as sold/shipped is not a likely form of exposure. However during further processing (welding, grinding, burning, etc.). If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If exposed, concerned or feel unwell: Get medical advice/attention.

4(b) Most Important Symptoms/Effects, Acute and Delayed (chronic):

- **Inhalation:** This product as sold/shipped is not likely to present an acute or chronic health effect.
- **Eye:** This product as sold/shipped is not likely to present an acute or chronic health effect.
- **Skin:** This product as sold/shipped is not likely to present an acute or chronic health effect.
- **Ingestion:** This product as sold/shipped is not likely to present an acute or chronic health effect.

4(c) Immediate Medical Attention and Special Treatment: None Known

Section 5 – Fire-fighting Measures

5(a) Suitable (and unsuitable) Extinguishing Media: Not applicable for **Galvanized (Hot Dipped) Sheet – Carbon Steel** as sold/shipped. Use extinguishers appropriate for surrounding materials.

5(b) Specific Hazards Arising From the Chemical: Not applicable for this product as sold/shipped. When burned, toxic smoke and vapor may be emitted.

Section 6 - Accidental Release Measures

6(a) Personal Precautions, Protective Equipment and Emergency Procedures: Not applicable for **Galvanized (Hot Dipped) Sheet – Carbon Steel** as sold/shipped. For spills involving finely divided particles, clean-up personnel should be protected against contact with eyes and skin. If material is in a dry state, avoid inhalation of dust.

6(b) Methods and Materials for Containment and Clean Up: Not applicable for this product as sold/shipped. Fine, dry material should be removed by vacuuming or wet sweeping methods to prevent spreading of dust. Avoid using compressed air. Do not release into sewers or waterways. Collect material in appropriate, labeled containers for recovery or disposal in accordance with federal, state, and local regulations. Follow applicable OSHA regulations (29 CFR 1910.120) and all other pertinent state and federal requirements.

Section 7 - Handling and Storage

7(a) Precautions for Safe Handling: Not applicable for **Galvanized (Hot Dipped) Sheet – Carbon Steel** as sold/shipped, however further processing (welding, burning, grinding, etc.) with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Practice good housekeeping. Avoid breathing metal fumes and/or dust. Do not eat, drink or smoke when using this product.

7(b) Conditions for Safe Storage, Including any Incompatibilities: Store away from acids and incompatible materials.

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Section 8 - Exposure Controls / Personal Protection

8(a) Occupational Exposure Limits (OELs): Galvanized (Hot Dipped) Sheet – Carbon Steel as sold/shipped in its physical form does not present an inhalation, ingestion or contact hazard, nor would any of the following exposure data apply. However, operations such as high temperature (burning, welding), sawing, brazing, machining and grinding may produce fumes and/or particulates. The following exposure limits are offered as reference, for an experience industrial hygienist to review.

Ingredients	8(a) OSHA PEL ¹	ACGIH TLV ²	NIOSH REL ³	IDLH ⁴
Iron	10 mg/m ³ (as iron oxide fume)	5.0 mg/m ³ (as iron oxide dust and fume)	5.0 mg/m ³ (as iron oxide dust and fume)	2,500 mg Fe/m ³
Manganese	“C” 5.0 mg/m ³ (as Fume & Mn compounds)	0.2 mg/m ³	“C” 5.0 mg/m ³ 1.0 mg/m ³ (as fume) “STEL” 3.0 mg/m ³	500 mg Mn/m ³
Nickel	1.0 mg/m ³ (as Ni metal & insoluble compounds)	1.5 mg/m ³ (as inhalable fraction ⁵ Ni metal) 0.2 mg/m ³ (as inhalable fraction Ni inorganic only insoluble and soluble compounds)	0.015 mg/m ³ (as Ni metal & insoluble and soluble compounds)	10 mg/m ³ (as Ni)

NE - None Established

1. OSHA PELs (Permissible Exposure Limits) are 8-hour TWA (time-weighted average) concentrations unless otherwise noted. A (“C”) designation denotes a ceiling limit, which should not be exceeded during any part of the working exposure unless otherwise noted. An Action level (AL) is used by OSHA and NIOSH to express a health or physical hazard. They indicate the level of a harmful or toxic substance/activity, which requires medical surveillance, increased industrial hygiene monitoring, or biological monitoring. Action Levels are generally set at one half of the PEL but the actual level may vary from standard to standard. The intent is to identify a level at which the vast majority of randomly sampled exposures will be below the PEL.
2. Threshold Limit Values (TLV) established by the American Conference of Governmental Industrial Hygienists (ACGIH) are 8-hour TWA concentrations unless otherwise noted. ACGIH TLVs are for guideline purposes only and as such are not legal, regulatory limits for compliance purposes. A Short Term Exposure Limit (STEL) is defined as the maximum concentration to which workers can be exposed for a short period of time (15 minutes) for only four times throughout the day with at least one hour between exposures.
3. The National Institute for Occupational Safety and Health Recommended Exposure Limits (NIOSH-REL) - Compendium of Policy and Statements. NIOSH, Cincinnati, OH (1992). NIOSH is the federal agency designated to conduct research relative to occupational safety and health. As is the case with ACGIH TLVs, NIOSH RELs are for guideline purposes only and as such are not legal, regulatory limits for compliance purposes.
4. The “immediately dangerous to life or health air concentration values (IDLHs)” are used by NIOSH as part of the respirator selection criteria and were first developed in the mid-1970s by NIOSH. The Documentation for Immediately Dangerous to Life or Health Concentrations (IDLHs) is a compilation of the rationale and sources of information used by NIOSH during the original determination of 387 IDLHs and their subsequent review and revision in 1994.
5. Inhalable fraction. The concentration of inhalable particulate for the application of this TLV is to be determined from the fraction passing a size-selector with the characteristics defined in the ACGIH 2013 TLVs[®] and BEIs[®] (Biological Exposure Indices) Appendix D, paragraph A.

8(b) Appropriate Engineering Controls: Use controls as appropriate to minimize exposure to metal fumes and dusts during handling operations. Provide general or local exhaust ventilation systems to minimize airborne concentrations. Local exhaust is necessary for use in enclosed or confined spaces. Provide sufficient general/local exhaust ventilation in pattern/volume to control inhalation exposures below current exposure limits.

8(c) Individual Protection Measures:

- **Respiratory Protection:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, use only a NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. Concentration in air of the various contaminants determines the extent of respiratory protection needed. Half-face, negative-pressure, air-purifying respirator equipped with P100 filter is acceptable for concentrations up to 10 times the exposure limit. Full-face, negative-pressure, air-purifying respirator equipped with P100 filter is acceptable for concentrations up to 50 times the exposure limit. Protection by air-purifying negative-pressure and powered air respirators is limited. Use a positive-pressure-demand, full-face, supplied air respirator or self-contained breathing apparatus (SCBA) for concentrations above 50 times the exposure limit. If exposure is above the IDLH (Immediately dangerous to life or health) for any of the constituents, or there is a possibility of an uncontrolled release or exposure levels are unknown, then use a positive-demand, full-face, supplied air respirator with escape bottle or SCBA.

Warning! Air-purifying respirators both negative-pressure, and powered-air do not protect workers in oxygen-deficient atmospheres.

- **Eyes:** Wear appropriate eye protection to prevent eye contact. For operations, which result in elevating the temperature of the product to or above its melting point or result in the generation of airborne particulates, use safety glasses to prevent eye contact. Contact lenses should not be worn where industrial exposures to this material are likely. Use safety glasses or goggles as required for welding, burning, sawing, brazing, grinding or machining operations.
- **Skin:** Wear appropriate personal protective clothing to prevent skin contact. Cut resistant gloves and sleeves should be worn when working with steel products. For operations, which result in elevating the temperature of the product to or above its melting point or result in the generation of airborne particulates, use protective clothing, and gloves to prevent skin contact. Protective gloves should be worn as required for welding, burning or handling operations. Contaminated work clothing must not be allowed out of the workplace.
- **Other protective equipment:** An eyewash fountain and deluge shower should be readily available in the work area.

Section 9 - Physical and Chemical Properties

<p>9(a) Appearance (physical state, color, etc.): Metallic Gray, Odorless</p> <p>9(b) Odor: NA</p> <p>9(c) Odor Threshold: NA</p> <p>9(d) pH: NA</p>	<p>9(j) Upper/lower Flammability or Explosive Limits: NA</p> <p>9(k) Vapor Pressure: NA</p> <p>9(l) Vapor Density (Air = 1): NA</p> <p>9(m) Relative Density: 7.85 g/cc Coating: 7.14 g/cc</p>
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Section 9 - Physical and Chemical Properties (continued)

9(e) Melting Point/Freezing Point: ~2750 °F (~1510 C), **Coating:** ~2750 °F(~1510 C) **9(n) Solubility(ies):** Insoluble

9(f) Initial Boiling Point and Boiling Range: **Coating:** ~1700 °F(~927 C) **9(o) Partition Coefficient n-octanol/water:** ND

9(g) Flash Point: NA **9(p) Auto-ignition Temperature:** NA

9(h) Evaporation Rate: NA **9(q) Decomposition Temperature:** ND

9(i) Flammability (solid, gas): Non-flammable, non-combustible **9(r) Viscosity:** NA

NA - Not Applicable
ND - Not Determined for product as a whole

Section 10 - Stability and Reactivity

10(a) Reactivity: Not Determined (ND)

10(b) Chemical Stability: Steel products are stable under normal storage and handling conditions.

10(c) Possibility of Hazardous Reaction: None Known







10(d) Conditions to Avoid: Storage with strong acids or calcium hypochlorite.

10(e) Incompatible Materials: Will react with strong acids to form hydrogen. Iron oxide dusts in contact with calcium hypochlorite evolve oxygen and may cause an explosion.

10(f) Hazardous Decomposition Products: Thermal oxidative decomposition of steel products can produce fumes containing oxides of iron and manganese as well as other alloying elements.

Section 11 - Toxicological Information

11(a-e) Information on toxicological effects: The following toxicity data has been determined for **Galvanized (Hot Dipped) Sheet – Carbon Steel** as a mixture when further processed using the information available for its components applied to the guidance on the preparation of an SDS under the GHS requirements of OSHA and the EU CPL:

Hazard Classification	Hazard Category		Hazard Symbols	Signal Word	Hazard Statement
	EU	OSHA			
Acute Toxicity Hazard (covers Categories 1-5)	NA*	4 ^a		Warning	Harmful if swallowed.
Eye Damage/ Irritation (covers Categories 1, 2A and 2B)	NA*	2B ^c	No Pictogram	Warning	Causes eye irritation.
Skin/Dermal Sensitization (covers Category 1)	1	1 ^d		Warning	May cause an allergic skin reaction.
Carcinogenicity (covers Categories 1A, 1B and 2)	2	2 ^g		Warning	Suspected of causing cancer.
Toxic to Reproduction (covers Categories 1A, 1B and 2)	NA*	2 ^h		Warning	Suspected of damaging fertility or the unborn child.
Specific Target Organ Toxicity (STOT) Following Single Exposure (covers Categories 1-3)	NA*	3 ⁱ		Warning	May cause respiratory irritation.
STOT following Repeated Exposure (covers Categories 1 and 2)	1	1 ^j		Danger	Causes damage to lungs through prolonged or repeated inhalation exposure.

* Not Applicable

Toxicological data listed below are presented regardless to classification criteria. Individual hazard classification categories where the toxicological information has met or exceeded a classification criteria threshold are listed above.

a. No LC₅₀ or LD₅₀ has been established for **Galvanized (Hot Dipped) Sheet – Carbon Steel**. The following data has been determined for the components:

- **Iron:** Rat LD₅₀ =98.6 g/kg (REACH)
Rat LD₅₀ =1060 mg/kg (IUCLID)
Rat LD₅₀ =984 mg/kg (IUCLID)
Rabbit LD₅₀ =890 mg/kg (IUCLID)
Guinea Pig LD₅₀ =20 g/kg (TOXNET)
Human LD_{LO} =77 g/kg (IUCLID)
- **Nickel:** LD₅₀ >9000 mg/kg (Oral/Rat); NOAEC >10.2 mg/1 (Inhalation/Rat)
- **Manganese:** Rat LD₅₀ > 2000 mg/kg (REACH)
Rat LD₅₀ > 9000 mg/kg (NLM Toxnet)

b. No Skin (Dermal) Irritation data available for **Galvanized (Hot Dipped) Sheet – Carbon Steel** as a mixture or its components.

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Section 11 - Toxicological Information (continued)

11(a-e) Information on toxicological effects (continued):

- c. No Eye Irritation data available for **Galvanized (Hot Dipped) Sheet – Carbon Steel** as a mixture. The following Eye Irritation information was found for the components:
- **Iron:** Causes eye irritation.
 - **Nickel:** Slight eye irritation from particulate abrasion only.
- d. No Skin (Dermal) Sensitization data available for **Galvanized (Hot Dipped) Sheet – Carbon Steel** as a mixture. The following Skin (Dermal) Sensitization information was found for the components:
- **Nickel:** May cause allergic skin sensitization.
- e. No Respiratory Sensitization data available for **Galvanized (Hot Dipped) Sheet – Carbon Steel** as a mixture or its components.
- f. No Germ Cell Mutagenicity data available for **Galvanized (Hot Dipped) Sheet – Carbon Steel** as a mixture. The following Mutagenicity and Genotoxicity information was found for the components:
- **Iron:** IUCLID has found some positive and negative findings in vitro.
 - **Nickel:** EU RAR has found positive results in vitro and in vivo but insufficient data for classification.
- g. Carcinogenicity: IARC, NTP, and OSHA do not list **Galvanized (Hot Dipped) Sheet – Carbon Steel** as carcinogens. The following Carcinogenicity information was found for the components:
- **Welding Fumes - IARC Group 2B carcinogen**, a mixture that is possibly carcinogenic to humans.
 - **Nickel and certain nickel compounds – Group 2B - metallic nickel Group 1 - nickel compounds** ACGIH confirmed human carcinogen. Nickel – EURAR Insufficient evidence to conclude carcinogenic potential in animals or humans; suspect carcinogen classification Category 2 Suspected of causing cancer.
- h. No Toxic to Reproduction data available for **Galvanized (Hot Dipped) Sheet – Carbon Steel** as a mixture. The following Toxic to Reproductive information was found for the components:
- **Nickel:** Effects on fertility.
- i. No Specific Target Organ Toxicity (STOT) following a Single Exposure data available for **Galvanized (Hot Dipped) Sheet – Carbon Steel** as a mixture. The following STOT following a Single Exposure data was found for the components:
- **Iron:** Irritating to respiratory tract.
- j. No Specific Target Organ Toxicity (STOT) following Repeated Exposure data was available for **Galvanized (Hot Dipped) Sheet – Carbon Steel** as a whole. The following STOT following Repeated Exposure data was found for the components:
- **Nickel:** Rat 4 wk inhalation LOEL 4 mg/m³ Lung and Lymph node histopathology. Rat 2 yr inhalation LOEL 0.1 mg/ m³ Pigment in kidney, effects on hematopoiesis spleen and bone marrow and adrenal tumor. Rat 13 Week Inhalation LOAEC 1.0 mg/m³ Lung weights, and Alveolar histopathology.
 - **Manganese:** Inhalation of metal fumes - Degenerative changes in human brain; Behavioral: Changes in motor activity and muscle weakness (Whitlock *et al.*, 1966).

The above toxicity information was determined from available scientific sources to illustrate the prevailing posture of the scientific community. The scientific resources includes: The American Conference of Governmental Industrial Hygienist (ACGIH) Documentation of the Threshold Limit Values (TLVs) and Biological Exposure indices (BEIs) with Other Worldwide Occupational Exposure Values 2009, The International Agency for Research on Cancer (IARC), The National Toxicology Program (NTP) updated documentation, the World Health Organization (WHO) and other available resources, the International Uniform Chemical Information Database (IUCLID), European Union Risk Assessment Report (EU-RAR), Concise International Chemical Assessment Documents (CICAD), European Union Scientific Committee for Occupational Exposure Limits (EU-SCOEL), Agency for Toxic Substances and Disease Registry (ATSDR), Hazardous Substance Data Bank (HSDB), and International Programme on Chemical Safety (IPCS).

The following health hazard information is provided regardless to classification criteria and is based on the individual component(s) and potential resultant components from further processing:

Acute Effects by component:

- **Iron and oxides:** Iron is harmful if swallowed, causes skin irritation, and causes eye irritation. Contact with iron oxide has been reported to cause skin irritation and serious eye damage.
- **Manganese and oxides:** Manganese and Manganese oxide are harmful if swallowed.
- **Nickel and oxides:** Nickel may cause allergic skin sensitization. Nickel oxide may cause an allergic skin.

Delayed (chronic) Effects by component:

- **Iron and oxides:** Chronic inhalation of excessive concentrations of iron oxide fumes or dusts may result in the development of a benign pneumoconiosis, called siderosis, which is observable as an X-ray change. No physical impairment of lung function has been associated with siderosis. Inhalation of excessive concentrations of ferric oxide may enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens. Iron oxide is listed as a Group 3 (not classifiable) carcinogen by the International Agency for Research on Cancer (IARC).
- **Manganese and oxides:** Chronic exposure to high concentrations of manganese fumes and dusts may adversely affect the central nervous system with symptoms including languor, sleepiness, weakness, emotional disturbances, spastic gait, mask-like facial expression and paralysis. Animal studies indicate that manganese exposure may increase susceptibility to bacterial and viral infections. Occupational overexposure (Manganese) is a progressive, disabling neurological syndrome that typically begins with relatively mild symptoms and evolves to include altered gait, fine tremor, and sometimes, psychiatric disturbances. May cause damage to lungs with repeated or prolonged exposure. Neurobehavioral alterations in worker populations exposed to MnO including: speed and coordination of motor function are especially impaired.
- **Nickel and oxides:** Exposure to nickel dusts and fumes can cause sensitization dermatitis, respiratory irritation, asthma, pulmonary fibrosis, edema, and may cause nasal or lung cancer in humans. Causes damage to lungs through prolonged or repeated inhalation exposure. IARC lists nickel and certain nickel compounds as Group 2B carcinogens (sufficient animal data). ACGIH 2013 TLVs® and BEIs® lists insoluble nickel compounds as confirmed human carcinogens. Suspected of damaging the unborn child.

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Section 12 - Ecological Information

12(a) Ecotoxicity (aquatic & terrestrial): No Data Available for **Galvanized (Hot Dipped) Sheet – Carbon Steel** as sold/shipped. However, individual components of the product when processed have been found to be toxic to the environment. Metal dusts may migrate into soil and groundwater and be ingested by wildlife as follows:

- **Iron Oxide:** LC₅₀: >1000 mg/L; Fish 48 h-EC₅₀ > 100 mg/L (Currenta, 2008k); 96 h-LC₀ ≥ 50,000 mg/l. Test substance: Bayferrox 130 red (95 – 97% Fe₂O₃; < 4% SiO₂ and Al₂O₃) (Bayer, 1989a).
- **Nickel Oxide:** IUCLID found LC₅₀ in fish, invertebrates and algae > 100 mg/l.

12(b) Persistence & Degradability: No Data Available

12(c) Bioaccumulative Potential: No Data Available

12(d) Mobility (in soil): No data available for **Galvanized (Hot Dipped) Sheet – Carbon Steel** as sold/shipped. However, individual components of the product have been found to be absorbed by plants from soil.

12(e) Other adverse effects: None Known

Additional Information:

Hazard Category: Not Reported

Signal Word: No Signal Word

Hazard Symbol: No Symbol

Hazard Statement: No Statement

Section 13 - Disposal Considerations

Disposal: **Galvanized (Hot Dipped) Sheet – Carbon Steel** should be recycled whenever possible. Product dusts and fumes from processing operations should also be recycled, or classified by a competent environmental professional and disposed of in accordance with applicable federal, state or local regulations.

Container Cleaning and Disposal: Follow applicable federal, state and local regulations. Observe safe handling precautions. European Waste Catalogue (EWC): 16-01-17 (ferrous metals), 12-01-99 (wastes not otherwise specified), 16-03 (off specification batches and unused products), or 15-01-04 (metallic packaging).

Please note this information is for Galvanized (Hot Dipped) Sheet – Carbon Steel in its original form. Any alterations can void this information.

Section 14 - Transport Information

14 (a-g) Transportation Information:

US Department of Transportation (DOT) under 49 CFR 172.101 **does not** regulate **Galvanized (Hot Dipped) Sheet – Carbon Steel** as a hazardous material. All federal, state, and local laws and regulations that apply to the transport of this type of material must be adhered to.

<p>Shipping Name: Not Applicable (NA) Shipping Symbols: NA Hazard Class: NA UN No.: NA Packing Group: NA DOT/ IMO Label: NA Special Provisions (172.102): NA</p>	<p>Packaging Authorizations a) Exceptions: NA b) Group: NA c) Authorization: NA</p>	<p>Quantity Limitations a) Passenger, Aircraft, or Railcar: NA b) Cargo Aircraft Only: NA Vessel Stowage Requirements a) Vessel Stowage: NA b) Other: NA DOT Reportable Quantities: NA</p>
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International Maritime Dangerous Goods (IMDG) and the Regulations Concerning the International Carriage of Dangerous Goods by Rail (RID) classification, packaging and shipping requirements follow the US DOT Hazardous Materials Regulation.

Regulations Concerning the International Carriage of Dangerous Goods by Road (ADR) **does not** regulate **Galvanized (Hot Dipped) Sheet – Carbon Steel** as a hazardous material.

<p>Shipping Name: Not Applicable (NA) Classification Code: NA UN No.: NA Packing Group: NA ADR Label: NA Special Provisions: NA Limited Quantities: NA</p>	<p>Packaging a) Packing Instructions: NA b) Special Packing Provisions: NA c) Mixed Packing Provisions: NA</p>	<p>Portable Tanks & Bulk Containers a) Instructions: NA b) Special Provisions: NA</p>
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International Air Transport Association (IATA) **does not** regulate **Galvanized (Hot Dipped) Sheet – Carbon Steel** as a hazardous material.

<p>Shipping Name: Not Applicable (NA) Class/Division: NA Hazard Label (s): NA UN No.: NA Packing Group: NA Excepted Quantities (EQ): NA</p>	<p>Passenger & Cargo Aircraft Limited Quantity (EQ)</p>		<p>Cargo Aircraft Only Pkg Inst: NA Max Net Qty/Pkg: NA</p>	<p>Special Provisions: NA ERG Code: NA</p>
	<p>Pkg Inst: NA Max Net Qty/Pkg: NA</p>	<p>Pkg Inst: NA Max Net Qty/Pkg: NA</p>		

Pkg Inst – Packing Instructions

Max Net Qty/Pkg – Maximum Net Quantity per Package

ERG – Emergency Response Drill Code

Transport Dangerous Goods (TDG) Classification: **Galvanized (Hot Dipped) Sheet – Carbon Steel** does not have a TDG classification.

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Section 15 - Regulatory Information

Regulatory Information: The following listing of regulations relating to a U. S. Steel product may not be complete and should not be solely relied upon for all regulatory compliance responsibilities. This product and/or its constituents are subject to the following regulations:

SARA Potential Hazard Categories: Immediate Acute Health Hazard; Delayed Chronic Health Hazard

Section 313 Supplier Notification: The product, **Galvanized (Hot Dipped) Sheet – Carbon Steel** contains the following toxic chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372:

CAS #	Chemical Name	Percent by Weight
7439-96-5	Manganese	2.0 max
7440-02-0	Nickel	0.2 max

State Regulations: The product, **Galvanized (Hot Dipped) Sheet – Carbon Steel** as a whole is not listed in any state regulations. However, individual components of the product are listed in various state regulations:

California Prop. 65: Contains elements known to the State of California to cause cancer or reproductive toxicity. This includes nickel.

Other Regulations:

WHMIS Classification (Canadian): The product, **Galvanized (Hot Dipped) Sheet – Carbon Steel** is not listed as a whole. However individual components are listed.

Ingredients	WHMIS Classification
Manganese	B4, D2A
Nickel	D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

Section 16 - Other Information

Prepared By: United States Steel Corporation

Revision History:

4/1/2014 - Update to OSHA HAZ COM 2012
 12/16/10 – Update of content and format to comply with GHS. Replaces USS Code 3C012
 8/1/1985 - Original

Expiration Date: 4/01/17

Additional Information:

Hazardous Material Identification System (HMIS) Classification

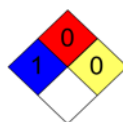
Health Hazard	1
Fire Hazard	0
Physical Hazard	0

HEALTH= 1, Denotes possible chronic hazard if airborne dusts or fumes are generated Irritation or minor reversible injury possible.

FIRE= 0, Materials that will not burn.

PHYSICAL HAZARD= 0, Materials that are normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosives.

National Fire Protection Association (NFPA)



HEALTH = 1, Exposure could cause irritation but only minor residual injury even if no treatment is given.

FIRE = 0, Materials that will not burn.

INSTABILITY = 0, Normally stable, even under fire exposure conditions, and are not reactive with water.

ABBREVIATIONS/ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists
BEIs	Biological Exposure Indices
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CNS	Central Nervous System
GI, GIT	Gastro-Intestinal, Gastro-Intestinal Tract
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
LC50	Median Lethal Concentration
LD50	Median Lethal Dose
LD_{Lo}	Lowest Dose to have killed animals or humans
LEL	Lower Explosive Limit
LOEL	Lowest Observed Effect Level
LOAEC	Lowest Observable Adverse Effect Concentration
µg/m³	microgram per cubic meter of air

NIF	No Information Found
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
ORC	Organization Resources Counselors
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PNOR	Particulate Not Otherwise Regulated
PNOC	Particulate Not Otherwise Classified
PPE	Personal Protective Equipment
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
RTECS	Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendment and Reauthorization Act
SCBA	Self-contained Breathing Apparatus
SDS	Safety Data Sheet
STEL	Short-term Exposure Limit

Galvanized (Hot Dipped) Sheet – Carbon Steel

USS IHS No.: 1650

Rev. 4/14

Section 16 - Other Information (continued)

ABBREVIATIONS/ACRONYMS:

mg/m³	milligram per cubic meter of air	TLV	Threshold Limit Value
Mppcf	million particles per cubic foot	TWA	Time-weighted Average
MSHA	Mine Safety and Health Administration	UEL	Upper Explosive Limit
NFPA	National Fire Protection Association		

Disclaimer: This information is taken from sources or based upon data believed to be reliable. However, United States Steel Corporation makes no warranty as to the absolute correctness or sufficiency of any of the foregoing or that additional or other measures may not be required under particular conditions.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Number: Sheet Steel

CAS Number: Not Applicable

Synonyms: Hot Band, Cold Rolled, P&O, Galvanized

Use/Description: Steel for thin gauge products

Products: Cold-Formed Steel Framing components and accessories for drywall, curtain wall and load bearing systems. Also includes metal lath and plaster accessories.

Company Identification: ClarkDietrich Building Systems

Corporate Office:

9100 Centre Pointe Drive, Suite 210
West Chester, OH 45069

Phone: (513) 870-1100
Fax: (513) 870-1300

Manufacturing Locations:

- Baltimore, MD - Baytown, TX - Bristol, CT - Dade City, FL
- Dallas, TX - Kapolei, HI - McDonough, GA - Riverside, CA
- Rochelle, IL - Sacramento, CA - Warren East & West, OH

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS No.	% Weight	Exposure Limits				
			ACGIH TLV (mg/m ³)		OSHA PEL (mg/m ³)		
Base Metal:				5	Oxide Dust/Fume	10	Oxide Dust/Fume
Iron (Fe)	7439-89-6	Balance					
Alloying Elements				10	Dust	15	Dust
Aluminum (Al)	7429-90-5	0-0.4	5	Fume	5	Respirable fraction	
Antimony (Sb)	7440-36-0	<0.9	0.5	As Antimony	0.5	As Antimony	
Arsenic (As)	7440-38-2	<0.09	0.01	As Arsenic (A1 Carcinogen)	0.01	As Arsenic	
Beryllium (Be)	7440-41-7	<0.09	0.002	As Beryllium (A1 Carcinogen)	0.002	As Beryllium	
			0.01	As Beryllium (STEL)	0.005	As Beryllium (Ceiling)	
Boron (B)	7440-42-8	<0.9	10	Oxide Dust	15	Oxide Dust	
Cadmium (Cd)	7440-43-9	<0.09	0.01	As Cadmium (A2 Carcinogen)	0.005	As Cadmium	
			0.002	Respirable fraction	0.0025	As Cadmium (Action Level)	
Calcium (Ca)	1305-78-8	<0.9	2	Oxide Dust	5	Oxide Dust	
Carbon (C)	7440-44-0	0.04-1.0		Not Established		Not Established	
Chromium (Cr)	7440-47-3	0.01-1.5	0.5	Metal	1	Metal	
Cobalt (Co)	7440-48-4	<0.09	0.02	As Cobalt (A3 Carcinogen)	0.1	Metal/Dust/Fume	
Copper (Cu)	7440-50-8	<0.9	1	Dust	1	Dust	
			0.2	Fume	0.1	Fume	
Lead (Pb)	7439-92-1	0.0-0.04	0.05	Dust / Fume (A3 Carcinogen)	0.05	Dust / Fume	
Magnesium (Mg)	7439-95-4	<0.9		Not Established		Not Established	
Manganese (Mn)	7439-96-5	0.1-3.0	0.2	Elemental Mn and Inorg Compounds	5	Fume (Ceiling)	
Molybdenum (Mo)	7439-98-7	<0.9	10	Insoluble Compounds	15	Insoluble Compounds	

ClarkDietrich Building Systems MSDS (Material Safety Data Sheet)

Steel Products

Revision Date: 11/28/2012

Components		CAS No.	% Weight	Exposure Limits			
				ACGIH TLV (mg/m ³)		OSHA PEL (mg/m ³)	
Niobium	(Nb)	7440-03-1	<0.9		Not Established		
Nickel	(Ni)	7440-02-0	0.01-1.5	1.5	Metal	1	Metal and Insoluble Compounds
Nitrogen	(N)	7727-37-9	<0.9		Simple Asphyxiant		Simple Asphyxiant
Phosphorus	(P)	7723-14-0	<0.9	0.1	Phosphorus	0.1	Phosphorus
Selenium	(Se)	7782-49-2	<0.9	0.2	Selenium	0.2	Selenium
Silicon	(Si)	7440-21-3	0.0-3.0	10	Dust	15	Dust
Sulfur	(S)	7446-09-05	<0.9	5.2 13	Sulfur Dioxide Sulfur Dioxide (STEL)	13	Sulfur Dioxide
Tin	(Sn)	7440-31-5	<0.9	2	Metal, Oxide and Inorganic Compounds	2	Inorganic Compounds
Titanium	(Ti)	7440-32-6	<0.9		Not Established		Not Established
Tungsten	(W)	7440-33-7	<0.9	5 10	Insoluble Compounds as W Insoluble Compounds as W (STEL)		Not Established
Vanadium	(V)	7440-62-2	<0.9	0.05	Oxide Dust/Fume	0.5 0.1	Oxide Dust (Ceiling) Oxide Fume (Ceiling)
Zinc	(Zn)	7440-66-6	0.0-0.01	10 5 10	Oxide Dust Oxide Fume Oxide Fume (STEL)	5 10	Oxide Fume Oxide Dust
<u>Coatings and Finishing Treatments:</u>							
Hydrochloric Acid	(HCl)	7647-01-0	<3				
Petroleum, Natural or Synthetic oils		Mixture	<0.1	5	Mist	5	Mist
Anhydrous Potassium Hydroxide		1310-58-3	<0.01	2	Celing	2	Celing
Glycine, nn-1,2-ethanediybis		60-00-4	<0.01				
Polyalkylene glycol		Mixture	<0.01				
Sodium nitrite		7632-00-0	<0.01				
Zinc (galvanized)		7440-66-6	0.4 - 10	10 5 10	Oxide Dust Oxide Fume Oxide Fume (STEL)	5 10	Oxide Fume Oxide Dust

NOTE: No permissible exposure limits (PEL) or threshold limit values (TLV) exist for steel over all. The above listing is a summary of elements used in normal Nucor Steel Products. Various grades of steel will contain different combinations of these elements and/or trace materials. **Exact specifications for specific products may be available upon request.**

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! WELDING, SAWING, BRAZING, GRINDING, AND MACHINING MAY CAUSE DUSTS AND/OR FUMES TO BE RELEASED. MAY BE HARMFUL IF INHALED. MAY IRRITATE THE EYES, SKIN, AND RESPIRATORY TRACT. MOLTEN MATERIAL MAY CAUSE THERMAL BURNS

Potential Health Effects

Note: Steel products in their solid state under normal conditions do not present an inhalation, ingestion or skin hazard. However, operations resulting in fume or particulate formation such as welding, sawing, brazing, grinding and machining may present health hazards. Molten steel also is hazardous.

Eye Contact

Dusts or particulates may cause mechanical irritation including pain, tearing, and redness. Scratching of the cornea can occur if eye is rubbed. Fumes may be irritating. Contact with the heated material may cause thermal burns.

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Skin Contact

Dusts or particulates may cause mechanical irritation due to abrasion. Coated steel may cause skin irritation in sensitive individuals (see Section 16 for additional information.) Some components in this product are capable of causing an allergic reaction, possibly resulting in burning, itching and skin eruptions. Contact with heated material may cause thermal burns.

Inhalation

Dusts may cause irritation of the nose, throat, and lungs. Excessive inhalation of metallic fumes and dusts may result in metal fume fever, an influenza-like illness. It is characterized by a sweet or metallic taste in the mouth, accompanied by dryness and irritation of the throat, cough, shortness of breath, pulmonary edema, general malaise, weakness, fatigue, muscle and joint pains, blurred vision, fever and chills. Typical symptoms last from 12 to 48 hours.

Ingestion

Not expected to be acutely toxic via ingestion based on the physical and chemical properties of the product. Swallowing of excessive amounts of the dust may cause irritation, nausea, and diarrhea.

Chronic or Special Toxic Effects

Repeated exposure to fine dusts may inflame the nasal mucosa and cause changes to the lung. In addition, a red-brown pigmentation of the eye and/or skin may occur.

Welding fumes have been associated with adverse health effects. Contains components that may cause cancer or reproductive effects. The following components are listed by NTP, OSHA, or IARC as carcinogens: Nickel, chromium (hexavalent), cobalt, lead, cadmium, antimony (trioxide), arsenic, beryllium. See Section 11, for additional, specific information on effects noted above.

Target Organs

Overexposure to specific components of this product that are generated in dusts or fumes may cause adverse effects to the following organs or systems: eyes, skin, liver, kidney, central nervous system, cardiovascular system, respiratory system,.

Medical Conditions Aggravated by Exposure

Diseases of the skin such as eczema may be aggravated by exposure. Also, disorders of the respiratory system including asthma, bronchitis, and emphysema. Long-term inhalation exposure to agents that cause pneumoconiosis (e.g. dust) may act synergistically with inhalation of oxide fumes or dusts of this product.

4. FIRST AID MEASURES

Eye Contact - In case of overexposure to dusts or fumes, immediately flush eyes with plenty of water for at least 15 minutes occasionally lifting the eye lids. Get medical attention if irritation persists. Thermal burns should be treated as medical emergencies.

Skin Contact - In case of overexposure to dusts or particulates, wash with soap and plenty of water. Get medical attention if irritation develops or persists. If thermal burn occurs, flush area with cold water and get immediate medical attention.

Inhalation - In case of overexposure to dusts or fumes, remove to fresh air. Get immediate medical attention if symptoms described in this MSDS develop.

Ingestion - Not considered an ingestion hazard. However, if excessive amounts of dust or particulates are swallowed, treat symptomatically and supportively. Get medical attention.

Notes to Physician - Inhalation of metal fume or metal oxides may produce an acute febrile state, with cough, chills, weakness, and general malaise, nausea, vomiting, muscle cramps, and remarkable leukocytosis. Treatment is symptomatic, and condition is self limited in 24-48 hours. Chronic exposure to dusts may result in pneumoconiosis of mixed type.

5. FIRE FIGHTING MEASURES

Flash Point (Method) - Not applicable

Flammable Limits (% volume in air) - Not applicable

Autoignition Temperature - Not applicable

Extinguishing Media - For molten metal, use dry powder or sand.

Special Fire Fighting Procedures - Do not use water on molten metal. Firefighters should not enter confined spaces without wearing NIOSH/MSHA approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.

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Unusual Fire or Explosion Hazards - Steel products do not present fire or explosion hazards under normal conditions. Fine metal particles such as produced in grinding or sawing can burn. High concentrations of metallic fines in the air may present an explosion hazard.

6. ACCIDENTAL RELEASE MEASURES

Precautions if Material is Spilled or Released - Emergency response is unlikely unless in the form of dust. Avoid inhalation, eye, or skin contact of dusts by using appropriate precautions outlined in this MSDS (see section 8). Fine turnings and small chips should be swept or vacuumed and placed into appropriate disposable containers. Keep fine dust or powder away from sources of ignition. Scrap should be reclaimed for recycling. Prevent materials from entering drains, sewers, or waterways.

Environmental Precautions - Some grades of steel may contain reportable quantities of alloying elements. See Section 15 for additional information.

Waste Disposal Methods - Dispose used or unused product in accordance with applicable Federal, State, and Local regulations.

7. HANDLING AND STORAGE

Storage Temperatures - Stable under normal temperatures and pressures.

Precautions to be Taken in Handling and Storing - Store away from strong oxidizers. Dusts or powders may form explosive mixtures with air. Avoid breathing dusts or fumes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Operations with potential for generating high concentrations of airborne particulates or fumes should be evaluated and controlled as necessary.

Eye Protection - Use safety glasses. Dust resistant safety goggles are recommended under circumstances where particles could cause mechanical injury such as grinding or cutting. Face shield should be used when welding or cutting.

Skin - Appropriate protective gloves should be worn as necessary. Good personal hygiene practices should be followed including cleansing exposed skin several times daily with soap and water, and laundering or dry cleaning soiled work clothing.

Respiratory Protection - NIOSH/MSHA approved dust/fume/mist respirator should be used to avoid excessive exposure. See Section 2 for component material information exposure limits. If such concentrations are sufficiently high that this respirator is inadequate, or high enough to cause oxygen deficiency, use a positive pressure self-contained breathing apparatus (SCBA). Follow all applicable respirator use, fitting, and training standards and regulations.

Ventilation - Provide general and/or local exhaust ventilation to control airborne levels of dust or fumes below exposure limits.

Exposure Guidelines - No permissible exposure limits (PEL) or threshold limit values (TLV) exist for steel. See Section 2 for component materials. Various grades of steel will contain different combinations of these elements. Trace elements may also be present in minute amounts.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor - Red, Grey or other color steel panels, pulins, and built-up joists and trusses

Boiling Point - Not applicable

Melting Point - Approximately 2800 °F

pH - Not applicable

Specific Gravity (at 15.6 °C) - Not applicable

Density (at 15.6 °C) - Not applicable

Vapor Pressure - Not applicable

Vapor Density (air = 1) - Not applicable

% Volatile, by Volume - Not applicable

Solubility in Water - Insoluble.

Evaporation Rate (Butyl Acetate = 1) - Not applicable

Other Physical and Chemical Data - None

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10. STABILITY AND REACTIVITY

Stability - Stable

Conditions to Avoid - Steel at temperatures above the melting point may liberate fumes containing oxides of iron and alloying elements. Avoid generation of airborne fume.

Hazardous Polymerization - Will not occur.

Incompatibility (Materials to Avoid) - Reacts with strong acids to form hydrogen gas. Do not store near strong oxidizers.

Hazardous Decomposition Products - Metallic fumes may be produced during welding, burning, grinding, and possibly machining or any situation with the potential for thermal decomposition. Refer to ANSI Z49.1

11. TOXICOLOGICAL INFORMATION

The primary component of this product is iron. Long-term exposure to iron dusts or fumes can result in a condition called siderosis which is considered to be a benign pneumoconiosis. Symptoms may include chronic bronchitis, emphysema, and shortness of breath upon exertion. Penetration of iron particles in the skin or eye may cause an exogenous or ocular siderosis which may be characterized by a red-brown pigmentation of the affected area. Ingestion overexposures to iron may affect the gastrointestinal, nervous, and hematopoietic system and the liver. Iron and steel founding, but not iron or iron oxide, has been listed as potentially carcinogenic by IARC.

When this product is welded, fumes are generated. Welding fumes may be different in composition from the original welding product, with the chief component being ordinary oxides of the metal being welded. Chronic health effects (including cancer) have been associated with the fumes and dusts of individual component metals (see above), and welding fumes as a general category have been listed by IARC as a carcinogen (Group 2B). There is also limited evidence that welding fumes may cause adverse reproductive and fetal effects. Evidence is stronger where welding materials contain known reproductive toxins, e.g., lead which may be present in the coating material of this product.

Breathing fumes or dusts of this product may result in metal fume fever, which is an illness produced by inhaling metal oxides. These oxides are produced by heating various metals including cadmium, zinc, magnesium, copper, antimony, nickel, cobalt, manganese, tin, lead, beryllium, silver, chromium, aluminum, selenium, iron, and arsenic. The most common agents involved are zinc and copper.

This product may contain small amounts of manganese. Prolonged exposure to manganese dusts or fumes is associated with "manganism", a Parkinson-like syndrome characterized by a variety of neurological symptoms including muscle spasms, gait disturbances, tremors, and psychoses.

This product may contain small amounts of cadmium. Primary target organs for cadmium overexposure are the lung and the kidney. Because of its cumulative nature, chronic cadmium poisoning can cause serious disease which takes many years to develop and may continue to progress despite cessation of exposure. Progression of the disease may not reflect current exposure conditions. It is also capable of causing a painful osteomalacia called "Itai-Itai" in postmenopausal women, and has caused developmental effects and/or reproductive effects in male and female animals. Cadmium is a listed carcinogen by NTP, OSHA, and IARC (Group 1).

This product may contain small amounts of chromium. Prolonged and repeated overexposure to chromium dusts or fumes may cause skin ulcers, nasal irritation and ulceration, kidney damage and cancer of the respiratory system. Chromium is skin sensitizer. Cancer is generally attributed to the hexavalent (+6) form of chromium which is listed as a carcinogen by NTP and IARC (Group 1).

This product may contain small amounts of nickel. Prolonged and repeated contact with nickel may cause sensitization dermatitis. Inhalation of nickel compounds has caused lung damage as well as sinus, nasal and lung cancer in laboratory animals. Nickel is a listed carcinogen by NTP and IARC (Group 1).

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This product may contain small amounts of vanadium. Adverse effects from dermal, inhalation or parenteral exposure to various vanadium compounds have been reported. The major target for vanadium pentoxide toxicity is the respiratory tract. Fumes or dust can cause severe eye and respiratory irritation, and systemic effects. Chronic bronchitis, green tongue, conjunctivitis, pharyngitis, rhinitis, rales, chronic productive cough, and tightness of the chest have been reported following overexposure. Allergic reactions resulting from skin and inhalation exposures have also been reported. A statistical association between vanadium air levels and lung cancer has been suggested, but vanadium currently is not regarded as a human carcinogen.

This product may contain small amounts of lead. Lead can accumulate in the body. Consequently, exposure to fumes or dust may produce signs of polyneuritis, diminished vision and peripheral neuropathy, such as tingling and loss of feeling in fingers, arms and legs. Lead is a known reproductive and developmental toxin. It is also associated with central nervous system disorders, anemia, kidney disfunction and neurobehavioral abnormalities. The brain is a major target organ for lead exposure. Elemental lead is listed as an IARC 2B carcinogen.

The product may contain small amounts of copper. Copper dust and fume can irritate the eyes, nose and throat causing coughing, wheezing, nosebleeds, ulcers and metal fume fever. Other effects from repeated inhalation of copper fume include a metallic or sweet taste, and discoloration of skin, teeth or hair. Copper also may cause an allergic skin reaction. Overexposure to copper can affect the liver.

12. ECOLOGICAL INFORMATION

Aquatic Ecotoxicological Data - No specific information available on this product.

Environmental Fate Data - No specific information available on this product.

13. DISPOSAL CONSIDERATIONS

Recovery and reuse, rather than disposal, should be the ultimate goal of handling efforts. Dispose in accordance with federal, state, and local health and environmental regulations. Prevent materials from entering drains, sewers, or waterways.

14. TRANSPORT INFORMATION

DOT Proper Shipping Name - Not regulated

DOT Hazard Classification - Not regulated

UN/NA Number - Not applicable

DOT Packing Group - Not applicable

Labeling Requirements - Not applicable

Placards - Not applicable

DOT Hazardous Substance - Not applicable

DOT Marine Pollutant - Not applicable

15. REGULATORY INFORMATION

This product is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, dusts and fumes from this product may be hazardous.

CALIFORNIA PROPOSITION 65

This product contains chemicals (antimony [oxide], arsenic, beryllium, chromium [hexavalent], cobalt, cadmium, lead, nickel) known to the State of California to cause cancer and chemicals (cadmium, lead) known to the State of California to cause birth defects or other reproductive harm.

Regulatory Lists

Some components of this product may be specifically listed by individual states; other product-specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

Toxic Substances Control Act (TSCA)

Components of this product are listed on the TSCA Inventory.

ClarkDietrich Building Systems MSDS (Material Safety Data Sheet)

Steel Products

Revision Date: 11/28/2012

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Steel is not reportable, however, it contains hazardous substances that may be reportable if released in pieces with diameters less than or equal to 0.004 inches (RQ marked with a “*”).

<u>Chemical Name</u>	<u>Reportable Quantity (in lb)</u>
Antimony	5000*
Arsenic	1*
Beryllium	10*
Cadmium	10*
Chromium	5000*
Copper	5000*
Lead	10*
Nickel	100*
Phosphorus	1
Selenium	100*
Zinc	1000*

Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III

SECTION 311/312 HAZARD CATEGORIES: Immediate Health Effect, Delayed Health Effect

This product contains the following EPCRA Section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right – To – Know Act of 1986 (40 CFR 372):

SECTION 313 REPORTABLE INGREDIENTS:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Concentration (% by weight)</u>	<u>Reportable</u>
Aluminum	7429-90-5	0.0-0.01 Some grades up to 0.4%	No – Less than 1%
Antimony	7440-36-0	<0.9	No – Less than 1%
Arsenic	7440-38-2	<0.09	No – Less than 0.1%
Beryllium	7440-43-9	<0.09	No – Less than 0.1%
Cadmium	7440-43-9	<0.09	No – Less than 0.1%
Chromium	7440-47-3	0.01-1.0 Some grades up to 1.5%	Yes – Greater than 0.1%
Cobalt	7440-48-4	<0.09	No – Less than 0.1%
Copper	7440-50-8	<0.9	No – Less than 1%
Lead	7439-92-1	0.0-0.04	Yes
Manganese	7439-96-5	0.2-2 Some grades up to 3.0%	Yes – Greater than 1%
Nickel	7440-02-0	0.01-0.1 Some grades up to 1.5%	Yes – Greater than 0.1%
Phosphorus	7723-14-0	<0.9	No – Less than 1%
Selenium	7782-49-2	<0.9	No – Less than 1%
Vanadium	7440-62-2	<0.9	No – Less than 1%
Zinc	7440-66-6	<0.9	No – Less than 1%

Concentrations based on analytical data and process knowledge of typical products distributed by the facility.

16. OTHER INFORMATION

This product may be coated with a variety of materials, including oils, paints, galvanization, etc. that are not included in this MSDS. During welding precautions should be taken for airborne contaminants that may originate from components of the welding rod. Arc or spark generated when welding or burning could be a source of ignition or combustible and flammable materials. The information in this Material Safety Data Sheet (MSDS) was obtained from sources which we believe are reliable; however, the information is provided without any representation of warranty, expressed or implied, regarding the accuracy or correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use, or disposal of this product.



MSDS (Material Safety Data Sheet)

Steel Products

Revision Date: 06/01/2012

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Number: Sheet Steel

CAS Number: Not applicable

Synonyms: Hot Band, Cold Rolled, P&O, Galvanized

Use/Description: Steel for thin gauge products

Products: Cold-Formed Steel Framing components and accessories for drywall, curtain wall and load-bearing systems. Also includes Metal lath and plaster accessories.

Company Identification:

Corporate Office:

6272 Center St.

Mentor, OH 44060

Phone: (440) 974.3370

Fax: (440) 974.3408

Manufacturing Locations:

* Cambridge Ohio- 4425 Larrick Rd. - Cambridge, OH 43725

* Osceola Arkansas- 1400 Southwire Dr. - Osceola, AR 72370

* Kingman Arizona- 4425 Windrose Lane – Kingman, AZ 86401

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS No.	% Weight	Exposure Limits	
			ACGIH TLV (mg/m ³)	OSHA PEL (mg/m ³)
Base Metal:				
Iron (Fe)	7439-89-6	Balance	5 Oxide Dust/Fume	10 Oxide Dust/Fume
Alloying Elements				
Aluminum (Al)	7429-90-5	0-0.4	10 Dust 5 Fume	15 Dust 5 Respirable fraction
Antimony (Sb)	7440-36-0	<0.9	0.5 As Antimony	0.5 As Antimony
Arsenic (As)	7440-38-2	<.09	0.01 As Arsenic (A1 Carcinogen)	0.01 As Arsenic
Beryllium (Be)	7440-41-7	<0.09	0.002 As Beryllium (A1 Carcinogen) 0.01 As Beryllium (STEL)	0.002 As Beryllium 0.005 As Beryllium (Ceiling)
Boron (B)	7440-42-8	<0.9	10 Oxide Dust	15 Oxide Dust
Cadmium (Cd)	7440-43-9	<0.09	0.01 As Cadmium (A2 Carcinogen) 0.002 Respirable fraction 0.0025	0.005 As Cadmium As Cadmium (Action Level)
Calcium (Ca)	1305-78-8	<0.09	2 Oxide Dust	5 Oxide Dust
Carbon (C)	7440-44-0	0.04-1.0	Not Established	Not Established
Chromium (Cr)	7440-47-3	0.01-1.5	0.5 Metal	1 Metal
Cobalt (Co)	7440-48-4	<0.09	0.02 As Cobalt (A3 Carcinogen)	0.1 Metal/Dust/Fume
Copper (Cu)	7440-50-8	<0.9	1 Dust 0.2 Fume	1 Dust 0.1 Fume
Lead (Pb)	7439-92-1	0.0-0.04	0.05 Dust / Fume (A3 Carcinogen)	0.05 Dust / Fume
Magnesium (Mg)	7439-95-4	<0.9	Not Established	Not Established
Manganese (Mn)	7439-96-5	0.1-3.0	0.2 Elemental Mn and Inorg Compounds	5 Fume (Ceiling)
Molybdenum (Mo)	7439-98-7	<0.9	10 Insoluble Compounds	15 Insoluble Compounds

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Components	CAS No.	% Weight	Exposure Limits			
			ACGIH TLV (mg/m ³)		OSHA PEL (mg/m ³)	
Niobium (Nb)	7440-03-1	<0.9		Not Established		
Nickel (Ni)	7440-02-0	<0.9	1.5	Metal	1	Metal and Insoluble Compounds
Nitrogen (N)	7727-37-9	<0.9		Simple Asphyxiant		Simple Asphyxiant
Phosphorus (P)	7723-14-0	<0.9	0.1	Phosphorus	0.1	Phosphorus
Selenium (Se)	7782-49-2	<0.9	0.2	Selenium	0.2	Selenium
Silicon (Si)	7440-21-3	0.0-3.0	10	Dust	15	Dust
Sulfur (S)	7446-09-05	<0.9	5.2 13	Sulfur Dioxide Sulfur Dioxide (STEL)	13	Sulfur Dioxide
Tin (Sn)	7440-31-5	<0.9	2	Metal, Oxide and Inorganic Compounds Not Established	2	Inorganic Compounds Not Established
Titanium (Ti)	7440-32-6	<0.9				
Tungsten (W)	7440-33-7	<0.9	5 10	Insoluble Compounds as W Insoluble Compounds as W (STEL)		Not Established
Vanadium (V)	7440-62-2	<0.9	0.05	Oxide Dust/Fume	0.5 0.1	Oxide Dust (Ceiling) Oxide Fume (Ceiling)
Zinc (Zn)	7440-66-6	0.0-0.01	10 5 10	Oxide Dust Oxide Fume Oxide Fume (STEL)	5 10	Oxide Fume Oxide Dust
Coatings and Finishing Treatments: (HCl)Hydrochloric Acid	7647-01-0	<3				
Petroleum, Natural or Synthetic oils	Mixture	<0.1	5	Mist	5	Mist
Anhydrous Potassium Hydroxide	1310-58-3	<0.01	2	Celing	2	Celing
Glycine,nn-1,2-ethanediyibis	60-00-4	<0.01				
Polyalkylene glycol	Mixture	<0.01				
Sodium nitrite	7632-00-0	<0.01	10	Oxide Dust		
Zinc (galvanized)	7440-66-6	0.4 -10	5	OxideFume	5	Oxide Fume

NOTE: No permissible exposure limits (PEL) or threshold limit values (TLV) exist for steel over all. The above listing is a summary of elements used in normal Nucor Steel Products. Various grades of steel will contain different combinations of these elements and/or trace materials. **Exact specifications for specific products may be available upon request.**

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! WELDING, SAWING, BRAZING, GRINDING, AND MACHINING MAY CAUSE DUSTS AND/OR FUME TO BE RELEASED. MAY BE HARMFUL IF INHALED. MAY IRRITATE THE EYES, SKIN, AND RESPIRATORY TRACT. MOLTEN MATERIAL MAY CAUSE THERMAL BURNS

Potential Health Effects

Note: Steel products in their solid state under normal conditions, do not present an inhalation, ingestion or skin hazard. However, operations resulting in fume or particulate formation such as welding, sawing, brazing, grinding and machining may present health hazards. Molten steel also is hazardous.

Eye Contact

Dusts or particulates may cause mechanical irritation including pain, tearing, and redness. Scratching of the cornea can occur if eye is rubbed. Fumes may be irritating. Contact with the heated material may cause thermal burns.

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Skin Contact

Dusts or particulates may cause mechanical irritation due to abrasion. Coated steel may cause skin irritation in sensitive individuals (see Section 16 for additional information.) Some components in this product are capable of causing an allergic reaction, possibly resulting in burning, itching and skin eruptions. Contact with heated material may cause thermal burns.

Inhalation

Dusts may cause irritation of the nose, throat, and lungs. Excessive inhalation of metallic fumes and dusts may result in metal fume fever, an influenza-like illness. It is characterized by a sweet or metallic taste in the mouth, accompanied by dryness and irritation of the throat, cough, shortness of breath, pulmonary edema, general malaise, weakness, fatigue, muscle and joint pains, blurred vision, fever and chills. Typical symptoms last from 12 to 48 hours.

Ingestion

Not expected to be acutely toxic via ingestion based on the physical and chemical properties of the product. Swallowing of excessive amounts of the dust may cause irritation, nausea, and diarrhea.

Chronic or Special Toxic Effects

Repeated exposure to fine dusts may inflame the nasal mucosa and cause changes to the lung. In addition, a red-brown pigmentation of the eye and/or skin may occur. Welding fumes have been associated with adverse health effects. Contains components that may cause cancer or reproductive effects. The following components are listed by NTP, OSHA, or IARC as carcinogens: Nickel, chromium (hexavalent), cobalt, lead, cadmium, antimony (trioxide), arsenic, beryllium. See Section 11, for additional, specific information on effects noted above.

Target Organs

Overexposure to specific components of this product that are generated in dusts or fumes may cause adverse effects to the following organs or systems: eyes, skin, liver, kidney, central nervous system, cardiovascular system, respiratory system,.

Medical Conditions Aggravated by Exposure

Diseases of the skin such as eczema may be aggravated by exposure. Also, disorders of the respiratory system including asthma, bronchitis, and emphysema. Long-term inhalation exposure to agents that cause pneumoconiosis (e.g. dust) may act synergistically with inhalation of oxide fumes or dusts of this product.

4. FIRST AID MEASURES

Eye Contact- In case of overexposure to dusts or fumes, immediately flush eyes with plenty of water for at least 15 minutes occasionally lifting the eye lids. Get medical attention if irritation persists. Thermal burns should be treated as medical emergencies. **Skin Contact** -In case of overexposure to dusts or particulates, wash with soap and plenty of water. Get medical attention if irritation develops or persists. If thermal burn occurs, flush area with cold water and get immediate medical attention. **Inhalation** - In case of overexposure to dusts or fumes, remove to fresh air. Get immediate medical attention if symptoms described in this MSDS develop. **Ingestion** - Not considered an ingestion hazard. However, if excessive amounts of dust or particulates are swallowed, treat symptomatically and supportively. Get medical attention. **Notes to Physician** - Inhalation of metal fume or metal oxides may produce an acute febrile state, with cough, chills, weakness, and general malaise, nausea, vomiting, muscle cramps, and remarkable leukocytosis. Treatment is symptomatic, and condition is self limited in 24-48 hours. Chronic exposure to dusts may result in pneumoconiosis of mixed type.

5. FIRE FIGHTING MEASURES

Flash Point (Method) - Not applicable **Flammable Limits (% volume in air)** - Not applicable
Autoignition Temperature - Not applicable **Extinguishing Media** - For molten metal, use dry powder or sand. **Special Fire Fighting Procedures** - Do not use water on molten metal. Firefighters should not enter confined spaces without wearing NIOSH/MSHA approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.

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Unusual Fire or Explosion Hazards - Steel products do not present fire or explosion hazards under normal conditions. Fine metal particles such as produced in grinding or sawing can burn. High concentrations of metallic fines in the air may present an explosion hazard.

6. ACCIDENTAL RELEASE MEASURES

Precautions if Material is Spilled or Released - Emergency response is unlikely unless in the form of dust. Avoid inhalation, eye, or skin contact of dusts by using appropriate precautions outlined in this MSDS (see section 8). Fine turnings and small chips should be swept or vacuumed and placed into appropriate disposable containers. Keep fine dust or powder away from sources of ignition. Scrap should be reclaimed for recycling. Prevent materials from entering drains, sewers, or waterways. **Environmental Precautions** - Some grades of steel may contain reportable quantities of alloying elements. See Section 15 for additional information. **Waste Disposal Methods** - Dispose used or unused product in accordance with applicable Federal, State, and Local regulations.

7. HANDLING AND STORAGE

Storage Temperatures - Stable under normal temperatures and pressures. **Precautions to be Taken in Handling and Storing** - Store away from strong oxidizers. Dusts or powders may form explosive mixtures with air. Avoid breathing dusts or fumes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Operations with potential for generating high concentrations of airborne particulates or fumes should be evaluated and controlled as necessary. **Eye Protection** - Use safety glasses. Dust resistant safety goggles are recommended under circumstances where particles could cause mechanical injury such as grinding or cutting. Face shield should be used when welding or cutting. **Skin** - Appropriate protective gloves should be worn as necessary. Good personal hygiene practices should be followed including cleansing exposed skin several times daily with soap and water, and laundering or dry cleaning soiled work clothing. **Respiratory Protection** - NIOSH/MSHA approved dust/fume/mist respirator should be used to avoid excessive exposure. See Section 2 for component material information exposure limits. If such concentrations are sufficiently high that this respirator is inadequate, or high enough to cause oxygen deficiency, use a positive pressure self-contained breathing apparatus (SCBA). Follow all applicable respirator use, fitting, and training standards and regulations. **Ventilation** - Provide general and/or local exhaust ventilation to control airborne levels of dust or fumes below exposure limits. **Exposure Guidelines** -No permissible exposure limits (PEL) or threshold limit values (TLV) exist for steel. See Section 2 for component materials. Various grades of steel will contain different combinations of these elements. Trace elements may also be present in minute amounts.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor - Red, Grey or other color steel panels, pulins, and built-up joists and trusses

Boiling Point - Not applicable

Melting Point - Approximately 2800 °F

pH - Not applicable

Specific Gravity (at 15.6 °C) -Not applicable

Density (at 15.6 °C) -Not applicable

Vapor Pressure - Not applicable

Vapor Density (air = 1) - Not applicable

% Volatile, by Volume - Not applicable

Solubility in Water – Insoluble

Evaporation Rate (Butyl Acetate = 1) -Not applicable

Other Physical and Chemical Data- None

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10. STABILITY AND REACTIVITY

Stability - Stable Conditions to Avoid - Steel at temperatures above the melting point may liberate fumes containing oxides of iron and alloying elements. Avoid generation of airborne fume. **Hazardous Polymerization** - Will not occur. **Incompatibility (Materials to Avoid)** - Reacts with strong acids to form hydrogen gas. Do not store near strong oxidizers. **Hazardous Decomposition Products** - Metallic fumes may be produced during welding, burning, grinding, and possibly machining or any situation with the potential for thermal decomposition. Refer to ANSI Z49.1

11. TOXICOLOGICAL INFORMATION

The primary component of this product is iron. Long-term exposure to iron dusts or fumes can result in a condition called siderosis which is considered to be a benign pneumoconiosis. Symptoms may include chronic bronchitis, emphysema, and shortness of breath upon exertion. Penetration of iron particles in the skin or eye may cause an exogenous or ocular siderosis which may be characterized by a red-brown pigmentation of the affected area. Ingestion overexposures to iron may affect the gastrointestinal, nervous, and hematopoietic system and the liver. Iron and steel founding, but not iron or iron oxide, has been listed as potentially carcinogenic by IARC.

When this product is welded, fumes are generated. Welding fumes may be different in composition from the original welding product, with the chief component being ordinary oxides of the metal being welded. Chronic health effects (including cancer) have been associated with the fumes and dusts of individual component metals (see above), and welding fumes as a general category have been listed by IARC as a carcinogen (Group 2B). There is also limited evidence that welding fumes may cause adverse reproductive and fetal effects. Evidence is stronger where welding materials contain known reproductive toxins, e.g., lead which may be present in the coating material of this product.

Breathing fumes or dusts of this product may result in metal fume fever, which is an illness produced by inhaling metal oxides. These oxides are produced by heating various metals including cadmium, zinc, magnesium, copper, antimony, nickel, cobalt, manganese, tin, lead, beryllium, silver, chromium, aluminum, selenium, iron, and arsenic. The most common agents involved are zinc and copper.

This product may contain small amounts of manganese. Prolonged exposure to manganese dusts or fumes is associated with "manganism", a Parkinson-like syndrome characterized by a variety of neurological symptoms including muscle spasms, gait disturbances, tremors, and psychoses.

This product may contain small amounts of cadmium. Primary target organs for cadmium overexposure are the lung and the kidney. Because of its cumulative nature, chronic cadmium poisoning can cause serious disease which takes many years to develop and may continue to progress despite cessation of exposure. Progression of the disease may not reflect current exposure conditions. It is also capable of causing a painful osteomalacia called "Itai-Itai" in postmenopausal women, and has caused developmental effects and/or reproductive effects in male and female animals. Cadmium is a listed carcinogen by NTP, OSHA, and IARC (Group 1).

This product may contain small amounts of chromium. Prolonged and repeated overexposure to chromium dusts or fumes may cause skin ulcers, nasal irritation and ulceration, kidney damage and cancer of the respiratory system. Chromium is skin sensitizer. Cancer is generally attributed to the hexavalent (+6) form of chromium which is listed as a carcinogen by NTP and IARC (Group 1).

This product may contain small amounts of nickel. Prolonged and repeated contact with nickel may cause sensitization dermatitis. Inhalation of nickel compounds has caused lung damage as well as sinus, nasal and lung cancer in laboratory animals. Nickel is a listed carcinogen by NTP and IARC (Group 1).

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This product may contain small amounts of vanadium. Adverse effects from dermal, inhalation or parenteral exposure to various vanadium compounds have been reported. The major target for vanadium pentoxide toxicity is the respiratory tract. Fumes or dust can cause severe eye and respiratory irritation, and systemic effects. Chronic bronchitis, green tongue, conjunctivitis, pharyngitis, rhinitis, rales, chronic productive cough, and tightness of the chest have been reported following overexposure. Allergic reactions resulting from skin and inhalation exposures have also been reported. A statistical association between vanadium air levels and lung cancer has been suggested, but vanadium currently is not regarded as a human carcinogen.

This product may contain small amounts of lead. Lead can accumulate in the body. Consequently, exposure to fumes or dust may produce signs of polyneuritis, diminished vision and peripheral neuropathy, such as tingling and loss of feeling in fingers, arms and legs. Lead is a known reproductive and developmental toxin. It is also associated with central nervous system disorders, anemia, kidney disfunction and neurobehavioral abnormalities. The brain is a major target organ for lead exposure. Elemental lead is listed as an IARC 2B carcinogen.

The product may contain small amounts of copper. Copper dust and fume can irritate the eyes, nose and throat causing coughing, wheezing, nosebleeds, ulcers and metal fume fever. Other effects from repeated inhalation of copper fume include a metallic or sweet taste, and discoloration of skin, teeth or hair. Copper also may cause an allergic skin reaction. Overexposure to copper can affect the liver.

12. ECOLOGICAL INFORMATION

Aquatic Ecotoxicological Data - No specific information available on this product.

Environmental Fate Data - No specific information available on this product.

13. DISPOSAL CONSIDERATIONS

Recovery and reuse, rather than disposal, should be the ultimate goal of handling efforts. Dispose in accordance with federal, state, and local health and environmental regulations. Prevent materials from entering drains, sewers, or waterways.

14. TRANSPORT INFORMATION

DOT Proper Shipping Name - Not regulated

DOT Hazard Classification - Not regulated

UN/NA Number - Not applicable **DOT**

Packing Group - Not applicable **Labeling**

Requirements - Not applicable **Placards** -

Not applicable **DOT Hazardous Substance** -

Not applicable **DOT Marine Pollutant** - Not applicable

15. REGULATORY INFORMATION

This product is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, dusts and fumes from this product may be hazardous.

CALIFORNIA PROPOSITION 65

This product contains chemicals (antimony [oxide], arsenic, beryllium, chromium [hexavalent], cobalt, cadmium, lead, nickel) known to the State of California to cause cancer and chemicals (cadmium, lead) known to the State of California to cause birth defects or other reproductive harm.

Regulatory Lists

Some components of this product may be specifically listed by individual states; other product-specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

Toxic Substances Control Act (TSCA)

Components of this product are listed on the TSCA Inventory.

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Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Steel is not reportable, however, it contains hazardous substances that may be reportable if released in pieces with diameters less than or equal to 0.004 inches (RQ marked with a “**”).

<u>Chemical Name</u>	<u>Reportable Quantity (in lb)</u>
Antimony	5000*
Arsenic	1*
Beryllium	10*
Cadmium	10*
Chromium	5000*
Copper	5000*
Lead	10*
Nickel	100*
Phosphorus	1
Selenium	100*
Zinc	1000*

Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III

SECTION 311/312 HAZARD CATEGORIES: Immediate Health Effect, Delayed Health Effect This product contains the following EPCRA Section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right – To – Know Act of 1986 (40 CFR 372):

SECTION 313 REPORTABLE INGREDIENTS:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Concentration (% by weight)</u>	<u>Reportable</u>
Aluminum	7429-90-5	0.0-0.01 Some grades up to 0.4%	No – Less than 1%
Antimony	7440-36-0	<0.9	No – Less than 1%
Arsenic	7440-38-2	<0.09	No – Less than 0.1%
Beryllium	7440-43-9	<0.09	No – Less than 0.1%
Cadmium	7440-43-9	<0.09	No – Less than 0.1%
Chromium	7440-47-3	0.01-1.0 Some grades up to 1.5%	Yes – Greater than 0.1%
Cobalt	7440-48-4	<0.09	No – Less than 0.1%
Copper	7440-50-8	<0.9	No – Less than 1%
Lead	7439-92-1	0.0-0.04	Yes
Manganese	7439-96-5	0.2-2 Some grades up to 3.0%	Yes – Greater than 1%
Nickel	7440-02-0	0.01-0.1 Some grades up to 1.5%	Yes – Greater than 0.1%
Phosphorus	7723-14-0	<0.9	No – Less than 1%
Selenium	7782-49-2	<0.9	No – Less than 1%
Vanadium	7440-62-2	<0.9	No – Less than 1%
Zinc	7440-66-6	<0.9	No – Less than 1%

Concentrations based on analytical data and process knowledge of typical products distributed by the facility.

16. OTHER INFORMATION

This product may be coated with a variety of materials, including oils, paints, galvanization, etc. that are not included in this MSDS. During welding precautions should be taken for airborne contaminants that may originate from components of the welding rod. Arc or spark generated when welding or burning could be a source of ignition or combustible and flammable materials. The information in this Material Safety Data Sheet (MSDS) was obtained from sources which we believe are reliable; however, the information is provided without any representation of warranty, expressed or implied, regarding the accuracy or correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use, or disposal of this product.

MATERIAL SAFETY DATA SHEET

Revision Date: January 1, 2013

Grabber Metal Fasteners inclusive, but not limited to, carbon steel and stainless steel bolts, screws washers, nails, brackets and clips do not meet or incorporate the criteria of hazardous materials as defined by the Federal Occupational Safety and Health Communication Standard 29 CFR 1910.1200 (c).

Grabber Construction Products provides this general communication to certify that the materials above with the various corrosion resistant coatings are not chemically hazardous to the consumer or post consumer.

Manufacturer:

Grabber Construction Products
20 West Main Street
Alpine, UT 81004-1889
800-477-8876

Product Identification:

Grabber and Scorpion branded carbon steel and stainless steel bolts, screws, washers, nails, brackets and clips.

Chemical Components:

Ferrous and nonferrous plating and/or coatings in multiple colors.

Coatings may be applied (often at the customer's request) to the surface of metal products. These are usually classified as protective coatings or lubricants. The typical coatings are as follows:

Phosphates/Oil	Dyeing (Color Identification)
Phosphates/ Paint	Clear Zinc Plating/ Chromate
Chrome Plating	Yellow Zinc Di-Chromate Plating
Chromate (Metal Filled) Paint	Waxes
Organic Coating (GrabberGard)	Powder Coatings

The possible presence of these coatings on metal products should be recognized and considered when evaluating potential employee health hazards and exposures during normal use.

MSDS for plating and coatings are available in their pre-consumer state at: www.grabberman.com in Technical Data>MSDS>screws

Physical Characteristics:

Specific Gravity: 7.6+	Physical State: Solid
Melting Point: >1400 degrees F	Odor: NA
Shape: Various	Boiling Point: NA
PH: NA	Solubility in H2O: NA
Vapor density: NA	Vapor Pressure: NA
Evaporation Rate: NA	

Fire and Explosion Hazard

Flammability: non flammable

MATERIAL SAFETY DATA SHEET

Revision Date: January 1, 2013

Reactivity Data:

Stability: Stable
Incompatibilities (Materials to Avoid): Acids
Polymerization: Will Not Occur
Hazardous Decomposition Products: None Anticipated

Health Hazard Data:

Health Effects/Signs & Symptoms: Not Applicable
Usual Route (s) of Entry: Sharp Metal Fastener May Cut Skin
Medical Conditions Possibly Aggravated: None Known

Carcinogen Information:

Chromium, Cadmium and Nickel have been included on the NTP list of Carcinogens.
Gloves should be worn when handling Chromium, Nickel and Cadmium treated metals.

Eye Contact:

Not anticipated to pose a significant eye hazard.

Skin Contact:

Not anticipated to pose a significant skin hazard.
Ingestion: Not anticipated to pose a significant ingestion hazard.
Inhalation: Not considered an inhalation hazard.

Occupational Exposure Control Measures:

Eye Protection: Safety glasses recommended
Skin Protection: Gloves recommended
Ingestion: Never place metal fasteners in mouth

Spill, Leak and Disposal Information:

N/A

Waste Disposal Method(s):

Any excess product can be recycled for further use or disposed of by methods which are in accordance with local, state and federal regulations.

Miscellaneous Information:

LEED Information- Grabber and Scorpion branded carbon steel and stainless steel bolts, screws, washers, nails, brackets and clips are classified as building materials. As such, fasteners are part of a system.

Applicable LEED standards:

Materials and Resources

Fasteners, Screws
4.1 – 4.2 : Recycled Content 0%
% Post Consumer = 0
% Post Industrial = 0

Grabber Screw packaging cartons are made of 80% recycled paper and 20% new paper products. Plastic Buckets are re-useable and recyclable.

INSULATION

- 1. FIBERGLASS INSULATION**
- 2. THERMAFIBER INSULATION**

1: Identification

PRODUCT IDENTIFICATION: **Fiberglass building insulation products—cured batts, rolls, and board; laminated cured insulation products; fiberglass cured blowing wool insulation (Supercube II®, Supercube HD)**

COMPANY: Guardian Building Products
979 Batesville Rd.
Greer, SC 29651
800-609-8373

CONTACT: Environmental Health & Safety Manager
864-281-3351

24-HOUR EMERGENCY RESPONSE INFORMATION: Chemtrec 1-800-424-9300

2: Hazard Identification

WARNING

Eye, skin and respiratory tract irritant.

Hazard Statement

Inhalation: Fiberglass wool may cause mechanical irritation of the upper respiratory tract.

Skin Contact: Direct contact with the skin may cause mechanical irritation.

Eye Contact: Direct contact with the eyes may cause mechanical irritation.

3: Composition/Information On Ingredients

INGREDIENTS	HAZARD	CAS NO.	%	TLV*
Fibrous Glass	Nuisance Dust	65997-17-3	90-100%	1 f/cc
Cured Organic Binding Material	N/A	25104-55-6	10-0%	
Formaldehyde		50-00-0	<0.01%	
Phenol		108-95-2	0.02%	
Ammonia		7664-41-7	0.03%	
Dedusting Oil	N/A	N/A	<1%	

*The TWA TLV of 1 f/cc is a protection standard voluntarily adopted by the fiberglass industry and is a recommendation of ACGIH and California's ACAC.

Adhesives used to adhere facings include:

Kraft/Foil Faced products:

Mineral Oil, white	Mild Irritant	8042-47-5	5-10
Wax, polyethylene	Mild Irritant	9002-88-4	1-5
Waxes, paraffin	Mild Irritant	8002-74-2	1-5

Vinyl faced laminated products:

Aluminum nitrate -9-hydrate	Mild Irritant	7784-27-2	1-5
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4: First Aid Measures

Skin Contact: Do not rub. Wash with soap and water. Use skin cream to sooth irritation. Wash clothes separately. A shower after work is recommended. Irritation typically will not persist if good personal hygiene habits are followed.

Eye Contact: Flush with running water for at least 15 minutes. Using sterile eye wash, flush foreign bodies from eyes.

Inhalation: Remove from exposure.

If irritation persists in any of these situations, a physician should be consulted.

5: Fire-Fighting Measures

Flash Point: N/A

Flammability Limits: N/A

Auto-Ignition Temperance: N/A

Extinguishing Media: Water, foam, dry chemical

Special Fire-fighting Procedure: None

Unusual Fire Hazards: Fiberglass insulation is a non-flammable product. The kraft and foil facing and packaging material will burn; caution should be used when working close to the facing or packaged material with open flame. Chemicals in adhesives, facings or plastic packaging products that do not present a health hazard under normal conditions may be released during a fire. Toxic fumes and gases that may result from incomplete combustion include carbon monoxide, hydrogen chloride and low-level cyanides. In case of overexposure, remove to fresh air. If breathing is difficult, administer oxygen and consult a physician.

6: Accidental Release Measures

Cleanup: Avoid dust-generating means of clean-up.

7: Handling And Storage

Store faced or packaged material away from sources of ignition and have fire-fighting equipment available.

8: Exposure Controls/Personal Protection

Exposure Limits: Inhalation. Fiberglass wool may cause mechanical irritation of the upper respiratory tract. Use of a 2-strap NIOSH-Approved N-95 Filtering Facepiece respirator such as a 3M model 8210 or equivalent is recommended when handling loose-fill, when exposure is unknown or when fibers exceed the TLV of 1 f/cc. Operations which generate high airborne fiber concentrations (over 10 times the TLV) require additional respiratory protection.

Skin Contact: Direct contact with the skin may cause mechanical irritation. Long sleeves, loose fitting clothing, gloves, and eye protection are recommended. If irritation occurs, wash exposed areas with soap and water after handling. Wash clothes separately and rinse out washer after each use. Following a thorough review of all the medical data available, the International Agency for Research on Cancer (IARC) has classified glass wool insulation as Group #3, "not classifiable as to carcinogenicity to humans". IARC has stated there is "no evidence of increased risks of lung cancer or of mesothelioma...from occupational exposures during the manufacture of these materials, and inadequate evidence overall of any cancer risk."

<u>Ingredients</u>	<u>OSHA Permissible Exposure Levels</u>
Fibrous Glass	TWA (Total Dust) = 15 mg/m ³ TWA (Respirable Dust) = 5 mg/m ³
Cured Organic Binding Material	N/A
Formaldehyde	TWA=1 ppm (.5 ppm Action Level)
Phenol	TWA=5 ppm, 19 mg/m ³ (skin)
Ammonia	TWA 50 ppm, 35 mg/m ³
Dedusting Oil	N/A

Adhesives used to adhere facings include:

Kraft/Foil Faced products:

Mineral Oil, white	TWA Mist = 5 mg/m ³
Wax, polyethylene	TWA (fume) = 2 mg/m ³
Waxes, paraffin	TWA (fume) = 2 mg/m ³ and hydrocarbons

Vinyl faced laminated products:

Aluminum nitrate -9-hydrate	N/A
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9: Accidental Release Measures

Boiling Point (°f): N/A	Specific Gravity (H₂O) = 1: 2.6
Vapor Pressure (mm Hg.): N/A	Percent Volatile By Volume: <1%
Vapor Density (Air=1): N/A	Solubility in Water: None
Evaporation Rate: N/A	

Appearance and Odor: Resilient or solid structure containing glass fibers and binding materials used as blankets, boards, or loose-fill insulation. May have slight binder odor.

10: Stability And Reactivity

Stability: Stable **Incompatibility:** None **Hazardous Polymerization:** Will not occur

11: Toxicological Information

Data not available.

12: Ecological Information

This material is not regulated under hazardous waste regulations.

13: Disposal Considerations

Dispose of scrap material according to federal, state and local regulations.

14: Transport Information

Reference Bill of Lading

15: Regulatory Information

SARA Title III, SECTION 313: Our finished insulation products contain the following amounts of "Toxic Chemicals", as defined by the Superfund Amendments and Reauthorization Act (SARA, Title III) of 1986:

<u>Chemical Name</u>	<u>Cas No.</u>	<u>Percent by Weight</u>
Formaldehyde	50-00-0	<0.01%
Phenol	108-95-2	0.02%
Ammonia	7664-41-7	0.03%

16: Other Information

The information provided in this SDS is accurate to the best of Guardian Building Products' knowledge and is provided in good faith. No warranty is given with respect to its accuracy and/or reliability. The information relates only to the particular product and not to the product when used in combination with any other materials. It is the user's responsibility to take proper precautions when using this product and ensure its own compliance with applicable local, state and federal laws and regulations.

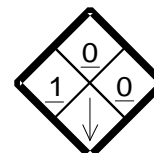
Revised August 2013

Knauf Insulation GmbH

Health Hazard	1
Fire Hazard	0
Physical Hazard	0
Personal Protection	B

HMIS RATING

MATERIAL SAFETY DATA SHEET



NFPA RATING

SECTION I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product: Fiber Glass Insulation - ECOSE™ Technology **MSDS Number:** 1014 (Rev. 6)

Trade Designations: EcoBatt™ (Unfaced and Faced) Building Insulation, EcoBatt™ QuietTherm® (Unfaced and Faced) Building Insulation, Acoustical/IB Board, Acoustical Board Smooth, Air Duct Board (Eclipse™, Type M), KB Blanket, Black Acoustical Board, Black Diffuser Board, Condensation Control Blanket, Duct Wrap (Faced and Unfaced), Earthwool™ 1000° Pipe Insulation*, ET Batt*, ET Blanket*, ET Board*, ET Panel*, Equipment Liner M, Fabrication Board*, Flexible Duct Material, Hullboard*, Insulation Board (Faced and Unfaced)*, KFR/ET Range Insulation*, KN Series, KwikFlex™*, Manufactured Housing Duct Board, Manufactured Housing Insulation, Metal Building Insulation, Metal Building Filler Insulation, Pipe & Tank Insulation*, Earthwool Redi-Klad® 1000° Pipe Insulation*, Rigid Plenum Liner, Sill Sealer, Sonic XP™ Duct Liner, Wall & Ceiling Liner M (* See Section VIII).

Manufacturer: Knauf Insulation GmbH

Date Issued: January 31, 2013

Address: One Knauf Drive
Shelbyville, IN 46176-1496

Product Stewardship Support Line: 317-398-4434, x8512
24 hr Emergency (Chemtrec) Phone: 800-424-9300

SECTION II - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	%	TLV	PEL
Fibrous Glass	65997-17-3	83-99	1 fiber/cc	1 fiber /cc
Proprietary Binder	N/A	1-17	None	None

Key: TLV = ACGIH, 8 hr. time weighted average (TWA); PEL = OSHA permissible exposure limit.

TLV and PEL limits are for respirable fibers length <5um, diameter >3um, aspect ratio <5:1.

SECTION III - HAZARDS IDENTIFICATION

Emergency Overview:

OSHA regulations do not require respiratory protection as long as the exposure to fiber glass wool does not exceed 1 fiber/cubic centimeter (f/cc) TWA (8 hour time weighted average). Fiber Glass wool exposure in the home, commercial buildings, and manufacturing facilities are generally found to be less than 1 f/cc. Installers and fabricators should be aware of their exposure levels and take appropriate actions if needed per recommended work practices. Guidance on typical fiber exposures for various applications can be obtained from the North American Insulation Manufacturers Association, www.NAIMA.org. Knauf STRONGLY recommends following all safe work practices while working with and/or installing fiber glass wool products.

SECTION III - HAZARDS IDENTIFICATION

HMIS Rating: **Health:** 1 **Fire:** 0 **Physical Hazard:** 0 **Protection:** B

Primary Routes of Entry: Via respirable fibers to the lungs and respiratory system and airborne fibers to the skin and eyes.

Primary Target Organs: Lungs, respiratory system, skin and eyes.

Potential Health Effects:

Acute: Mechanical irritation of the skin, eyes and upper respiratory system. Fiber glass wool is classified as a nuisance dust by OSHA.

Chronic: Results from the most recent cohort and nested case-control epidemiological studies of U.S. workers exposed to glass wool have not provided evidence of an association between exposure to fibers and risk for respiratory cancer or mesothelioma.

Skin Contact: There are confirmed reports of contact dermatitis.

Eye Contact: A mechanical irritant which can cause moderate to severe eye irritation.

Ingestion: Non-hazardous when ingested. Potentially a mild irritant to the GI tract if excessive quantity is ingested.

Medical Conditions Aggravated by Exposure: Pre-existing chronic upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Skin disease such as dermatitis.

Biosolubility: All Knauf Insulation products covered by this MSDS are independently certified by EUCEB to be manufactured using biosoluble glass formulations and thus exempt from labeling under NTP or California Prop 65 requirements.

SECTION IV - FIRST AID MEASURES

Inhalation: Remove to fresh air. Drink water to clear throat and blow nose to evacuate dust. If coughing and irritation develop, call a physician.

Eye Contact: Flush with large amounts of water until irritation subsides, as least 15 minutes. See a physician if irritation persists.

Skin Contact: Normal good personal hygiene practices. Wash with mild soap and warm water after each exposure.

Ingestion: Emergency procedures not normally required. May be a temporary irritant to the GI system.

SECTION V - FIREFIGHTING MEASURES

NFPA Rating: **Health:** 1 **Fire:** 0 **Reactivity:** 0 **Other:** 0

Extinguishing Method: Use water, foam, dry chemical or carbon dioxide.

Special Firefighting Procedures: Wear self contained breathing apparatus and protective clothing. Dense smoke may limit visibility in enclosed areas.

Fire or explosion Hazards: Resin, paper or plastic facings will burn causing dense acrid smoke.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Clean-up Procedures: Pick up or shovel material into waste container taking care to minimize dust and fiber generation. Vacuum clean-up is preferred. If sweeping is required use a dust suppressant.

Personal Precautions: If dusty conditions exist, wear a face mask approved for use with dusts such as 3M 8210, N95 or equivalent.

Environmental Precautions: This product is not regulated under RCRA Hazardous Waste Regulations. May be disposed in landfill. Comply with federal, state and local regulations.

SECTION VII - HANDLING AND STORAGE

Storage Requirements: Store in dry area. Keep area clean. Vacuum clean dust. Use a dust suppressant if sweeping is necessary.

Special Sensitivity or Incompatibility: Hydrofluoric acid will react with and dissolve glass.

Handling Precautions: Assure proper respiratory protection if dust potential exceeds PEL/TLV.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

* **Heat-Up Precautions:** During initial heat-up of high temperature insulation products to temperatures above 350°F, an odor and smoke may be given off. Adequate ventilation should be provided to protect against fumes. In confined spaces, occupants should wear self-contained breathing apparatus during this period.

Engineering Controls: Maintain sufficient mechanical or natural ventilation to assure fiber concentrations remain below PEL/TLV. Use local exhaust if necessary. Power equipment should be equipped with properly designed dust collection devices.

Respiratory Protection: When over PEL/TLV wear an approved respirator such as 3M 8210, N95 or equivalent, to protect against respirable glass wool fibers. Concentrations of fibers that exceed the recommendations of the mask manufacturer will need a higher level of respiratory protection, such as a half mask respirator with appropriate dust filters.

Eye Protection: Wear safety glasses with side shields, goggles or face shield when handling, installing or fabricating to protect eyes against dust and fibers.

Skin Protection (clothing): Long-sleeved, loose fitting clothes and head covering are recommended. Wash work clothes separately from other clothing, towels and linens to prevent fiber migration. Rinse washer thoroughly.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Brown or tan fibrous product.

Melting Point: >1300°F

Specific Gravity: Variable

Solubility in Water: Insoluble

Pure/Mixture: Mixture

SECTION X - REACTIVITY

Stability: This is a stable, non-reactive product.

Hazardous Decomposition Products: Thermal decomposition of the resin may include carbon dioxide, carbon monoxide, carbon particulate and traces of other decomposition products.

SECTION XI - TOXICOLOGICAL/ECOLOGICAL INFORMATION**LD₅₀:** N/Av**LC₅₀:** N/Av**Toxicological Hazards:** See the Emergency overview on page 1, Section II.**Ecological Hazards:** No data exists for this product.**Teratogenicity, Mutagenicity, other Reproductive Effects:** None known**SECTION XII - DISPOSAL CONSIDERATIONS**

Waste Disposal Method This product is not regulated under RCRA Hazardous Waste Regulations. May be disposed in landfill. If unsure, contact the local office of the USEPA, your local public health department or the local landfill regulators.

SECTION XIII - TRANSPORTATION INFORMATION**US DOT Shipping Name:** Not regulated**DOT Label:** None**UN/NA Number:** None**SECTION XIV - REGULATORY INFORMATION****OSHA Status:** This product is regulated as a nuisance dust under OSHA criteria.**TSCA/CEPA Status:** All components of this product are included in the TSCA and CEPA Chemical Inventories.**CERCLA Reportable Quantity:** N/Av**SARA Title III:**

Section 302 Extremely Hazardous: This product contains no extremely hazardous substances as defined and listed in section #302.

Section 311/312 Hazard Categories: This product is not classified as hazardous.

Section 313 Toxic Chemicals: This product does not contain substances which are reportable under Section 313.

California Safe Drinking Water and Toxic Enforcement Act (Prop. 65) This product is exempt from labeling requirements under this Act.

Canada (WHMIS): This product is a class D2A controlled product under Canadian WHMIS regulations.

SECTION XV - APPROVALS**Reason for Issue:** Update Sections XIV**Rev:** **Approval Date:** 1/31/13**Prepared by:** Knauf Insulation**Supersedes Date:** 1/23/13**SECTION XVI - DISCLAIMER**

As of the date of this document, the foregoing information is believed to be accurate and is provided in good faith to comply with applicable federal and state laws. However, no warranty or representation of law or fact, with respect to such information, is intended or given.



Personal Protective Equipment Protective Gloves Safety Glasses	WHMIS Pictograms <div style="border: 1px solid black; padding: 5px; text-align: center; font-weight: bold; font-size: 1.2em;">Not Controlled</div>	DOT Pictograms <div style="border: 1px solid black; padding: 5px; text-align: center; font-weight: bold; font-size: 1.2em;">Not Regulated</div>
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SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: Low Density Fiber Glass Insulation/Insulation Board - Unfaced Products

MSDS Manufacturer Number: 13614-NAM

Synonyms: Acoustical Backing Board, Attic Door Insulator, Attic Hatch Insulator, Attic Scuttle Insulator, Batts in Bags, Blended Blowing Wool, Cathedral Batt Insulation, Cavity Wall, Cold Storage Wall, Curtain Wall 225, ECO TOUCH™, FDM ARP 100, FDM ARP 125, Flexible Marine, Flexible Type 75 AF-FDM, HV-24, HV-26, H2V-1000, H2V-2000, Insulation Batts, Manufactured Housing Insulation, Masonry Wall Insulation, Metal Building (all types), Metal Framing Batts, Metal Framing Insulation, Multi-purpose Insulation, Noise Stop Board, Pink® Insulation, Pink Pak, QuietZone® Acoustic Batt, RA Series, Shaft Wall, Sill Sealer, Sonobatts®, Sound Attenuation Batts, Standard Blend, Super Pink R Blowing Wool, ThermaGlas®, Marine Board, ULTRAVANTAGE™ Comfort Touch™, Unfaced Duct Wrap, Warm-N-Dri®, Aislhogar, Aislacoustic™, MBI, MBI Certified R, Attic Blanket®, Flexible Duct Media FIBERGLAS® Insulation with PureFiber Technology®, Metal Building FIBERGLAS® Insulation with PureFiber Technology®

Product Use/Restriction: Insulation

Manufacturer Name: Owens Corning Insulating Systems, LLC

Address: One Owens Corning Parkway
Toledo, OH 43659

Customer Service Phone Number: 1-800-GET-PINK or 1-800-438-7465

Health Issues Information: 1-419-248-8234 (8am-5pm ET)

Technical Product Information: 1-800-GET-PINK or 1-800-438-7465

Emergency Phone Number: 1-419-248-5330 (after 5pm ET and weekends)

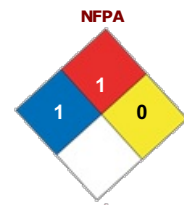
CHEMTREC: 800-424-9300 (24 hours everyday)

Canotec: (613) 996-6666 (Canada 24 hours everyday)

Website: www.owenscorning.com

MSDS Creation Date: December 16, 1997

MSDS Revision Date: March 01, 2011



HMIS	
Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	X

* Chronic Health Effects

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent
Cured Binder	N/A	0 - 15 by weight
Fiber Glass (Wool)	65997-17-3	85 - 100 by weight
Non-Hazardous Statement:	The remaining components of this product are non-hazardous or are in a small enough quantity as to not meet regulatory thresholds for disclosure. These components contain no substances or impurities which would influence the classification of this product.	

SECTION 3 - HAZARDS IDENTIFICATION

Applies to Product

Emergency Overview: Exposure to dust may be irritating to eyes, nose, and throat.

Route of Exposure:	Eye contact Skin contact Inhalation
Potential Health Effects:	
Eye:	May cause slight irritation.
Skin:	May cause slight skin irritation.
Inhalation:	May cause irritation of respiratory tract.
Ingestion:	Ingestion of this product is unlikely.
Chronic Health Effects:	There is no known chronic health effect connected with long-term use or contact with this product.
Carcinogenicity:	This product contains a component which is listed by IARC, OSHA or NTP. See Section 11 for additional information.
Potential Environmental Effects:	There is no known ecological information for this material.
Aggravation of Pre-Existing Conditions:	Chronic respiratory or skin conditions may temporarily worsen from exposure to this product.
OSHA Regulatory Status:	This product is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SECTION 4 - FIRST AID MEASURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Do not rub or scratch eyes. If eye irritation persists, consult a specialist.
Skin Contact:	Wash off immediately with soap and cold water. DO NOT use warm water because this will open up the pores of the skin, which will cause further penetration of the fibers. Use a wash cloth to help remove fibers. DO NOT rub or scratch affected areas. Remove contaminated clothing. If irritation persists get medical attention. Never use compressed air to remove fibers from the skin. If fibers are seen penetrating from the skin, the fibers can be removed by applying and removing adhesive tape so that the fibers adhere to the tape and are pulled out of the skin.
Inhalation:	Move to fresh air. If symptoms persist, call a physician.
Ingestion:	Accidental ingestion of this material is unlikely. If this does occur, watch person for several days to make sure intestinal blockage does not occur. Rinse mouth with water and drink water to remove fibers from the throat. If symptoms persist, call a physician.
Note to Physicians:	Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

Flammable Properties:	Non Flammable.
Flash Point:	None.
Flash Point Method:	Not applicable.
Lower Flammable/Explosive Limit:	Not applicable.
Upper Flammable/Explosive Limit:	Not applicable.
Extinguishing Media:	dry chemical foam carbon dioxide (CO2) water fog
Protective Equipment:	Wear self-contained breathing apparatus (SCBA) and full fire fighting protective gear.
Unusual Fire Hazards:	Hydrogen chloride to be released from the PVC barrier and vinyl facings during a fire.
Hazardous Combustion Byproducts:	Carbon monoxide. Carbon dioxide. Ammonia. Other undetermined compounds could be released in small quantities.
Universal Fire And Explosion Hazards:	Not available.

NFPA Ratings:

NFPA Health: 1
 NFPA Flammability: 1
 NFPA Reactivity: 0

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions: Avoid contact with skin and eyes.

Environmental Precautions: Prevent further leakage or spillage if safe to do so.

Methods for containment: This material will settle out of the air.
Prevent from spreading by covering, diking or other means.

Methods for cleanup: Use an industrial vacuum cleaner with a high efficiency filter to clean up dust and fiber contamination.
Avoid dry sweeping.
Pick up and transfer to properly labeled containers.

Other Precautions: Does not apply.

SECTION 7 - HANDLING and STORAGE

Handling: Avoid dust formation.
Do not breathe dust.
Wear personal protective equipment.

Storage: Keep product in its packaging until use to minimize potential dust generation.
Product should be kept dry and undercover.

Hygiene Practices: Wash hands before breaks and immediately after handling the product.
Remove and wash contaminated clothing before re-use.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls: Provide local exhaust and/or general ventilation to maintain exposure below regulatory and recommended limits.
Dust collection system must be used in transferring operations, cutting or machining or other dust generating processes, such as using power tools.
Vacuum or wet clean-up methods should be used.

Eye/Face Protection: Safety glasses with side-shields.

Skin Protection Description: Protective gloves.
Long sleeved shirt and long pants.

Respiratory Protection: When workers are facing airborne particulate/dust concentrations above the exposure limit they must use appropriate certified respirators.
A properly fitted NIOSH approved disposable N 95 type dust respirator or better is recommended.

Other Protective: When the temperature of the surface being insulated exceeds 250°F (121°C), including initial startup, the binder in these products may undergo various degrees of decomposition depending on the temperature in the application.
The need for respiratory protection will vary according to the airborne concentration of the decomposition products released and accumulated in the area.
Wear the appropriate respiratory protection according to the conditions and exposure levels in the area.

General Hygiene Considerations: Wash hands before breaks and immediately after handling the product.
Remove and wash contaminated clothing before re-use.

EXPOSURE GUIDELINES

Ingredient	Guideline OSHA	Guideline ACGIH	Ontario Canada	Mexico
Fiber Glass (Wool)	PEL-TWA: 1 f/cc (Respirable)	TLV-TWA: 1 f/cc (Respirable)	TWAEV-TWA: 0.05 mg/m3 or 1 f/cc STEL: 0.6 mg/m3	TWA: 0.15 mg/m3

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance: Fibrous.

Odor: organic

Boiling Point: No Data

Melting Point: No Data

Specific Gravity: No Data

Solubility: Insoluble in water.
 Vapor Density: No Data
 Vapor Pressure: No Data
 Evaporation Rate: No Data
 pH: No Data
 Viscosity: Not applicable.
 Flash Point: None.
 Flash Point Method: Not applicable.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability: Stable under normal conditions.
 Hazardous Polymerization: Hazardous polymerization does not occur.
 Conditions to Avoid: None expected
 Incompatible Materials: No materials to be especially mentioned.
 Special Decomposition Products: See Section 5 of MSDS for hazardous decomposition products during a fire.

SECTION 11 - TOXICOLOGICAL INFORMATION

Applies to Product :

Acute Toxicity: Dusts may cause mechanical irritation to eyes and skin. Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. High exposures may cause difficulty breathing, congestion, and chest tightness.

Carcinogens:	ACGIH	NIOSH	OSHA	IARC	NTP	MEXICO
Cured Binder	No Data	No Data	No Data	No Data	No Data	No Data
Fiber Glass (Wool)	A3 Animal Carcinogen	No Data	No Data	Group 3 - Not Classifiable as to its Carcinogenicity to Humans.	RAC - Reasonably anticipated to be a human carcinogen.	A3 Animal Carcinogen

Applies to Product :

Sensitization: No information available.
 Mutagenicity: No information available.
 Reproductive Toxicity: No information available.
 Teratogenicity: No information available.
 Neurological Effects: No information available.

Cured Binder :

Ingestion: Inhalation - Rat LD50: 7 gm/kg - [Autonomic Nervous System - other (direct) parasympathomimetic Behavioral - muscle weakness Lungs, Thorax, or Respiration - respiratory depression]
 Inhalation - Mouse LD50: 7 gm/kg - [Autonomic Nervous System - other (direct) parasympathomimetic Behavioral - muscle weakness Lungs, Thorax, or Respiration - respiratory depression](RTECS)

Fiber Glass (Wool) :

Chronic Effects: In October 2001, the International Agency for Research on Cancer (IARC) classified fiber glass wool as Group 3, "not classifiable as to its carcinogenicity to humans". The 2001 decision was based on human studies and animal research that have not shown an association between inhalation exposure to dust from fiber glass wool and the development of respiratory disease. This classification replaces the IARC finding in 1987 of a Group B designation "possibly carcinogenic to humans."

In May 1997, the American Conference of Governmental Industrial Hygienists (ACGIH) adopted an A3 carcinogen classification for glass wool fibers. The ACGIH A3 classification considers glass wool to be carcinogenic in experimental animals at relatively high doses, by routes of administration, at sites, or by mechanisms that it does not consider relevant to worker exposure. It also reviewed the available epidemiological studies and concluded that they do not confirm an increased risk of cancer in exposed humans. Overall, the ACGIH found that the available medical/scientific evidence suggests that glass wool is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

In 1994, the National Toxicology Program (NTP) classified glass wool (respirable size) as ""reasonably anticipated to be a human carcinogen"". This classification was primarily based upon the 1987 IARC classification. NTP is currently considering reclassifying this material.

SECTION 12 - ECOLOGICAL INFORMATION

Applies to Product :

Ecotoxicity: This material is not expected to cause harm to animals, plants or fish.

Bioaccumulation: Not available.

Biodegradation: Not available.

Mobility In Environmental Media: Not available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Applies to Product :

Waste Disposal: Dispose of in accordance with Local, State, Federal and Provincial regulations.

Contaminated Packaging: Empty containers should be taken for local recycling, recovery or waste disposal.

RCRA Number: No EPA Waste Numbers are applicable for this product's components.

RCRA Characteristics: This material is not expected to be a characteristic hazardous waste under RCRA.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Not Regulated.

IATA Shipping Name: Not Regulated.

Canadian Shipping Name: Not Regulated.

IMDG Shipping Name : Not Regulated.

ADR Shipping Name : Not Regulated.

RID Shipping Name : Not Regulated.

ICAO Shipping Name: Not Regulated.

MEX Shipping Name : Not Regulated.

SECTION 15 - REGULATORY INFORMATION

Inventory Status

	Japan ENCS	EINECS Number	Philippines PICCS	China	South Korea KECL
Cured Binder	Not listed			Listed	KE-35185
Fiber Glass (Wool)	Not listed	266-046-0	Listed	Listed	KE-17630

	Australia AICS	Canada DSL	TSCA Inventory Status		
Cured Binder	Listed	Listed	Listed		
Fiber Glass (Wool)	Listed	Listed	Listed		

Applies to Product :

Canada Reg. Status: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

Canada WHMIS: Not controlled.

CA PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the State of California to cause cancer.

SARA : This product does not contain any chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III (40CFR, Part 372).

Section 311/312 Hazard Categories: Acute Health Hazard: Yes

Chronic Health Hazard: Yes
 Risk of ignition: No
 Sudden Release of Pressure Hazard: No
 Reactive Hazard: No

Clean Air Act: This product does not contain any Hazardous Air Pollutants (HAPs).

State Right To Know

	RI	MN	IL	PA	MA
Cured Binder	No Data	No Data	No Data	No Data	No Data
Fiber Glass (Wool)	Listed	Listed	Listed	Listed	Listed

	NJ				
Cured Binder	No Data				
Fiber Glass (Wool)	No Data				


SECTION 16 - ADDITIONAL INFORMATION

HMIS Health Hazard: 1
HMIS Fire Hazard: 1
HMIS Reactivity: 0
HMIS Personal Protection: X
MSDS Creation Date: December 16, 1997
MSDS Revision Date: March 01, 2011
MSDS Revision Notes: Added to the synonyms list

Disclaimer: Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

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Personal Protective Equipment		WHMIS Pictograms	
		Not Controlled	
Protective Gloves	Safety Glasses		

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: Low Density Fiber Glass Insulation/Insulation Board - Faced Products

MSDS Manufacturer Number: 44964-NAM

Synonyms: Acoustical Backing Board, All Service Faced Duct Wrap, All Service Fiber Glass Duct Wrap, Attic Blanket®, Attic Door Insulator, Attic Hatch Insulator, Attic Scuttle Insulator, Base Cap Roof, Basement Blanket™, R-13 BASEMENT FINISHING SYSTEM™, Batts in Bags, Cathedral Batt Insulation, Cavity Wall, Cold Storage Wall, Curtain Wall 225, Dishwasher, Duct Board, ECOTOUCH, EnDuraCoat, Extended Flange 25, Faced Duct Wrap Insulation, Flame Spread 25, FS 25 Hi-Perm Residential/Commercial Insulation, Insulation Batts, Manufactured Housing Duct Board, Manufactured Housing Insulation, Metal Framing Batts, Metal Framing Insulation, NC Roof, NOISE Stop Blanket, Noise Stop Board, Pink Insulation, Pipe Wrap Insulation, PROPINK Fast Batt®, PINKPLUS®, PSK Duct Wrap, QuietZone® Acoustic Batt, RC Roof Board, Rigid Coated Duct, Roof Insulation, Sonobatts®, SOFTR®, Warm-N-Dri®, ULTRAVANTAGE™ Comfort Touch™, Water Heater Blanket, Wide Flute, YELLOW JACKET® Fiber Glass Insulation, Aishlogar, Aislacoustic™, Deco SKY™, RF-3000, Utiliwrap

Product Use/Restriction: Insulation

Manufacturer Name: Owens Corning Insulating Systems, LLC

Address: One Owens Corning Parkway
Toledo, OH 43659

Customer Service Phone Number: 1-800-GET-PINK or 1-800-438-7465

Health Issues Information: 1-419-248-8234 (8am-5pm ET)

Technical Product Information: 1-800-GET-PINK or 1-800-438-7465

Emergency Phone Number: 1-419-248-5330 (after 5pm ET and weekends)

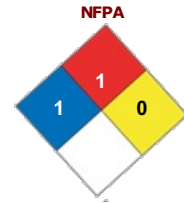
CHEMTREC: 800-424-9300 (24 hours everyday)

Canutec: (613) 996-6666 (Canada 24 hours everyday)

Website: www.owenscorning.com

MSDS Creation Date: July 10, 2002

MSDS Revision Date: December 01, 2010



HMIS	
Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	X

* Chronic Health Effects

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent
Cured Binder	N/A	0 - 15 by weight
Fiber Glass (Wool)	65997-17-3	85 - 100 by weight
Non-Hazardous Statement:	The remaining components of this product are non-hazardous or are in a small enough quantity as to not meet regulatory thresholds for disclosure. These components contain no substances or impurities which would influence the classification of this product.	

SECTION 3 - HAZARDS IDENTIFICATION

[Applies to Product](#)

Emergency Overview:	Exposure to dust may be irritating to eyes, nose, and throat.
Route of Exposure:	Eye contact Skin contact Inhalation
Potential Health Effects:	
Eye:	May cause slight irritation.
Skin:	May cause slight skin irritation.
Inhalation:	May cause irritation of respiratory tract.
Ingestion:	Ingestion of this product is unlikely.
Chronic Health Effects:	There is no known chronic health effect connected with long-term use or contact with this product.
Aggravation of Pre-Existing Conditions:	Chronic respiratory or skin conditions may temporarily worsen from exposure to this product.

SECTION 4 - FIRST AID MEASURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Do not rub or scratch eyes. If eye irritation persists, consult a specialist.
Skin Contact:	Wash off immediately with soap and cold water. DO NOT use warm water because this will open up the pores of the skin, which will cause further penetration of the fibers. Use a wash cloth to help remove fibers. DO NOT rub or scratch affected areas. Remove contaminated clothing. If irritation persists get medical attention. Never use compressed air to remove fibers from the skin. If fibers are seen penetrating from the skin, the fibers can be removed by applying and removing adhesive tape so that the fibers adhere to the tape and are pulled out of the skin.
Inhalation:	Move to fresh air. If symptoms persist, call a physician.
Ingestion:	Accidental ingestion of this material is unlikely. If this does occur, watch person for several days to make sure intestinal blockage does not occur. Rinse mouth with water and drink water to remove fibers from the throat. If symptoms persist, call a physician.
Note to Physicians:	Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

Flammable Properties:	Non Flammable.
Flash Point:	None.
Flash Point Method:	Not applicable.
Lower Flammable/Explosive Limit:	Not applicable.
Upper Flammable/Explosive Limit:	Not applicable.
Extinguishing Media:	dry chemical foam carbon dioxide (CO2) water fog
Protective Equipment:	Wear self-contained breathing apparatus (SCBA) and full fire fighting protective gear.
Unusual Fire Hazards:	Hydrogen chloride to be released from the PVC barrier and vinyl facings during a fire.
Hazardous Combustion Byproducts:	Carbon monoxide. Carbon dioxide. Ammonia. Other undetermined compounds could be released in small quantities.
Universal Fire And Explosion Hazards:	Not available.

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Avoid contact with skin and eyes.
Environmental Precautions:	Prevent further leakage or spillage if safe to do so.
Other Precautions:	Does not apply.

SECTION 7 - HANDLING and STORAGE

Handling:	Avoid dust formation. Do not breathe dust. Wear personal protective equipment.
Storage:	Keep product in its packaging until use to minimize potential dust generation. Product should be kept dry and undercover.
Hygiene Practices:	Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Provide local exhaust and/or general ventilation to maintain exposure below regulatory and recommended limits. Dust collection system must be used in transferring operations, cutting or machining or other dust generating processes, such as using power tools. Vacuum or wet clean-up methods should be used.
Eye/Face Protection:	Safety glasses with side-shields.
Skin Protection Description:	Protective gloves. Long sleeved shirt and long pants.
Respiratory Protection:	When workers are facing airborne particulate/dust concentrations above the exposure limit they must use appropriate certified respirators. A properly fitted NIOSH approved disposable N 95 type dust respirator or better is recommended.
Other Protective:	When the temperature of the surface being insulated exceeds 250°F (121°C), including initial startup, the binder in these products may undergo various degrees of decomposition depending on the temperature in the application. The need for respiratory protection will vary according to the airborne concentration of the decomposition products released and accumulated in the area. Wear the appropriate respiratory protection according to the conditions and exposure levels in the area.

EXPOSURE GUIDELINES

Ingredient	Guideline OSHA	Guideline ACGIH	Ontario Canada	Mexico	
Fiber Glass (Wool)	PEL-TWA: 1 f/cc (Respirable)	TLV-TWA: 1 f/cc (Respirable)	TWAEV-TWA: 0.05 mg/m ³ or 1 f/cc STEL: 0.6 mg/m ³	TWA: 0.15 mg/m ³	

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Fibrous.
Odor:	organic
Boiling Point:	No Data
Melting Point:	No Data
Specific Gravity:	No Data
Solubility:	Insoluble in water.
Vapor Density:	No Data
Vapor Pressure:	No Data
Evaporation Rate:	No Data
pH:	No Data
Viscosity:	Not applicable.
Flash Point:	None.
Flash Point Method:	Not applicable.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability: Stable under normal conditions.

Hazardous Polymerization: Hazardous polymerization does not occur.

Conditions to Avoid: None expected

Incompatible Materials: No materials to be especially mentioned.

Special Decomposition Products: See Section 5 of MSDS for hazardous decomposition products during a fire.

SECTION 11 - TOXICOLOGICAL INFORMATION

Carcinogens:						
	ACGIH	NIOSH	OSHA	IARC	NTP	MEXICO
Cured Binder	No Data	No Data	No Data	No Data	No Data	No Data
Fiber Glass (Wool)	A3 Animal Carcinogen	No Data	No Data	Group 3 - Not Classifiable as to its Carcinogenicity to Humans.	RAC - Reasonably anticipated to be a human carcinogen.	A3 Animal Carcinogen

Applies to Product :

Sensitization: No information available.

Mutagenicity: No information available.

Reproductive Toxicity: No information available.

Teratogenicity: No information available.

Neurological Effects: No information available.

Fiber Glass (Wool) :

Chronic Effects: In October 2001, the International Agency for Research on Cancer (IARC) classified fiber glass wool as Group 3, "not classifiable as to its carcinogenicity to humans". The 2001 decision was based on human studies and animal research that have not shown an association between inhalation exposure to dust from fiber glass wool and the development of respiratory disease. This classification replaces the IARC finding in 1987 of a Group B designation "possibly carcinogenic to humans."

In May 1997, the American Conference of Governmental Industrial Hygienists (ACGIH) adopted an A3 carcinogen classification for glass wool fibers. The ACGIH A3 classification considers glass wool to be carcinogenic in experimental animals at relatively high doses, by routes of administration, at sites, or by mechanisms that it does not consider relevant to worker exposure. It also reviewed the available epidemiological studies and concluded that they do not confirm an increased risk of cancer in exposed humans. Overall, the ACGIH found that the available medical/scientific evidence suggests that glass wool is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

In 1994, the National Toxicology Program (NTP) classified glass wool (respirable size) as "reasonably anticipated to be a human carcinogen". This classification was primarily based upon the 1987 IARC classification. NTP is currently considering reclassifying this material.

SECTION 12 - ECOLOGICAL INFORMATION

Applies to Product :

Ecotoxicity: This material is not expected to cause harm to animals, plants or fish.

Bioaccumulation: Not available.

Biodegradation: Not available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Applies to Product :

Waste Disposal: Dispose of in accordance with Local, State, Federal and Provincial regulations.

RCRA Number: No EPA Waste Numbers are applicable for this product's components.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Not Regulated.
 IATA Shipping Name: Not Regulated.
 Canadian Shipping Name: Not Regulated.
 IMDG Shipping Name : Not Regulated.
 ADR Shipping Name : Not Regulated.
 RID Shipping Name : Not Regulated.
 ICAO Shipping Name: Not Regulated.
 MEX Shipping Name : Not Regulated.

SECTION 15 - REGULATORY INFORMATION

Inventory Status

	Japan ENCS	EINECS Number	Philippines PICCS	China	South Korea KECL
Cured Binder	Not listed			Listed	KE-35185
Fiber Glass (Wool)	Not listed	266-046-0	Listed	Listed	KE-17630

	Australia AICS	Canada DSL	TSCA Inventory Status		
Cured Binder	Listed	Listed	Listed		
Fiber Glass (Wool)	Listed	Listed	Listed		

Applies to Product :

Canada WHMIS: Not controlled.

CA PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
 WARNING! This product contains a chemical known to the State of California to cause cancer.

SARA: This product does not contain any chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III (40CFR, Part 372).

Section 311/312 Hazard Categories:

Acute Health Hazard:	Yes
Chronic Health Hazard:	Yes
Risk of ignition:	No
Sudden Release of Pressure Hazard:	No
Reactive Hazard:	No

Clean Air Act: This product does not contain any Hazardous Air Pollutants (HAPs).

State Right To Know

	RI	MN	IL	PA	MA
Cured Binder		No Data		No Data	No Data
Fiber Glass (Wool)	Listed	Listed	Listed	Listed	Listed

	NJ				
Cured Binder	No Data				
Fiber Glass (Wool)	No Data				

SECTION 16 - ADDITIONAL INFORMATION

HMIS Health Hazard: 1
 HMIS Fire Hazard: 1
 HMIS Reactivity: 0
 HMIS Personal Protection: X
 MSDS Creation Date: July 10, 2002
 MSDS Revision Date: December 01, 2010
 MSDS Revision Notes: Added product name ECOTOUCH™

Disclaimer: Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes

no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

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MATERIAL SAFETY DATA SHEET

THERMAFIBER® BONDED PRODUCTS

Thermafiber Inc.
3711 Mill Street
Wabash, Indiana 46992

Page 1 of 2
Phone (260) 563-2111
Version Date: April 1, 2013
MSDS NO. 00001, Version 4

SECTION I PRODUCT IDENTIFICATION

PRODUCT(S): THERMAFIBER® Bonded Products

®Trademark of Thermafiber Inc.

SYNONYM: Insulation

CHEMICAL FAMILY: Slag wool.

SECTION II INGREDIENTS

MATERIAL	WT%	ACGIH TLV (mg/m ³)	OSHA PEL (mg/m ³)	CAS NUMBER
Slag wool fiber ¹	>95	10(T)/3(R)	15(T)/5(R)	65997-17-3
Phenolic resin	<5	(NE)	(NE)	9003-35-4

If laminated, contains the following adhesive:

Vinyl alcohol polymer <1 (NE) (NE) 9002-89-5
(T) - Total (R) - Respirable (NE) - Not Established

¹OSHA and ACGIH recommended exposure level is 1 fiber/cc and NIOSH recommended exposure level is 3 fibers/cc. This material is slag wool. Other generic terms that are used or have been used to classify this material include mineral wool, stone wool, man-made mineral fiber (MMMF), and man-made vitreous fiber (MMVF). A more recent generic term that has appeared in the literature to describe these glass-like materials is synthetic vitreous fiber (SVF).

SECTION III HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

ACUTE: The products are composed of mineral wool in a bound matrix. When these are cut or trimmed, especially with power tools, the resulting dust may cause transitory mechanical irritation to skin, eyes or respiratory tract.

EYES: Direct contact with eye can cause mechanical irritation.

SKIN: This material (in wet state or as dust) is not chemically harmful if it gets on the skin and is not immediately washed off. However direct contact of dust and mineral wool fibers with skin can cause skin irritation (mechanical) and itchiness.

INHALATION: Inhalation of dust can cause nose, throat, lungs and upper respiratory tract irritation. Persons exposed to dust may be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation.

INGESTION: No known effects.

CHRONIC: Persons with chronic or systemic skin or eye disease should use precautions and wear all personal protective equipment when working with this product.

SECTION IV FIRST AID MEASURES

EYES: In case of contact, immediately flush thoroughly with copious amounts of water occasionally lifting the lower and upper lids (to remove particulates). Get medical attention immediately. Contact lenses should not be worn when working with this product.

SKIN: Skin contact is not a chemical hazard. Mechanical action of fibers on skin can cause itchiness. Irritation of skin may occur with prolonged and repeated contact. Rinse with cool water, followed by washing with soap and warm water. A commercially available skin cream or lotion may be helpful to treat dry skin areas. Wash hands before eating or using restroom.

INHALATION: If exposed to excessive levels of dust, leave area of dust exposure and remain away until coughing and other symptoms

subside. Other measures are usually not necessary, however if conditions warrant, get medical attention.

INGESTION: No harmful or chronic effects expected. No specific recommendation. If gastric disturbance occurs, call physician.

TARGET ORGANS: Eyes, skin, lungs and respiratory system.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung disease such as, but not limited to, bronchitis, emphysema and asthma.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact. Note to physician: This product is a mechanical irritant, and is not expected to produce any chronic health effects from acute exposures. Treatment should be directed toward removing the source of irritation with symptomatic treatment as necessary.

SECTION V FIRE FIGHTING MEASURES

The products are non-combustible and do not pose a fire hazard. However, packaging material may burn.

Extinguishing Media: Carbon dioxide (CO₂), water, water fog, foam, dry chemical

Special Fire Fighting Procedures: No special procedures are expected to be necessary for this product. Normal fire fighting procedures should be followed to avoid inhalation of smoke and gases.

Unusual Fire and Explosion Hazards: None.

Special Fire Fighting Protective Equipment: Observe normal fire fighting procedures.

Flash Point (Method Used): Not applicable.

Upper and lower flammable limits in air: Not applicable.

Autoignition temperature: Not applicable.

Hazardous Combustion Products: Carbon dioxide, carbon monoxide and trace gases.

SECTION VI ACCIDENTAL RELEASE MEASURES

CONTAINMENT: Not necessary. Treat as inert material.

CLEAN UP: Pick up large pieces. Use gloves to avoid skin irritation. Vacuum dust, preferably with an industrial vacuum cleaner with high efficiency air filter. If sweeping is necessary, use dust suppressant such as water. Do not dry sweep dust accumulation or use compressed air for clean up. These procedures will help minimize potential exposures.

DISPOSAL: Dispose in sanitary landfill in accordance with local, state and federal requirements.

SECTION VII HANDLING AND STORAGE

HANDLING: Use protective equipment to avoid irritation as described in Section 8.

STORAGE: Warehouse storage should be in accordance with manufacturer's recommendations. Material should be kept dry and protected from the elements.

SECTION VIII EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide general ventilation and local exhaust ventilation to meet TLV requirements of individual ingredients (see Section 2) and to control dusting conditions.

If cutting or trimming with power equipment, dust collectors and local ventilation should be used.

Avoid unnecessary exposure to dust and handle with care. Keep work area clean of dust and fibers by using an industrial vacuum cleaner with high efficiency filter or wetting down area with water. Never use compressed air and avoid dry sweeping.

EYE PROTECTION: Wear safety glasses with sideshields or goggles to avoid eye irritation.

RESPIRATORY PROTECTION: Wear a NIOSH/MSHA-approved dust respirator in poorly ventilated areas, where local exhaust is not feasible, if TLV is exceeded, and/or when dusty conditions exist. Avoid prolonged and repeated breathing of dust.

OTHER CLOTHING: Wear tight fitting goggles and gloves when dusty conditions exist. Wear long-sleeved, loose fitting clothing at the

neck and wrists and minimize skin contact. Wash work clothing separately from other clothing. Rinse washer thoroughly after use.

SECTION IX PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance and Odor:** Tan or off yellow in color with low odor
- **Physical State:** Solid
- **Boiling Point:** Not applicable
- **Freezing Point:** Not applicable
- **Melting Point:** 2100° F (1150° C)
- **Specific Gravity (H₂O=1):** Not applicable
- **Solubility in Water:** Insoluble
- **pH Range:** Not applicable
- **Vapor Pressure:** Not applicable
- **Evaporation Rate (in-Butyl Acetate=1):** Not applicable
- **Percent Volatile:** Not applicable
- **Volatile Organic Compounds:** Not applicable

SECTION X CHEMICAL STABILITY

STABILITY: Stable

REACTIVITY: Not reactive

INCOMPATIBILITY: Acids (gives off H₂S under certain acidic conditions)

HAZARDOUS POLYMERIZATION: Will not occur

HAZARDOUS DECOMPOSITION: Oxides of carbon and smoke would be produced at high temperatures with thermal decomposition.

SECTION XI TOXICOLOGICAL INFORMATION

ACUTE DATA:

SLAG WOOL FIBER (65997-17-3)

Oral LD₅₀RAT: Not determined

Dermal LD₅₀RAT: Not determined

Skin Irritation: Mechanical Irritant

Eye Irritation: Mechanical Irritant

Contact with mineral wool fibers may cause temporary eye and skin irritation (mechanical). When products are handled continually, the skin irritation generally diminishes.

Chronic Data: Inhalation: In October 2001, the International Agency for Research on Cancer (IARC) classified mineral wool fibers (rock or slag) as Group 3 (not classifiable as to carcinogenicity to humans).

SECTION XII ECOLOGICAL INFORMATION

This product is not expected to have an adverse effect on the ecology.

SECTION XIII DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of material in accordance with federal, state, and local regulations. Wastes are not hazardous as defined by the Resource Conservation and Recovery Act (RCRA; 40 CFR 261).

WASTE NUMBERS: No EPA Waste Numbers are applicable for this product's components.

SECTION XIV TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

SECTION XV REGULATORY INFORMATION

CANADIAN REGULATIONS:

WHMIS: D2B

All components of this product are included in the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).

USA REGULATIONS:

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

CARCINOGENICITY CLASSIFICATION OF INGREDIENTS:

Material	IARC	NTP
Man Made Vitreous	Group 3	None

In October 2001, the International Agency for Research on Cancer (IARC) classified mineral wool fibers (rock or slag) as **Group 3 (not classifiable as to carcinogenicity to humans)**. IARC noted specifically: "no evidence of increased risks of lung cancer or mesothelioma (cancer of the lining of the body cavities) from occupational exposures during manufacture of these materials, and inadequate evidence overall of any cancer risk." This was a reversal of the IARC finding in 1987 of a Group 2B designation (possibly carcinogenic to humans) based on earlier studies in which animals were injected with large quantities of slag wool fibers.

SECTION XVI OTHER INFORMATION

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings: Health: 0 Fire: 0 Reactivity: 0 Other: N/A

HMIS Ratings: Health: 0 Fire: 0 Reactivity: 0

Personal Protection: Use eye and skin protection. Use NIOSH/MSHA - approved respiratory protection when necessary.

0 = Minimal Hazard 1 = Slight Hazard 2 = Moderate Hazard

3 = Serious Hazard 4 = Severe Hazard

△ CAUTION:

Dust exposure can cause temporary eye, skin and respiratory tract irritation. Avoid creating dust and install in well ventilated area. Cut and trim with razor knife or hand saw to minimize dust levels. Using power tools for cutting will generate high dust levels. Power tools should be equipped with dust collection system. Use NIOSH/MSHA-approved dust respirator. Avoid dust contact with eyes and skin. Wear eye protection and long-sleeve, loose fitting clothing closed at the neck and wrists. Wash work clothing separately from other clothing. Rinse washer thoroughly.

KEEP OUT OF REACH OF CHILDREN THIS PRODUCT CONTAINS NO ASBESTOS

FIRST AID: For skin irritation, rinse skin with cool water, followed by washing with soap and warm water. For eye irritation, flush eyes thoroughly with water for 15 minutes. If irritation continues, or product is swallowed, consult a physician. Additional product safety information is available on the Thermafiber web site, www.thermafiber.com or by calling (260) 563-2111.

Key/Legend

ACGIH	American Conference of Government Industrial Hygienists
CAS	Chemical Abstracts Service (Registry Number)
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
MSDS	Material Safety Data Sheet
MSHA	Mine Safety and Health Administration
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety & Health
NTP	National Toxicology Program
OSHA	Occupational Health and Safety Administration
PEL	Permissible Exposure Limit
TLV	Threshold Limit Value



MATERIAL SAFETY DATA SHEET

Product name: Mineral wool
Description: Synthetic vitreous fiber
Supplier: Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121
Emergency # (Chem-Trec.): 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

INGREDIENTS AND EXPOSURE LIMITS

Ingredients:	CAS Number:	PEL:	TLV:	STEL:
Slag wool fiber	65997-17-3	NE	1 fiber / cc	NE
Phenolic resin	09003-35-4	NE	NE	NE
Polyvinyl alcohol	09002-89-5	NE	NE	NE

Abbreviations: PEL = OSHA Permissible Exposure Limit. TLV = ACGIH Threshold Limit Value. STEL = Short Term Exposure Limit. NE = None Established. NA = Not Applicable.

PHYSICAL DATA

Appearance:	2' x 4' x 4" sheets.	Odor:	Negligible.
Boiling Point:	Not applicable.	Vapor Pressure:	Not applicable.
Melting Point:	Approx. 2400° F	VOC Content:	< 1% w/w
Evaporation Rate:	Not applicable.	Solubility in Water:	Insoluble.
pH:	Not applicable.	Specific Gravity:	Not determined.

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Not applicable.	Flammable Limits:	Not applicable.
Extinguishing Media:	As appropriate for surrounding fire; material does not burn.		
Special Fire Fighting Procedures:	Soak cartons to help prevent the spread of fire. Use a self-contained breathing apparatus when fighting fires involving chemicals.		
Unusual Fire and Explosion Hazards:	None known.		

REACTIVITY DATA

Stability:	Stable.	Hazardous Polymerization:	Will not occur.
Incompatibility:	Strong acids.		
Hazardous Decomposition Products:	Thermal decomposition products can be formed at temperatures exceeding 2000° F. Thermal decomposition can yield CO and CO ₂ .		
Conditions to Avoid:	None known.		

HEALTH HAZARD DATA

Known Hazards:	Acute: Eye, skin and respiratory irritation. Chronic: Respiratory impairment.		
Routes of Exposure:	Inhalation, Dermal.		
Signs and Symptoms of Exposure:	Eyes: Mechanical irritation. Skin: Itching, irritation. Inhalation: Nose, throat and upper respiratory tract irritation.		
Carcinogenicity:	Slag wool has been classified by the IARC as Group 3 – Unclassifiable as to Carcinogenicity in Humans.		
Medical Conditions Aggravated by Exposure:	Eye, skin, and respiratory conditions.		

EMERGENCY AND FIRST AID PROCEDURES

Eyes:	Flush with plenty of water while holding eyelids apart. Avoid rubbing the eyes as mechanical abrasions can occur. Call a physician if symptoms persist.
Skin:	Wash with soap and water. Launder clothing before reuse.
Inhalation:	Move to fresh air.
Ingestion:	No ill effects expected.
Other:	Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure.

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation:	General (natural or mechanically induced fresh air movements).
Eye Protection:	Safety goggles recommended to prevent particulates from irritating the eyes.
Skin Protection:	Cloth gloves and long sleeves to protect skin from irritating fibers.
Respiratory Protection:	Use local exhaust and/or a NIOSH-approved dust respirator when air movement is inadequate to control dusts / fibers below recommended exposure levels.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	Avoid generating dusts. Local exhaust may be required to control dusts if power tools are used for cutting / trimming. Wear appropriate personal protective equipment. Store away from moisture; keep dry.
Spill Procedures:	Not applicable.

REGULATORY INFORMATION

Hazard Communication:	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
HMIS Codes:	Health 1, Flammability 0, Reactivity 0, PPE B (Gloves, Goggles)
DOT Shipping Name:	Not regulated.
IATA / ICAO Shipping Name:	Not regulated.
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product does not contain any toxic chemicals which are subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).
EPA Waste Code(s):	Not regulated by EPA as a hazardous waste.
Waste Disposal Methods:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, state, and federal safety, health and environmental regulations.

CONTACTS

Customer Service:	1 800 879 8000	Technical Service:	1 800 879 8000
Health / Safety:	1 800 879 6000	Jerry Metcalf	(x1003704)
Emergency # (Chem-Trec):	1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)		

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.

WALLBOARD

- 1. GYPSUM PANELS**
- 2. GLASS MAT FACED PANELS**
- 3. LEAD LINED GYPSUM PANELS**
- 4. CEMENT BOARD**

Section 1: PRODUCT AND COMPANY INFORMATION

Product Name(s): Continental Building Products Drywall

Product Identifiers: Drywall, Firecheck® Type X, Firecheck® Type C, Watercheck®, Fire Watercheck® Type X, Firecheck® Shaftliner, Gypboard, Sagcheck®, Soffitboard, Firecheck® Soffitboard, Sheathing, Firecheck® Sheathing Type X, Plasterbase, Firecheck® Plasterbase Type X, Rapid Deco® Level Five®, Protecta® AR 100 Type X with Mold Defense®, Shaft Wall Liner, Green Board, Mold Defense® Type X, Mold Defense® Shaftliner Type X, Weather Defense® Platinum, Rapid Deco Type X, Weather Defense® Platinum Type X, Rapid Deco, Rapid Deco with Mold Defense, Rapid Deco with Mold Defense® Type X, Shaftliner Type X, Protecta® AR 100 with Mold Defense®, Protecta® HIR 300, Weather Defense® Platinum Shaftliner, LiftLite®, Weather Defense® Interior, Weather Defense® Interior Type X.

Manufacturer:
Continental Building Products Inc.
12950 Worldgate Drive, suite 700
Herndon, VA 20170

Information Telephone Number:
800.237.5505 (9am to 5pm EST)

Emergency Telephone Number:
800.451.8346 (3E Hotline)

Product Use: Drywall is used for commercial and residential construction.





Note: This MSDS covers many types of drywall. Individual composition of hazardous constituents will vary between types of drywall.

Section 2: COMPOSITION/INFORMATION ON INGREDIENTS

Component	Percent (By Weight)	CAS Number	OSHA PEL - TWA (mg/m ³)	ACGIH TLV-TWA (mg/m ³)	LD ₅₀ Rat, Oral	LC ₅₀ Rat, Inhalation
Gypsum* (Calcium Sulfate)	70-90	7778-18-9	15 (T), 5 (R)	10 (T)	NA	NA
Calcium Carbonate*	60-65	1317-65-3	15 (T), 5 (R)	3 (R); 10 (T)	NA	NA
Cellulose	0-10	9004-34-6	15 (T), 5 (R)	10 (T)	>5 g/kg	>5.8 g/m ³ /4H
Crystalline Silica (as Quartz)	0-2	14808-60-7	[[10] / (%SiO ₂ +2)] (R); [(30) / (%SiO ₂ +2)] (T)	0.025 (R)	NA	NA
Vermiculite	0-10	1318-00-9	NA	NA	NA	NA
Potassium sulfate	0-5	7778-80-5	NA	NA	6.6 g/kg	NA
Starch	0-5	9005-25-8	15 (T), 5 (R)	10 (T)	6.6 g/kg (I, M)	NA
Fiberglass (Continuous Filament)	0-5	65997-17-3	15 (T), 5 (R)	5 (I)	NA	NA
Mica *	2-3	12001-26-2	3 (R)	3 (R)	NA	NA
Paraffin Wax (fume)	0-2	8002-74-2	NA	2 (T)	NA	NA
Boric Acid	0-1	10043-35-3	NA	NA	2.7 g/kg	NA

Note: Exposure limits for components noted with an * contain no asbestos and <1% crystalline silica
(I, M) = LD₅₀ Intraperitoneal and Mouse

Section 3: HAZARD IDENTIFICATION

	WARNING	 Respiratory Protection  Eye Protection  Gloves
	<p>Toxic - Harmful by inhalation. (Contains crystalline silica)</p> <p>Use proper engineering controls, work practices, and Personal Protective Equipment (PPE) to prevent exposure to dust.</p> <p>Read MSDS for details.</p>	

Section 3: HAZARD IDENTIFICATION (continued)

Emergency Overview: Drywall is a solid material that is composed of paper covered gypsum board. The paper covering can be gray, green, brown, blue, or white while the internal gypsum board is an off-white color. Drywall is odorless. Drywall is not combustible or explosive. A single, short-term exposure to drywall dust presents little or no hazard.

Potential Health Effects:

Eye Contact: Eye contact to airborne dust may cause immediate or delayed irritation or inflammation. Eye exposures require immediate first aid and medical attention to prevent significant damage to the eye.

Skin Contact: Drywall dust may cause dry skin, discomfort, and irritation.

Inhalation (acute): Breathing dust may cause nose, throat or lung irritation, including choking, depending on the degree of exposure.

Inhalation (chronic): Risk of injury depends on duration and level of exposure.

Silicosis: This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis, a seriously disabling and fatal lung disease. See Note to Physicians in Section 4 for further information.

This product contains mica. Prolonged and repeated inhalation of respirable mica dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury depends on duration and level of exposure.

Carcinogenicity: Crystalline silica is classified by IARC and NTP as a known human carcinogen.

Autoimmune Disease: Some studies show that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders such as scleroderma (thickening of the skin), systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys.

Tuberculosis: Silicosis increases the risk of tuberculosis.

Renal Disease: Some studies show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica.

Ingestion: Do not ingest drywall. Ingestion of small quantities of drywall is not known to be harmful; ingesting large quantities can cause intestinal distress.

Medical Conditions Aggravated by Exposure: Individuals with lung disease (e.g. bronchitis, emphysema, COPD, pulmonary disease) can be aggravated by exposure.

Section 4: FIRST AID MEASURES

Eye Contact: Rinse eyes thoroughly with water for at least 15 minutes, including under lids, to remove all particles. Seek medical attention for abrasions.

Skin Contact: Wash with cool water and a pH neutral soap or a mild skin detergent. Seek medical attention for rash or irritation.

Inhalation: Move person to fresh air. Seek medical attention for discomfort or if coughing or other symptoms do not subside.

Ingestion: Do not induce vomiting. If conscious, have person drink plenty of water. Seek medical attention or contact poison control center immediately.

Section 4: FIRST AID MEASURES (continued)

Note to Physician: The three types of silicosis include:

- Simple chronic silicosis – which results from long-term exposure (more than 20 years) to low amounts of respirable crystalline silica. Nodules of chronic inflammation and scarring provoked by the respirable crystalline silica form in the lungs and chest lymph nodes. This disease may feature breathlessness and may resemble chronic obstructive pulmonary disease (COPD).
- Accelerated silicosis – occurs after exposure to larger amounts of respirable crystalline silica over a shorter period of time (5-15 years). Inflammation, scarring, and symptoms progress faster in accelerated silicosis than in simple silicosis.
- Acute silicosis – results from short-term exposure to very large amounts of respirable crystalline silica. The lungs become very inflamed and may fill with fluid, causing severe shortness of breath and low blood oxygen levels.

Progressive massive fibrosis may occur in simple or accelerated silicosis, but is more common in the accelerated form. Progressive massive fibrosis results from severe scarring and leads to the destruction of normal lung structures.

Section 5: FIREFIGHTING MEASURES

Flashpoint & Method:	Non-combustible	Combustion Products:	None.
General Hazard:	Avoid breathing dust.	Firefighting Equipment:	Drywall poses no fire-related hazard. A SCBA is recommended to limit exposures to combustion products when fighting any fire.
Extinguishing Media:	Use extinguishing media appropriate for surrounding fire.		
Flammability (UL classification):	Flame spread: 10 or 15	Smoke development: 0	Non-combustible core

Section 6: ACCIDENTAL RELEASE MEASURES

General: Place broken material and drywall dust into a container. Avoid actions that cause dust to become airborne. Avoid inhalation of dust. Wear appropriate protective equipment as described in Section 8.

Waste Disposal Method: Dispose of drywall according to Federal, State, Provincial and Local regulations.

Section 7: HANDLING AND STORAGE

General: Minimize dust generation and accumulation. Use good safety and industrial hygiene practices.

Follow traditional building practices; such as management of water away from the interior of the structure to avoid the growth of mold, mildew and fungus. Remove any building products suspected of being exposed to sustained moisture and considered conducive to mold growth from the jobsite.

When moving board with a forklift or similar equipment, it is essential that the equipment be rated capable of handling the loads. The forks should always be long enough to extend completely through the width of the load. Fork spacing between supports should be one half the length of the panels or base being handled so that a maximum of 4 feet extends beyond the supports on either end.

Section 7: HANDLING AND STORAGE (continued)

Drywall is heavy and poses risks such as sprains and strains to the back, arms, shoulders and legs during lifting and mixing. Handle with care and use appropriate control measures.

Usage: Cutting, crushing or sanding drywall or other crystalline silica-bearing materials will release respirable crystalline silica. Use all appropriate measures of dust control or suppression, and Personal Protective Equipment (PPE) described in Section 8 below.

Housekeeping: Avoid actions that cause dust to become airborne during clean-up such as dry sweeping or using compressed air. Use HEPA vacuum or thoroughly wet with water to clean-up dust. Use PPE described in Section 8 below.

Storage: Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities, as described in Section 10. Protect product from physical damage. Protect from weather and prevent exposure to sustained moisture.

Gypsum Association literature recommends storing board flat to avoid damaging edges, warping the board and the potential safety hazards of the board falling over. However, in other situations, storing the board flat may cause a tripping hazard or exceed floor limit loads. If stacking board vertically, leave at least 4 inches from the wall to decrease the risk of falling board and no more than 6 inches to avoid too much lateral weight against the wall.

Storage Temperature: Drywall should not be used where temperatures exceed 125° F for extended periods or in areas of extreme humidity.

Storage Pressure: Unlimited.

Clothing: Remove and launder clothing that is dusty before it is reused.

Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls: Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits.

Personal Protective Equipment (PPE):

Respiratory Protection: Under ordinary conditions no respiratory protection is required. Wear a NIOSH approved respirator that is properly fitted and is in good condition when exposed to dust above exposure limits.

Eye Protection: Wear ANSI approved glasses or safety goggles when handling drywall to prevent dust coming in contact with eyes. Wearing contact lenses when using drywall, under dusty conditions, is not recommended.

Skin Protection: Wear gloves when handling drywall. Remove clothing and protective equipment that becomes dusty and launder before reusing.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid	Evaporation Rate:	NA.
Appearance:	Variety of paper colors, with white	pH (in water):	Neutral
Odor:	core None.	Boiling Point:	NA
Vapor Pressure:	NA.	Freezing Point:	None, solid.
Vapor Density:	NA.	Viscosity:	None, solid.
Specific Gravity:	1.1 to 4.0 lbs/ft ²	Solubility in Water:	< 0.2% @ 20° C

Section 10: STABILITY AND REACTIVITY

- Stability:** Stable. Avoid contact with incompatible materials.
- Incompatibility:** The components of drywall are incompatible with strong oxidizers, strong acids, diazomethane, ammonium salts, aluminum, and fluorine.
- Hazardous Polymerization:** None.
- Hazardous Decomposition:** Thermal decomposition may yield sulfur oxides, and calcium oxide fumes (above 825°C).

Section 11 and 12: TOXICOLOGICAL AND ECOLOGICAL INFORMATION

For questions regarding toxicological and ecological information refer to contact information in Section 1.

Section 13: DISPOSAL CONSIDERATIONS

Dispose of waste and containers in compliance with applicable Federal, State, Provincial and Local regulations.

Section 14: TRANSPORT INFORMATION

This product is not classified as a Hazardous Material under U.S. DOT or Canadian TDG regulations.

Section 15: REGULATORY INFORMATION

- OSHA/MSHA Hazard Communication:** This product is considered by OSHA/MSHA to be a hazardous chemical and should be included in the employer's hazard communication program.
- CERCLA/SUPERFUND:** This product is not listed as a CERCLA hazardous substance.
- EPCRA SARA Title III:** This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 and is considered a hazardous chemical and a delayed health hazard.
- EPRCA SARA Section 313:** This product contains none of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.
- RCRA:** If discarded in its purchased form, this product would not be a hazardous waste either by listing or characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.
- TSCA:** Crystalline silica is exempt from reporting under the inventory update rule.
- California Proposition 65:** Crystalline silica (airborne particulates of respirable size) is known by the State of California to cause cancer.
- WHMIS/DSL:** Products containing crystalline silica and calcium carbonate are classified as D2A and are subject to WHMIS requirements.



Section 16: OTHER INFORMATION

Abbreviations:

>	Greater than	NA	Not Applicable
ACGIH	American Conference of Governmental Industrial Hygienists	NFPA	National Fire Protection Association
CAS No	Chemical Abstract Service number	NIOSH	National Institute for Occupational Safety and Health
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	NTP	National Toxicology Program
		OSHA	Occupational Safety and Health Administration
CFR	Code for Federal Regulations	PEL	Permissible Exposure Limit
CL	Ceiling Limit	pH	Negative log of hydrogen ion
DOT	U.S. Department of Transportation	PPE	Personal Protective Equipment
EST	Eastern Standard Time	R	Respirable Particulate
HEPA	High-Efficiency Particulate Air	RCRA	Resource Conservation and Recovery Act
HMIS	Hazardous Materials Identification System	SARA	Superfund Amendments and Reauthorization Act
IARC	International Agency for Research on Cancer	T	Total Particulate
		TDG	Transportation of Dangerous Goods
LC ₅₀	Lethal Concentration	TLV	Threshold Limit Value
LD ₅₀	Lethal Dose	TWA	Time Weighted Average (8 hour)
mg/m ³	Milligrams per cubic meter	WHMIS	Workplace Hazardous Materials Information System
MSHA	Mine Safety and Health Administration		

This MSDS (Section 1) was revised on April 11, 2014.

An electronic version of this MSDS is available at: www.continental-bp.com under the Resources section.

Continental Building Products (CBP) believes the information contained herein is accurate; however, CBP makes no guarantees with respect to such accuracy and assumes no liability in connection with the use of the information contained herein which is not intended to be and should not be construed as legal advice or as insuring compliance with any federal, state or local laws or regulations. Any party using this product should review all such laws, rules, or regulations prior to use, including but not limited to US and Canada Federal, Provincial and State regulations.

NO WARRANTY IS MADE, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE.



SECTION 1
CHEMICAL PRODUCT AND IDENTIFICATION

United States Gypsum Company
 550 West Adams Street
 Chicago, Illinois 60661-3637
 A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
 Version Date: January 1, 2011
 Version: 7

PRODUCT(S) SHEETROCK® Gypsum Panels

CHEMICAL FAMILY / GENERAL CATEGORY Wallboard

SYNONYMS Gypsum Panels, Drywall

SECTION 2
HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:
ΔWARNING!

This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract. This product does not present an inhalation, ingestion, or contact health hazard unless subjected to operations such as sawing, sanding or machining which result in the generation of airborne particulate. This product contains quartz (crystalline silica) as a naturally occurring contaminant.

POTENTIAL HEALTH EFFECTS (See Section 11 for more information)

ACUTE :

Inhalation	Exposure to dust generated during the handling or use of the product may cause temporary irritation to eyes, skin, nose, throat, and upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.
Eyes	Dust can cause temporary mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.
Skin	None known.
Ingestion	None known.

CHRONIC:

Inhalation	The concentration of respirable crystalline silica measured in bulk samples of USG gypsum was less than 0.1 Wt.%. Industrial hygiene testing, following the NIOSH Method 7500, did not detect respirable crystalline silica in dust created during the cutting of USG gypsum wallboard panels by both the recommended score and snap technique and with the use of a power saw in a 10ft by 10ft room. Panels do not release respirable dust in their installed state and therefore do not present any known health hazards when installed and properly maintained. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.
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Eyes	None known.
Skin	None known.
Ingestion	None known.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S) All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11: Toxicology Information for detailed information.

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Crystalline silica	1	1	A2	Listed
FibrousGlass/Continuous Filament	3	2	A4	Not Listed
Vinyl Acetate Monomer	2B	Not Listed	A3	Not Listed
Acetaldehyde	2B	2	A3	Listed
Formaldehyde	1	2	A2	Listed

IARC - International Agency for Research on Cancer: 1- Carcinogenic to humans; 2A – Probably carcinogenic to humans; 2B – Possibly carcinogenic to humans; 3 - Not classifiable as a carcinogen; 4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS): 1- Known to be carcinogen; 2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists: A1 – Confirmed human carcinogen; A2 – Suspected human carcinogen; A3 – Animal carcinogen; A4 - Not classifiable as a carcinogen; A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 “Chemicals known to the State of California to Cause Cancer”

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent of crystalline silica given represents total quartz and not the respirable fraction. The weight percent of respirable silica has not been measured in this product.

POTENTIAL ENVIRONMENTAL EFFECTS: Toxicity studies of gypsum performed with fish, aquatic invertebrates and aquatic plants showed no toxic effect. (See Section 12 for more information.)

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	CAS #
Gypsum or Calcium Sulfate Dihydrate (CaSO ₄ •2H ₂ O)	>85	13397-24-5/10101-41-4
Cellulose	<10	9004-34-6
Starch	<3	9005-25-8
Crystalline Silica	<5	14808-60-7 [^]
May Contain:		[]
Fibrous Glass (Continuous Filament)	<1	65997-17-3#
May be available with foil-backing:		[]
Aluminum Foil (as Aluminum and Cmpds)	<3	7429-90-5
Ethylene Vinyl Acetate Polymer	<2	24937-78-8

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory and the Canadian Domestic Substances List (DSL).

[^]The weight percent for silica represents total quartz and not the respirable fraction.

#As manufactured, continuous filament glass fibers are not respirable. Continuous filaments that are chopped,



crushed, or severely mechanically processed during manufacture or use may contain very small amounts of respirable particulates.

**SECTION 4
 FIRST AID MEASURES**

FIRST AID PROCEDURES

Inhalation	Remove to fresh air. Leave the area of exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.
Eyes	In case of contact, do not rub or scratch your eyes. To prevent mechanical irritation, flush thoroughly with water for 15 minutes. If irritation persists, consult physician.
Skin	Wash with mild soap and water. If irritation persists, consult physician.
Ingestion	This product is not intended to be ingested or eaten. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

NOTES TO PHYSICIAN: Treatment should be directed at the control of symptoms and the clinical condition.

**SECTION 5
 FIRE FIGHTING MEASURES**

General Fire Hazards	None known		
Extinguishing Media	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures	Wear appropriate personal protective equipment. See section 8.		
Unusual Fire/ Explosion Hazards	None known		
Hazardous Combustion Products	None known		
Flash Point	Not Determined	Auto Ignition	Not Applicable
Method Used	Not Applicable	Flammability Classification	Not Applicable
Upper Flammable Limit (UFL)	Not Determined		
Lower Flammable Limit (LFL)	Not Determined	Rate of Burning	Not Applicable

**SECTION 6
 ACCIDENTAL RELEASE MEASURES**

CONTAINMENT: Collect panels from spillage and if not damaged or contaminated by foreign material, panels may be reclaimed.

CLEAN-UP: Use normal clean up procedures. No special precautions.

DISPOSAL: Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters.



**SECTION 7
 HANDLING AND STORAGE**

HANDLING: Avoid dust contact with eyes and skin. Wear the appropriate eye and skin protection against dust (See Section 8). Minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Use good safety and industrial hygiene practices. When moving board with a forklift or similar equipment, it is essential that the equipment be rated capable of handling the loads. The forks should always be long enough to extend completely through the width of the load. Fork spacing between supports should be one half the length of the panels or base being handled so that a maximum of 4' extends beyond the supports on either end.

Follow traditional building practices; such as management of water away from the interior of the structure to avoid the growth of mold, mildew and fungus. Remove any building products suspected of being exposed to sustained moisture and considered conducive to mold growth from the jobsite.

Gypsum panels are very heavy awkward loads posing the risk of severe back injury. Use proper lifting techniques.

STORAGE: Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities (see Section 10). Protect product from physical damage.

Protect from weather and prevent exposure to sustained moisture.

Gypsum Association literature recommends storing board flat to avoid damaging edges, warping the board and the potential safety hazards of the board falling over. However, in other situations, storing the board flat may cause a tripping hazard or exceed floor limit loads. If stacking board vertically, leave at least 4 inches from the wall to decrease the risk of falling board and no more than 6 inches to avoid too much lateral weight against the wall.

**SECTION 8
 EXPOSURE CONTROLS/PERSONAL PROTECTION**

MATERIAL	WT%	TLV (mg/m ³)	PEL(mg/m ³)
Gypsum or Calcium Sulfate Dihydrate (CaSO ₄ •2H ₂ O)	>85	10	15 (T) / 5 (R)
Cellulose	<10	10	15 (T) / 5 (R)
Starch	<3	10	15 (T) / 5 (R)
Crystalline Silica	<5	0.025 (R)	0.1 (R)
May Contain:		[]
Fibrous Glass (Continuous Filament)	<1	1 f/cc (R) *	15 (T) / 5 (R)
May be available with foil-backing:		[]
Aluminum Foil (as Aluminum and Cmpds)	<3	10	15 (T) / 5 (R)
Ethylene Vinyl Acetate Polymer	<2	(NE)	(NE)

(T)–Total; (R)–Respirable; (NE)-Not Established; (C)-Ceiling; (STEL)-Short-term exposure limit
 (F)-Fume; (Du)-Dust; (M)-Mist
 ppm-part per million; f/cc-fiber per cubic centimeter; mppcf- million particles per cubic foot

*ACGIH: 1 fiber/cubic centimeter air for fibers longer than 5 micrometers and thinner than 3 micrometers. Continuous filaments that are chopped, crushed, or severely mechanically processed during manufacture or use may contain very small amounts of respirable particulates [PEL = 5 mg/m³(R)].

ENGINEERING CONTROLS: Provide ventilation sufficient to control airborne dust levels. If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits. Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits.



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RESPIRATORY PROTECTION: Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face	Wear eye protection, safety glasses or goggles, to avoid possible eye contact.
Skin	Wear gloves and protective clothing to prevent repeated or prolonged skin contact.
General	Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Paper with gray to off white core	Vapor Density (Air = 1)	Not Applicable
Odor	Low to no odor	Specific Gravity (H ₂ O = 1)	2.32 – 2.96
Odor Threshold	Not Determined	Solubility in water (g/100g)	0.26/100g
Physical State	Solid	Partition Coefficient	Not Applicable
pH @ 25 ° C	~ 7	Auto-ignition Temp	Not Determined
Melting Point	Not Applicable	Decomposition Temp	2650°F/1450°C
Freezing Point	Not Applicable	Viscosity	Not Applicable
Boiling Point	Not Applicable	Particle Size	Varies
Flash Point	Not Determined	Bulk Density	~ 55 lb/ft ³
Evaporation Rate (BuAc = 1)	Not Applicable	Molecular Weight	~ 172
Upper Flammable Limit (UFL)	Not Determined	VOC Content	Zero g/L
Lower Flammable Limit (LFL)	Not Determined	Percent Volatile	Zero
Vapor Pressure (mm Hg)	Not Applicable		

SECTION 10 CHEMICAL STABILITY AND REACTIVITY

STABILITY	Stable.
CONDITIONS TO AVOID	Contact with incompatibles (see below).
INCOMPATIBILITY	None known.
HAZARDOUS POLYMERIZATION	None known.
HAZARDOUS DECOMPOSITION	None known.



SECTION 11
TOXICOLOGICAL INFORMATION

ACUTE EFFECTS: The acute oral toxicity study [OECD TG 420] of calcium sulfate dihydrate showed that this chemical did not cause any changes even at 2,000 mg/kg b.w. Therefore, the oral LD50 value was more than 2,000-mg/kg b.w. for female rats. Gypsum paste applied experimentally to the eyes of rabbits was not an irritant. Gypsum dust particulate has shown an irritant action on mucous membranes of the respiratory tract and eyes. The sulfate ion has caused gastro-intestinal disturbance in humans following large oral doses. Limited studies involving the repeated inhalation of an (unspecified) calcium sulfate failed to identify any particular target organs in monkeys, rats and hamsters. No evidence of mutagenicity was found in Ames bacterial tests.

CHRONIC EFFECTS / CARCINOGENICITY: Panels do not release respirable dust in their installed state and therefore do not present any known health hazards when installed and properly maintained.

Crystalline Silica: Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. The weight percent of respirable crystalline silica may not have been measured in this product. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. Smoking in combination with silica exposures increases the risk of cancer. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

SECTION 12
ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on ecology. Toxicity studies of gypsum performed with fish, aquatic invertebrates and aquatic plants showed no toxic effect.

Ecotoxicity value	Not determined.
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SECTION 13
DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of material in accordance with federal, state, and local regulations. Never discharge directly into sewers or surface waters. Consult with environmental regulatory agencies for guidance on acceptable disposal practices.

SECTION 14
TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.



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Shipping Name	Same as product name.
Hazard Class	Not classified.
UN/NA #	None. Not classified.
Packing Group	None.
Label (s) Required	Not applicable.
GGVSec/MDG-Code	Not classified.
ICAO/IATA-DGR	Not applicable.
RID/ADR	None.
ADNR	None.

SECTION 15 REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	3 0 2	3 0 4	3 1 3	CERCLA	CAA Sec. 112	RCRA Code
Gypsum or Calcium Sulfate Dihydrate (CaSO ₄ •2H ₂ O)	>85	NL	NL	NL	NL	NL	NL
Cellulose	<10	NL	NL	NL	NL	NL	NL
Starch	<3	NL	NL	NL	NL	NL	NL
Crystalline Silica	<5	NL	NL	NL	NL	NL	NL
May Contain:		[]
Fibrous Glass (Continuous Filament)	<1	NL	NL	NL	NL	NL	NL
May be available with foil-backing:		[]
Aluminum Foil (as Aluminum and Cmpds)	<3	NL	NL	X	NL	NL	NL
Ethylene Vinyl Acetate Polymer	<2	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of Controlled Product regulations and the MSDS contains all the information required by the Controlled Products Regulations. All ingredients of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification
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Gypsum or Calcium Sulfate Dihydrate (CaSO4•2H2O)	>85	Not Listed	Not Listed
Cellulose	<10	Not Listed	Not Listed
Starch	<3	Not Listed	Not Listed
Crystalline Silica	<5	1406	D2A
May Contain:		[]
Fibrous Glass (Continuous Filament)	<1	Not Listed	Not Listed
May be available with foil-backing:		[]
Aluminum Foil (as Aluminum and Cmpds)	<3	47	Not Listed
Ethylene Vinyl Acetate Polymer	<2	Not Listed	Not Listed

IDL Item#: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

Risk and Safety Phrases defined by European Union Directive 67/548/EEC (Annex III and IV)

R-Phrase(s): R36/37/38

S-Phrase(s): S51 S38 S39

SECTION 16 OTHER INFORMATION

Label Information

Δ WARNING!

Dust can cause irritation to eyes, skin and respiratory tract. Wear eye, skin and respiratory protection as necessary per working conditions. If eye contact occurs flush with water for 15 minutes. Do not ingest. If ingested, call physician. If cutting board with a power tool, use a wet or vacuum saw to reduce the amount of dust generated. Panels are heavy and can fall over, causing serious injury or death. Avoid creating a tripping hazard and do not exceed floor limit loads. Product safety information: 800-507-8899 or usg.com. Customer Service: 800 USG-4-YOU (800 874-4968). KEEP OUT OF REACH OF CHILDREN.

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:		HMIS Ratings:	<table border="1"> <tr> <td>HEALTH</td> <td>*</td> <td>1</td> </tr> <tr> <td>FLAMMABILITY</td> <td></td> <td>0</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td></td> <td>0</td> </tr> <tr> <td>PERSONAL PROTECTION</td> <td></td> <td>E</td> </tr> </table>	HEALTH	*	1	FLAMMABILITY		0	PHYSICAL HAZARD		0	PERSONAL PROTECTION		E	0 = Minimal Hazard
HEALTH		*		1												
FLAMMABILITY				0												
PHYSICAL HAZARD				0												
PERSONAL PROTECTION		E														
Health:	1	Health:	1	1 = Slight Hazard												
Fire:	0	Fire:	0	2 = Moderate Hazard												
Reactivity:	0	Reactivity:	0	3 = Serious Hazard												
				4 = Severe Hazard												

E – Safety glasses, gloves and dust respirator; * - Contains silica

Key/Legend

ANSI	American National Standards Institute
ACGIH	American Conference of Governmental Industrial Hygienists
CAA	Clean Air Act
CAS	Chemical Abstracts Service (Registry Number)
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
DOT	United States Department of Transportation
DSL	Canadian Domestic Substances List



MATERIAL SAFETY DATA SHEET

SHEETROCK® Gypsum Panels

MSDS #54-000-001

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EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning & Community Right-to-know Act
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
MSHA	Mine Safety and Health Administration
NDSL	Canadian Non-Domestic Substances List
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Health and Safety Administration
PEL	Permissible Exposure Limit
PPE	Personal Protection Equipment
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act of 1986
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
UN/NA#	United Nations/North America number
WHMIS	Workplace Hazardous Material Information System

Prepared by:
Product Safety
USG Corporation
550 West Adams Street
Chicago, IL 60661-3637

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his/her own particular use.

END

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	Paper Faced Gypsum Panels
Product use	Products accommodate wide range of wall, floor and ceiling applications and soffit treatments.
Product list	See Product List found in Section 16
Manufacturer information	Georgia-Pacific Gypsum LLC Georgia-Pacific Gypsum II LLC 133 Peachtree Street, NE Atlanta, GA 3030 MSDS Request 404.652.5119 Technical Information 800.225.6119 Chemtrec - Emergency 800.424.9300

2. Hazards Identification

Emergency overview	CAUTION! Cutting, sanding, or otherwise working with this product may generate large amounts of dust. Dust can be irritating to the eyes, skin, and respiratory system.
Potential health effects	
Eyes	Dust may cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Skin	Dust and glass fibers may produce itching, rash, and redness. Handling can cause dry skin.
Inhalation	Dusts of this product may cause irritation to the nose, throat, or respiratory tract.
Ingestion	Not applicable under normal conditions of use. May result in obstruction or temporary irritation of the digestive tract.

3. Composition / Information on Ingredients

Components	CAS #	Percent/Wt
GYPSUM (CALCIUM SULFATE, DIHYDRATE)	10101-41-4	60 - 100
VERMICULITE (NON-ASBESTOS CONTAINING)****	1318-00-9	1 - 3
BORIC ACID**	10043-35-3	0.1 - 1
CONTINUOUS FILAMENT GLASS FIBERS***	65997-17-3	0.1 - 1
CRYSTALLINE SILICA (QUARTZ)*	14808-60-7	1 - 5

Composition comments	** Found in products in List B, C and F, Section 16 of this MSDS. *** Found in products in List C, D, E and F, Section 16 of this MSDS. **** Found in products in List E and F, Section 16 of this MSDS.
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Gypsum (calcium sulfate, dihydrate) contains naturally occurring silica crystalline (quartz), which is listed as a lung carcinogen. See Section 8 for exposure information.

*The weight percent for crystalline silica represents total crystalline silica and not the respirable fraction. Testing conducted by Georgia-Pacific did not detect respirable crystalline silica during activities associated with the normal use of this product; however, jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.
Skin contact	For skin contact, wash immediately with soap and water. Get medical attention if irritation develops or persists.
Inhalation	Remove to fresh air. If symptoms persist, obtain medical attention.
Ingestion	May result in obstruction and irritation if ingested. Get medical attention.

5. Fire Fighting Measures

Flammable properties	Not flammable by OSHA/WHMIS criteria.
Extinguishing media	
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire fighting equipment/instructions	Firefighters should wear full protective clothing including self contained breathing apparatus.
Explosion data	
Sensitivity to static discharge	Not applicable.
Sensitivity to mechanical impact	Not applicable.
Hazardous combustion products	May include, and are not limited to: calcium oxide and sulfur dioxide.

6. Accidental Release Measures

Personal precautions	Use personal protection recommended in Section 8. Keep unnecessary personnel away from the release.
Environmental precautions	Keep out of drains, sewers, ditches, and waterways.
Methods for containment	Contain the spill, then place in a suitable container. Minimize dust generation.
Methods for cleaning up	Sweep up or gather material and place in appropriate container for disposal. Utilize wet methods, if appropriate, to minimize dust.

7. Handling and Storage

Handling	Avoid contact with skin and eyes. Use only in well-ventilated areas. Handle and open container with care. Wear appropriate NIOSH approved dust mask or filtering facepiece if dust is generated. Do not eat or drink while using the product. Wash hands before eating, drinking, or smoking.
Storage	Store level and keep dry. Dewpoint or other conditions causing the presence of moisture can damage the product during storage.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH Components	Type	Value	Form
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)	TWA	0.025 mg/m ³	(Respirable fraction)
GYPSUM (CALCIUM SULFATE, DIHYDRATE) (CAS 10101-41-4)	TWA	10 mg/m ³	(Inhalable fraction)
US ACGIH Threshold Limit Values: Short Term Exposure Limit (STEL): mg/m³			
Components	Type	Value	Form
BORIC ACID** (CAS 10043-35-3)	STEL	6 mg/m ³	Inhalable fraction.
US ACGIH Threshold Limit Values: Time Weighted Average (TWA): mg/m³, non-standard units			
Components	Type	Value	Form
BORIC ACID** (CAS 10043-35-3)	TWA	2 mg/m ³	Inhalable fraction.
U.S. - OSHA			
Components	Type	Value	Form
GYPSUM (CALCIUM SULFATE, DIHYDRATE) (CAS 10101-41-4)	TWA	5 mg/m ³	(Respirable fraction)
		15 mg/m ³	(Total dust)

US OSHA Table Z-3: Calculated Time Weighted Average (TWA) (mg/m3)

Components	Type	Value	Form
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)	TWA	10 mg/m3	Total dust.

US OSHA Table Z-3: Calculated Time Weighted Average (TWA) (Non-standard unit)

Components	Type	Value	Form
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)	TWA	3.3 mg/m3	(Respirable fraction)

Exposure guidelines

*Exposure limits for CRYSTALLINE SILICA - The US OSHA exposure limits 8 hour TWA for CRYSTALLINE SILICA (QUARTZ) are calculated from the following equations: $30/(\%SiO_2+2)$ mg/m3 for total dust; and $10/(\%SiO_2+2)$ mg/m3 for the respirable fraction.

*The weight percent for crystalline silica represents total crystalline silica and not the respirable fraction. Testing conducted by Georgia-Pacific did not detect respirable crystalline silica during activities associated with the normal use of this product; however, jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

US ACGIH Threshold Limit Values: Short Term Exposure Limit (STEL): mg/m3

BORIC ACID** (CAS 10043-35-3)

US ACGIH Threshold Limit Values: Short Term Exposure Limit (STEL): mg/m3

Engineering controls

Score and snap method recommended. When using product, provide local and general exhaust ventilation to keep airborne dust concentrations below exposure limits. Use wet methods, if appropriate, to reduce the generation of dust.

Personal protective equipment**Eye / face protection**

Safety glasses or goggles are recommended when using this product. Ensure compliance with OSHA's PPE standard (29 CFR 1910.132 and .133) for eye and face protection. Safety shower/eye wash fountain is recommended in the workplace area (29 CFR 1910.151(c)).

Skin protection

Impervious protective clothing and gloves recommended to prevent drying or irritation of skin. Ensure compliance with OSHA's PPE standards (29 CFR 1910.132 (general) and 138 (hand protection)). Safety shower/eye wash fountain is recommended in the workplace area (29 CFR 1910.151 (c)).

Respiratory protection

A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

9. Physical & Chemical Properties

Appearance	Paper faced gypsum boards
Color	Facing color varies
Form	Solid
Odor	Odorless
Odor threshold	Not available.
pH	7
Melting point/Freezing point	Not applicable
Boiling point	Not applicable
Flash point	Not applicable
Evaporation rate	Not available
Flammability	Not flammable
Flammability limits in air, upper, % by volume	Not applicable
Flammability limits in air, lower, % by volume	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Specific gravity	2.2 - 2.4

Partition coefficient (n-octanol/water)	Not available.
Solubility (water)	0.2 % @ 22°C
Auto-ignition temperature	Not applicable

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions of reactivity	Contact with strong acids produces carbon dioxide.
Incompatible materials	Acids.
Hazardous decomposition products	May include and are not limited to: calcium oxide and sulfur dioxide.

11. Toxicological Information

Routes of exposure	Skin contact. Eye contact. Inhalation.
Toxicological information	No toxicological data available for this product. Toxicological information for components of this product is listed below.

Toxicological information (Ingredients)

GYPSUM (CALCIUM SULFATE, DIHYDRATE) (CAS # 10101-41-4)

Toxicology Data - Selected LD50s and LC50s

Oral LD50 Mouse: 5824 mg/kg
Oral LD50 Rat: 3000 mg/kg

BORIC ACID** (CAS # 10043-35-3)

Toxicology Data - Selected LD50s and LC50s

Oral LD50 Rat: 2660 mg/kg
Dermal LD50 Rabbit: 2000 mg/kg
Inhalation LC50 Rat: 0.16 mg/l/4h
Oral LD50 Chicken: 2.95 g/kg
Oral LD50 Dog: 2000 mg/kg
Oral LD50 Mouse: 3450 mg/kg
Inhalation LC50 Rat: 0.002 mg/l
Dermal LD50 Rabbit: 2000 mg/kg
Other LD50 Guinea pig: 1200 mg/kg
Other LD50 Mouse: 1240 mg/kg
Other LD50 Rat: 1330 mg/kg

Sensitization	Not expected to be hazardous by OSHA/WHMIS criteria.
Chronic effects	Not expected to be hazardous by OSHA/WHMIS criteria.
Carcinogenicity	Not expected to be hazardous by OSHA/WHMIS criteria.

Exposure to respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by IARC and NTP as a lung carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to a respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of respirable crystalline silica exposure and the length of time (usually years) of exposure.

ACGIH Carcinogens

CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) US ACGIH Threshold Limit Values: A2 carcinogen

IARC Monographs. Overall Evaluation of Carcinogenicity

CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) IARC Monographs: Overall evaluation 1 Volume 68, Volume 100C

Mutagenicity	Not expected to be hazardous by OSHA/WHMIS criteria.
Reproductive effects	Not expected to be hazardous by OSHA/WHMIS criteria.
Teratogenicity	Not expected to be hazardous by OSHA/WHMIS criteria.
Synergistic materials	Not available.

12. Ecological Information

Ecotoxicity	Not considered to be harmful to aquatic life.
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Ecotoxicological data

Components	Species	Test Results
BORIC ACID** (CAS 10043-35-3)		
Crustacea	EC50 Daphnia	766.5 mg/L, 48 Hours

Components	Species	Test Results
Aquatic		
Fish	LC50	Razorback sucker (<i>Xyrauchen texanus</i>) > 100 mg/l, 96 hours
GYPSUM (CALCIUM SULFATE, DIHYDRATE) (CAS 10101-41-4)		
Fish	LC50	Fish 2980 mg/l, 96 Hours

13. Disposal Considerations

Disposal instructions Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

14. Transport Information

DOT

Not regulated as dangerous goods.

TDG

Not regulated as dangerous goods.

15. Regulatory Information

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
 Delayed Hazard - No
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Section 313 hazardous chemical No

Canadian regulations

Canada WHMIS Ingredient Disclosure: Threshold limits

BORIC ACID** (CAS 10043-35-3) 1 %
 CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) 1 %

WHMIS status Non-controlled

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Product list

- Product List A
- ToughRock® Veneer Plaster Base (Blueboard)
- ToughRock® Flexroc® Gypsum Board
- ToughRock® Mold-Guard™ Gypsum Board
- ToughRock® Basement Board® Gypsum Board
- ToughRock® Sound Deadening Gypsum Board
- ToughRock® Stretch 54® Gypsum Board
- ToughRock® SOFFIT Board
- Stretch54® Gypsum Board
- Water-Resistant Gypsum Board

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Product list

Product List B

ToughRock® Gypsum Board
Gypsum Veneer Plaster Base Panels
Gypsum Wallboard

Product List C

MH Ceiling Board
ToughRock® Span 24® Lite-Weight Ceiling Board
Span24® Ceiling Board
ToughRock® Stretch 54® Lite-Weight Gypsum Board
Stretch54® Lite-Weight Gypsum Board
ToughRock® Lite-Weight Gypsum Board
Lite-Weight Gypsum Board
ToughRock® Fireguard X™ Gypsum Board
F-R "X" Gypsum Fire-Resistant Panels

Product List D

ToughRock® Gypsum Sheathing
ToughRock® MH Ceiling Board
ToughRock® Span 24® Ceiling Board
ToughRock® Fireguard X™ Gypsum Sheathing
ToughRock® Fireguard X™ Stretch 54® Gypsum Board
ToughRock® Fireguard X™ Mold-Guard™ Abuse-Resistant Gypsum
ToughRock® Mold-Guard™ Lite-Weight Gypsum Board
ComfortGuard® Sound-Deadening Gypsum Board
ComfortGuard® IR Impact-Resistant Gypsum Board
ComfortGuard® Mold-Resistant Gypsum Wallboard
ComfortGuard® AR Abuse-Resistant Gypsum Board
F-R "X" Stretch54® Gypsum Fire-Resistant Panels
F-R "X" Gypsum Sheathing Panels
Fire-Rated Structguard® Sheathing
Fire-Rated Water-Resistant Gypsum Board
Gypsum Sheathing Panels
ToughRock® Fireguard X™ Veneer Plaster Board
ToughRock® Fireguard X™ Soffit Board
ToughRock® Fireguard X™ Abuse-Resistant Gypsum Board
ToughRock® Fireguard X™ Mold-Guard™ Gypsum Board
F-R "X" Gypsum Soffit Panels
F-R "X" ComfortGuard® Mold-Resistant Gypsum Wallboard
Gypsum Veneer Plaster Base Panels

Product List E

ToughRock® Shaftliner
Silentguard® Shaftliner
ToughRock® Fireguard C® Soffit Board

Product list

ToughRock® Fireguard C® Stretch 54® Gypsum Board
ToughRock® Lite-Weight Fire-Rated Gypsum Board
F-R TG "C" Gypsum Fire-Resistant Panels
F-R "C" Gypsum Soffit Panels

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Product List F

ToughRock® Fireguard C® Gypsum Board

HMIS® ratings

Health: 1
Flammability: 0
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 0
Instability: 0

Disclaimer

The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. Buyer assumes all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Georgia-Pacific and its subsidiaries make no warranty of any kind, expressed or implied, concerning the accuracy or completeness of the information and data herein. The implied warranties of merchantability and fitness for a particular purpose are specifically excluded. Georgia-Pacific and its subsidiaries will not be liable for claims relating to any party's use of or reliance on information and data contained herein regardless of whether it is claimed that the information and data are inaccurate, incomplete or otherwise misleading.

Prepared by

Georgia-Pacific LLC
404.652.5119

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	Glass Mat Faced Gypsum Panels
Product use	Products accommodate a wide range of wall, floor, ceiling and roof applications
Product list	See Product List found in Section 16
Manufacturer information	Georgia-Pacific Gypsum LLC Georgia-Pacific Gypsum II LLC 133 Peachtree Street, NE Atlanta, GA 3030 MSDS Request 404.652.5119 Technical Information 800.225.6119 Chemtrec - Emergency 800.424.9300

2. Hazards Identification

Emergency overview	CAUTION! Cutting, sanding, or otherwise working with this product may generate large amounts of dust. Dust can be irritating to the eyes, skin, and respiratory system.
Potential health effects	
Eyes	Dust may cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Skin	Dust and glass fibers may produce itching, rash, and redness. Handling can cause dry skin.
Inhalation	Dust may cause respiratory tract irritation.
Ingestion	Not applicable under normal conditions of use. May result in obstruction and temporary irritation of the digestive tract.

3. Composition / Information on Ingredients

Components	CAS #	Percent/Wt
GYPSUM (CALCIUM SULFATE, DIHYDRATE)	10101-41-4	60 - 100
VERMICULITE (NON-ASBESTOS CONTAINING)**	1318-00-9	3 - 7
CRYSTALLINE SILICA (QUARTZ)*	14808-60-7	1 - 5
CONTINUOUS FILAMENT GLASS FIBER	65997-17-3	1 - 5

Composition comments ** Found in products in List B, Section 16 of this MSDS.

Gypsum (calcium sulfate, dihydrate) and vermiculite contain naturally occurring crystalline silica (quartz) which is listed as a lung carcinogen. See Section 8 for exposure information.

*The weight percent for crystalline silica represents total crystalline silica and not the respirable fraction. Testing conducted by Georgia-Pacific did not detect respirable crystalline silica during activities associated with the normal use of this product; however, jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.
Skin contact	For skin contact, wash immediately with soap and water. Get medical attention if irritation develops or persists.
Inhalation	Remove to fresh air. If symptoms persist, obtain medical attention.
Ingestion	May result in obstruction and irritation if ingested. Get medical attention.

5. Fire Fighting Measures

Flammable properties Not flammable by OSHA/WHMIS criteria.

Extinguishing media	
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire fighting equipment/instructions	Firefighters should wear full protective clothing including self contained breathing apparatus.
Explosion data	
Sensitivity to static discharge	Not applicable.
Sensitivity to mechanical impact	Not applicable.
Hazardous combustion products	May include, and are not limited to: calcium oxide and sulfur dioxide.

6. Accidental Release Measures

Personal precautions	Use personal protection recommended in Section 8. Keep unnecessary personnel away from the release.
Environmental precautions	Keep out of drains, sewers, ditches, and waterways.
Methods for containment	Pick up large pieces, then place in a suitable container. Minimize dust generation.
Methods for cleaning up	Sweep up or gather material and place in an appropriate container for disposal. Utilize wet methods, if appropriate, to minimize dust.

7. Handling and Storage

Handling	Avoid contact with skin and eyes. Do not breathe dust. Use only in well-ventilated areas. Handle and open container with care. Wear appropriate NIOSH approved dust mask or filtering facepiece if dust is generated. Do not eat or drink while using the product. Wash hands before eating, drinking, or smoking.
Storage	Store level and keep dry. Dewpoint or other conditions causing the presence of moisture can damage the product during storage.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components	Type	Value	Form
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)	TWA	0.025 mg/m ³	(Respirable fraction)
GYPSUM (CALCIUM SULFATE, DIHYDRATE) (CAS 10101-41-4)	TWA	10 mg/m ³	(Inhalable fraction)

U.S. - OSHA

Components	Type	Value	Form
GYPSUM (CALCIUM SULFATE, DIHYDRATE) (CAS 10101-41-4)	TWA	5 mg/m ³	(Respirable fraction)
		15 mg/m ³	(Total dust)

US OSHA Table Z-3: Calculated Time Weighted Average (TWA) (mg/m³)

Components	Type	Value	Form
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)	TWA	10 mg/m ³	Total dust.

US OSHA Table Z-3: Calculated Time Weighted Average (TWA) (Non-standard unit)

Components	Type	Value	Form
CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7)	TWA	3.3 mg/m ³	(Respirable fraction)

Exposure guidelines	<p>*Exposure limits for CRYSTALLINE SILICA - The US OSHA exposure limits 8 hour TWA for CRYSTALLINE SILICA (QUARTZ) are calculated from the following equations: $30/(\%SiO_2+2)$ mg/m³ for total dust; and $10/(\%SiO_2+2)$ mg/m³ for the respirable fraction.</p> <p>*The weight percent for crystalline silica represents total crystalline silica and not the respirable fraction. Testing conducted by Georgia-Pacific did not detect respirable crystalline silica during activities associated with the normal use of this product; however, jobsite air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.</p>
Engineering controls	Score and snap method recommended. When using product, provide local and general exhaust ventilation to keep airborne dust concentrations below exposure limits. Use wet methods, if appropriate, to reduce the generation of dust.
Personal protective equipment	
Eye / face protection	Safety glasses or goggles are recommended when using this product. Ensure compliance with OSHA's PPE standard (29 CFR 1910.132 and .133) for eye and face protection. Safety shower/eye wash fountain is recommended in the workplace area (29 CFR 1910.151(c)).
Skin protection	Impervious protective clothing and gloves recommended to prevent drying or irritation of skin. Ensure compliance with OSHA's PPE standards (29 CFR 1910.132 (general) and 138 (hand protection)). Safety shower/eye wash fountain is recommended in the workplace area (29 CFR 1910.151 (c)).
Respiratory protection	A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

9. Physical & Chemical Properties

Appearance	Gypsum boards
Color	Facing color varies
Form	Solid
Odor	Low odor
Odor threshold	Not available.
pH	6 - 8
Melting point	Not available.
Boiling point	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability	Not flammable
Flammability limits in air, upper, % by volume	Not applicable
Flammability limits in air, lower, % by volume	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Specific gravity	2.2 - 2.4
Partition coefficient (n-octanol/water)	Not available.
Solubility (water)	0.2 % @ 22°C
Auto-ignition temperature	Not applicable

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions of reactivity	Contact with strong acids produces carbon dioxide.
Incompatible materials	Acids.
Hazardous decomposition products	May include and are not limited to: calcium oxide and sulfur dioxide.

11. Toxicological Information

Routes of exposure	Skin contact. Eye contact. Inhalation.
Toxicological information	No toxicological data available for this product. Toxicological information for components of this product is listed below.
Toxicological information (Ingredients)	
GYPSUM (CALCIUM SULFATE, DIHYDRATE) (CAS # 10101-41-4)	
Toxicology Data - Selected LD50s and LC50s	Oral LD50 Mouse: 5824 mg/kg Oral LD50 Rat: 3000 mg/kg
Sensitization	Not expected to be hazardous by OSHA/WHMIS criteria.
Chronic effects	Not expected to be hazardous by OSHA/WHMIS criteria.
Carcinogenicity	Not expected to be hazardous by OSHA/WHMIS criteria.

Exposure to respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by IARC and NTP as a lung carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to a respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of respirable crystalline silica exposure and the length of time (usually years) of exposure.

ACGIH Carcinogens

CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) US ACGIH Threshold Limit Values: A2 carcinogen

IARC Monographs. Overall Evaluation of Carcinogenicity

CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) IARC Monographs: Overall evaluation 1 Volume 68, Volume 100C

Mutagenicity	Not expected to be hazardous by OSHA/WHMIS criteria.
Reproductive effects	Not expected to be hazardous by OSHA/WHMIS criteria.
Teratogenicity	Not expected to be hazardous by OSHA/WHMIS criteria.
Synergistic materials	Not available.

12. Ecological Information

Ecotoxicity Not considered to be harmful to aquatic life.

Ecotoxicological data

Components	Species	Test Results
GYPSUM (CALCIUM SULFATE, DIHYDRATE) (CAS 10101-41-4)		
Fish	LC50	Fish 2980 mg/l, 96 Hours

13. Disposal Considerations

Disposal instructions Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

14. Transport Information

DOT

Not regulated as dangerous goods.

TDG

Not regulated as dangerous goods.

15. Regulatory Information

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	Yes
Section 313 hazardous chemical	No

Canadian regulations

Canada WHMIS Ingredient Disclosure: Threshold limits

CRYSTALLINE SILICA (QUARTZ)* (CAS 14808-60-7) 1 %

WHMIS status Controlled

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Product list

Product List A

- DensArmor Plus® High Performance Interior Panel
- DensArmor Plus® Fireguard® Abuse-Resistant Panels
- DensArmor Plus® Fireguard® Impact-Resistant Panels
- DensArmor Plus® Fireguard® Interior Panels
- DensDeck® DuraGuard Roof Board
- DensDeck® Prime Roof Board
- DensDeck® Roof Board
- DensDeck® DuraGuard Fireguard® Roof Board
- DensDeck® Prime Fireguard® Roof Board
- DensDeck® Fireguard® Roof Board
- DensGlass® Fireguard® Sheathing
- DensGlass® Shaftliner
- DensGlass® Sheathing
- DensShield® Fireguard® Tile Backer
- DensShield® Tile Backer
- Fire-Rated GreenGlass® Prime Roof Board
- Fire-Rated GreenGlass® Sheathing
- Fire-Rated GreenGlass® Tile Backer
- Fire-Rated GreenGlass® Roof Board
- Fire-Rated GreenGlass® Interior Panels
- GreenGlass® Prime Roof Board
- GreenGlass® Roof Board
- GreenGlass® Sheathing
- GreenGlass® Tile Backer
- GreenGlass® Interior Panels

.....

Product List B

- DensArmor Plus® Fireguard C® High-Performance Interior Panels
- GreenGlass® Shaftliner

.....

HMIS® ratings Health: 1
Flammability: 0
Physical hazard: 0

NFPA ratings Health: 1
Flammability: 0
Instability: 0

Disclaimer

The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. Buyer assumes all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Georgia-Pacific and its subsidiaries make no warranty of any kind, expressed or implied, concerning the accuracy or completeness of the information and data herein. The implied warranties of merchantability and fitness for a particular purpose are specifically excluded. Georgia-Pacific and its subsidiaries will not be liable for claims relating to any party's use of or reliance on information and data contained herein regardless of whether it is claimed that the information and data are inaccurate, incomplete or otherwise misleading.

Prepared by

Georgia-Pacific LLC
404.652.5119

Material Safety Data Sheet

MSDS:
Continental Building Products
Drywall

Section 1: PRODUCT AND COMPANY INFORMATION

Product Name(s): Continental Building Products Drywall

Product Identifiers: Drywall, Firecheck® Type X, Firecheck® Type C, Watercheck®, Fire Watercheck® Type X, Firecheck® Shaftliner, Gypboard, Sagcheck®, Soffitboard, Firecheck® Soffitboard, Sheathing, Firecheck® Sheathing Type X, Plasterbase, Firecheck® Plasterbase Type X, Rapid Deco® Level Five®, Protecta® AR 100 Type X with Mold Defense®, Shaft Wall Liner, Green Board, Mold Defense® Type X, Mold Defense® Shaftliner Type X, Weather Defense® Platinum, Rapid Deco Type X, Weather Defense® Platinum Type X, Rapid Deco, Rapid Deco with Mold Defense, Rapid Deco with Mold Defense® Type X, Shaftliner Type X, Protecta® AR 100 with Mold Defense®, Protecta® HIR 300, Weather Defense® Platinum Shaftliner, LiftLite®, Weather Defense® Interior, Weather Defense® Interior Type X.

Manufacturer:
Continental Building Products Inc.
12950 Worldgate Drive, suite 700
Herndon, VA 20170

Information Telephone Number:
800.237.5505 (9am to 5pm EST)

Emergency Telephone Number:
800.451.8346 (3E Hotline)

Product Use: Drywall is used for commercial and residential construction.





Note: This MSDS covers many types of drywall. Individual composition of hazardous constituents will vary between types of drywall.

Section 2: COMPOSITION/INFORMATION ON INGREDIENTS

Component	Percent (By Weight)	CAS Number	OSHA PEL - TWA (mg/m ³)	ACGIH TLV-TWA (mg/m ³)	LD ₅₀ Rat, Oral	LC ₅₀ Rat, Inhalation
Gypsum* (Calcium Sulfate)	70-90	7778-18-9	15 (T), 5 (R)	10 (T)	NA	NA
Calcium Carbonate*	60-65	1317-65-3	15 (T), 5 (R)	3 (R); 10 (T)	NA	NA
Cellulose	0-10	9004-34-6	15 (T), 5 (R)	10 (T)	>5 g/kg	>5.8 g/m3/4H
Crystalline Silica (as Quartz)	0-2	14808-60-7	[[10] / (%SiO ₂ +2)] (R); [(30) / (%SiO ₂ +2)] (T)	0.025 (R)	NA	NA
Vermiculite	0-10	1318-00-9	NA	NA	NA	NA
Potassium sulfate	0-5	7778-80-5	NA	NA	6.6 g/kg	NA
Starch	0-5	9005-25-8	15 (T), 5 (R)	10 (T)	6.6 g/kg (I, M)	NA
Fiberglass (Continuous Filament)	0-5	65997-17-3	15 (T), 5 (R)	5 (I)	NA	NA
Mica *	2-3	12001-26-2	3 (R)	3 (R)	NA	NA
Paraffin Wax (fume)	0-2	8002-74-2	NA	2 (T)	NA	NA
Boric Acid	0-1	10043-35-3	NA	NA	2.7 g/kg	NA

Note: Exposure limits for components noted with an * contain no asbestos and <1% crystalline silica (I, M) = LD₅₀ Intraperitoneal and Mouse

Section 3: HAZARD IDENTIFICATION

	WARNING	 Respiratory Protection  Eye Protection  Gloves
	<p>Toxic - Harmful by inhalation. (Contains crystalline silica)</p> <p>Use proper engineering controls, work practices, and Personal Protective Equipment (PPE) to prevent exposure to dust.</p> <p>Read MSDS for details.</p>	

Section 3: HAZARD IDENTIFICATION (continued)

Emergency Overview: Drywall is a solid material that is composed of paper covered gypsum board. The paper covering can be gray, green, brown, blue, or white while the internal gypsum board is an off-white color. Drywall is odorless. Drywall is not combustible or explosive. A single, short-term exposure to drywall dust presents little or no hazard.

Potential Health Effects:

Eye Contact: Eye contact to airborne dust may cause immediate or delayed irritation or inflammation. Eye exposures require immediate first aid and medical attention to prevent significant damage to the eye.

Skin Contact: Drywall dust may cause dry skin, discomfort, and irritation.

Inhalation (acute): Breathing dust may cause nose, throat or lung irritation, including choking, depending on the degree of exposure.

Inhalation (chronic): Risk of injury depends on duration and level of exposure.

Silicosis: This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis, a seriously disabling and fatal lung disease. See Note to Physicians in Section 4 for further information.

This product contains mica. Prolonged and repeated inhalation of respirable mica dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury depends on duration and level of exposure.

Carcinogenicity: Crystalline silica is classified by IARC and NTP as a known human carcinogen.

Autoimmune Disease: Some studies show that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders such as scleroderma (thickening of the skin), systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys.

Tuberculosis: Silicosis increases the risk of tuberculosis.

Renal Disease: Some studies show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica.

Ingestion: Do not ingest drywall. Ingestion of small quantities of drywall is not known to be harmful; ingesting large quantities can cause intestinal distress.

Medical Conditions Aggravated by Exposure: Individuals with lung disease (e.g. bronchitis, emphysema, COPD, pulmonary disease) can be aggravated by exposure.

Section 4: FIRST AID MEASURES

Eye Contact: Rinse eyes thoroughly with water for at least 15 minutes, including under lids, to remove all particles. Seek medical attention for abrasions.

Skin Contact: Wash with cool water and a pH neutral soap or a mild skin detergent. Seek medical attention for rash or irritation.

Inhalation: Move person to fresh air. Seek medical attention for discomfort or if coughing or other symptoms do not subside.

Ingestion: Do not induce vomiting. If conscious, have person drink plenty of water. Seek medical attention or contact poison control center immediately.

Section 4: FIRST AID MEASURES (continued)

Note to Physician:

The three types of silicosis include:

- Simple chronic silicosis – which results from long-term exposure (more than 20 years) to low amounts of respirable crystalline silica. Nodules of chronic inflammation and scarring provoked by the respirable crystalline silica form in the lungs and chest lymph nodes. This disease may feature breathlessness and may resemble chronic obstructive pulmonary disease (COPD).
- Accelerated silicosis – occurs after exposure to larger amounts of respirable crystalline silica over a shorter period of time (5-15 years). Inflammation, scarring, and symptoms progress faster in accelerated silicosis than in simple silicosis.
- Acute silicosis – results from short-term exposure to very large amounts of respirable crystalline silica. The lungs become very inflamed and may fill with fluid, causing severe shortness of breath and low blood oxygen levels.

Progressive massive fibrosis may occur in simple or accelerated silicosis, but is more common in the accelerated form. Progressive massive fibrosis results from severe scarring and leads to the destruction of normal lung structures.

Section 5: FIREFIGHTING MEASURES

Flashpoint & Method:	Non-combustible	Combustion Products:	None.
General Hazard:	Avoid breathing dust.	Firefighting Equipment:	Drywall poses no fire-related hazard. A SCBA is recommended to limit exposures to combustion products when fighting any fire.
Extinguishing Media:	Use extinguishing media appropriate for surrounding fire.		
Flammability (UL classification):	Flame spread: 10 or 15	Smoke development: 0	Non-combustible core

Section 6: ACCIDENTAL RELEASE MEASURES

General: Place broken material and drywall dust into a container. Avoid actions that cause dust to become airborne. Avoid inhalation of dust. Wear appropriate protective equipment as described in Section 8.

Waste Disposal Method: Dispose of drywall according to Federal, State, Provincial and Local regulations.

Section 7: HANDLING AND STORAGE

General: Minimize dust generation and accumulation. Use good safety and industrial hygiene practices.

Follow traditional building practices; such as management of water away from the interior of the structure to avoid the growth of mold, mildew and fungus. Remove any building products suspected of being exposed to sustained moisture and considered conducive to mold growth from the jobsite.

When moving board with a forklift or similar equipment, it is essential that the equipment be rated capable of handling the loads. The forks should always be long enough to extend completely through the width of the load. Fork spacing between supports should be one half the length of the panels or base being handled so that a maximum of 4 feet extends beyond the supports on either end.

Section 7: HANDLING AND STORAGE (continued)

Drywall is heavy and poses risks such as sprains and strains to the back, arms, shoulders and legs during lifting and mixing. Handle with care and use appropriate control measures.

Usage: Cutting, crushing or sanding drywall or other crystalline silica-bearing materials will release respirable crystalline silica. Use all appropriate measures of dust control or suppression, and Personal Protective Equipment (PPE) described in Section 8 below.

Housekeeping: Avoid actions that cause dust to become airborne during clean-up such as dry sweeping or using compressed air. Use HEPA vacuum or thoroughly wet with water to clean-up dust. Use PPE described in Section 8 below.

Storage: Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities, as described in Section 10. Protect product from physical damage. Protect from weather and prevent exposure to sustained moisture.

Gypsum Association literature recommends storing board flat to avoid damaging edges, warping the board and the potential safety hazards of the board falling over. However, in other situations, storing the board flat may cause a tripping hazard or exceed floor limit loads. If stacking board vertically, leave at least 4 inches from the wall to decrease the risk of falling board and no more than 6 inches to avoid too much lateral weight against the wall.

Storage Temperature: Drywall should not be used where temperatures exceed 125° F for extended periods or in areas of extreme humidity.

Storage Pressure: Unlimited.

Clothing: Remove and launder clothing that is dusty before it is reused.

Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls: Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits.

Personal Protective Equipment (PPE):

Respiratory Protection: Under ordinary conditions no respiratory protection is required. Wear a NIOSH approved respirator that is properly fitted and is in good condition when exposed to dust above exposure limits.

Eye Protection: Wear ANSI approved glasses or safety goggles when handling drywall to prevent dust coming in contact with eyes. Wearing contact lenses when using drywall, under dusty conditions, is not recommended.

Skin Protection: Wear gloves when handling drywall. Remove clothing and protective equipment that becomes dusty and launder before reusing.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid	Evaporation Rate:	NA.
Appearance:	Variety of paper colors, with white	pH (in water):	Neutral
Odor:	core None.	Boiling Point:	NA
Vapor Pressure:	NA.	Freezing Point:	None, solid.
Vapor Density:	NA.	Viscosity:	None, solid.
Specific Gravity:	1.1 to 4.0 lbs/ft ²	Solubility in Water:	< 0.2% @ 20° C

Section 10: STABILITY AND REACTIVITY

- Stability:** Stable. Avoid contact with incompatible materials.
- Incompatibility:** The components of drywall are incompatible with strong oxidizers, strong acids, diazomethane, ammonium salts, aluminum, and fluorine.
- Hazardous Polymerization:** None.
- Hazardous Decomposition:** Thermal decomposition may yield sulfur oxides, and calcium oxide fumes (above 825°C).

Section 11 and 12: TOXICOLOGICAL AND ECOLOGICAL INFORMATION

For questions regarding toxicological and ecological information refer to contact information in Section 1.

Section 13: DISPOSAL CONSIDERATIONS

Dispose of waste and containers in compliance with applicable Federal, State, Provincial and Local regulations.

Section 14: TRANSPORT INFORMATION

This product is not classified as a Hazardous Material under U.S. DOT or Canadian TDG regulations.

Section 15: REGULATORY INFORMATION

- OSHA/MSHA Hazard Communication:** This product is considered by OSHA/MSHA to be a hazardous chemical and should be included in the employer's hazard communication program.
- CERCLA/SUPERFUND:** This product is not listed as a CERCLA hazardous substance.
- EPCRA SARA Title III:** This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 and is considered a hazardous chemical and a delayed health hazard.
- EPRCA SARA Section 313:** This product contains none of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.
- RCRA:** If discarded in its purchased form, this product would not be a hazardous waste either by listing or characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.
- TSCA:** Crystalline silica is exempt from reporting under the inventory update rule.
- California Proposition 65:** Crystalline silica (airborne particulates of respirable size) is known by the State of California to cause cancer.
- WHMIS/DSL:** Products containing crystalline silica and calcium carbonate are classified as D2A and are subject to WHMIS requirements.



Section 16: OTHER INFORMATION

Abbreviations:

>	Greater than	NA	Not Applicable
ACGIH	American Conference of Governmental Industrial Hygienists	NFPA	National Fire Protection Association
CAS No	Chemical Abstract Service number	NIOSH	National Institute for Occupational Safety and Health
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	NTP	National Toxicology Program
		OSHA	Occupational Safety and Health Administration
CFR	Code for Federal Regulations	PEL	Permissible Exposure Limit
CL	Ceiling Limit	pH	Negative log of hydrogen ion
DOT	U.S. Department of Transportation	PPE	Personal Protective Equipment
EST	Eastern Standard Time	R	Respirable Particulate
HEPA	High-Efficiency Particulate Air	RCRA	Resource Conservation and Recovery Act
HMIS	Hazardous Materials Identification System	SARA	Superfund Amendments and Reauthorization Act
IARC	International Agency for Research on Cancer	T	Total Particulate
		TDG	Transportation of Dangerous Goods
LC ₅₀	Lethal Concentration	TLV	Threshold Limit Value
LD ₅₀	Lethal Dose	TWA	Time Weighted Average (8 hour)
mg/m ³	Milligrams per cubic meter	WHMIS	Workplace Hazardous Materials Information System
MSHA	Mine Safety and Health Administration		

This MSDS (Section 1) was revised on April 11, 2014.

An electronic version of this MSDS is available at: www.continental-bp.com under the Resources section.

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MATERIAL SAFETY DATA SHEET—SOFT LEAD

SECTION 1, IDENTIFICATION

Product Name: Soft Lead

Synonyms: Corroding grade lead, pure lead

CAS No: 7439-92-1

Chemical Formula: Pb

RTECS: OF7525000

TSCA: TSCA 8(b) inventory: Lead

CI#: Not available.

Synonym: Lead Metal, granular; Lead Metal, foil;
Lead Metal, sheet; Lead Metal, shot

Chemical Name: Lead

Contact Information:

Radiation Protection Products, Inc.

P.O. Box 862

1000 Superior Boulevard, Suite 310

Wayzata, MN 55391

Phone: 1.888.746.4777 (RINGRPP)

Sales: 1.888.746.4777 (RINGRPP)

Web site: www.radiationproducts.com

SECTION 2, HAZARD(S) IDENTIFICATION

POTENTIAL HEALTH EFFECTS

Inhalation: When scattered in the air as a dust, fume or mist, it may be inhaled (breathed) and absorbed through the lungs and upper respiratory tract irritation and it can result in both acute and chronic overexposure.

Ingestion: When it gets into the mouth and is swallowed, it may be absorbed through the digestive system and can result in both acute and chronic overexposure.

Skin Contact: Dust, fume or mist, are not readily absorbed through the skin; however, they may cause mechanical irritation to the skin.

Eye Contact: Dust, fume or mist may cause mechanical irritation.

SIGNS & SYMPTOMS OF OVEREXPOSURE

Acute (short term) exposure: If left untreated—weakness, vomiting, loss of appetite, uncoordinated body movements, convulsions, stupor, bloody stools, and possible coma.

Chronic (long term) exposure: If left untreated—weakness, insomnia, hypertension, slight irritation to skin and eyes, metallic taste in mouth, anemia, constipation, headache, muscle and joint pains, neuromuscular dysfunction, possible paralysis and encephalopathy. Lead and its inorganic compounds are neurotoxins that may produce peripheral neuropathy. For an overview of the effects of lead exposure, see OSHA 29CFR1910.1025, Appendix A.

SECTION 3, COMPOSITION/INFORMATION ON INGREDIENTS

Material:

Lead

% by Weight:

99.9+%

CAS #:

7439-92-1

Toxicological Data on Ingredients: Lead LD50: Not available. LC50: Not available.

SECTION 4, FIRST-AID MEASURES

Inhalation: Remove from exposure. Get medical attention if experiencing affects of overexposure.

Ingestion: Get immediate medical attention.

Eyes: Flush with large quantities of water. Get immediate medical attention.

Skin: Wash thoroughly with soap and water.

SECTION 5, FIRE-FIGHTING MEASURES

Flash Point: Not Applicable

Fire Extinguishing Media: Dry chemical or carbon dioxide should be used on surrounding fire. DO NOT use water on fires where molten metal is present.

Special Fire Fighting Precautions: Use approved full-face-piece, self-contained breathing apparatus and full protective clothing if involved in a fire.

Unusual Fire and Explosion Hazard: Molten metals produce fume, dust or mist that may be toxic.

SECTION 6, ACCIDENTAL RELEASE MEASURES

Spill or Leak: Dust or particulate should be vacuumed or wet swept where vacuuming is infeasible. Place material in dry, closed containers for disposal or recycling. Do not use compressed air or dry sweeping for cleaning. Use approved respiratory protection if dust/fume exposure possibility exists.

SECTION 7, HANDLING AND STORAGE

Storage: Store in a dry area where accidental contact with hydrogen peroxide is not possible.

Other Special Precautions/Procedures: Wash hands, face, neck and arms thoroughly before eating or smoking. Eating and smoking should be confined to non-contaminated areas. Work clothes and equipment should remain in designated contaminated areas, and should never be taken home or laundered with personal clothing. Do not use compressed air for blowing dust off of clothes.

Before using the product, consult the OSHA Federal Standard for Occupational Exposure to Lead 29CFR1910.1025.

SECTION 8, EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA Exposure Limit: 0.05 mg/meter (OSHA)

Ventilation: Local exhaust ventilation shall be provided in areas where exposures are above the permissible limits or threshold limit values specified by OSHA or other local, state, and federal regulations.

Respiratory Protection: Use of approved (OSHA 29CFR1910.1025 (f)) respirators is required for applications where adequate ventilation cannot be provided.

Eyes and Face: Face shields or vented goggles should be used around molten metal. Safety glasses should be used for operations generating flying pieces.

Gloves: Gloves should be worn when handling the product.

Other Clothing and Equipment: Full protective clothing is required if the permissible exposure limit is exceeded. Hard hat, safety shoes, and other safety equipment should be worn as appropriate for the environment.

SECTION 9, PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Silver-gray metal, odorless. Various shapes and sizes.

Molecular Weight: 207.2

Boiling Point: Greater than 3164°F (1740°C)

Vapor Density: Not Applicable

Vapor Pressure: Not Applicable

% Volatiles by Volume: Not Applicable

Specific Gravity (H₂O=1): 11.34

Melting Point: 621°F (327°C)

Solubility in Water: Insoluble

Evaporation Rate: Not Applicable

SECTION 10, STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: Not Applicable

Hazardous Polymerization: Not Applicable

SECTION 11, TOXICOLOGICAL INFORMATION

Routes of Entry: Absorbed through skin. Inhalation. Ingestion.

Biological Limit for Lead: 50 micrograms lead/100 grams whole blood.

SECTION 12, ECOLOGICAL INFORMATION

Precautions should be taken to prevent the release of lead into the environment. Lead may bioaccumulate to some extent.

SECTION 13, DISPOSAL CONSIDERATIONS

Waste Disposal Method: Material should be recycled if at all possible. Collection, transportation, and storage should be in accordance with federal, state and local laws.

SECTION 14, TRANSPORT INFORMATION

Lead metal is not a DOT regulated material.

SECTION 15, REGULATORY INFORMATION

FEDERAL AND STATE REGULATIONS

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Lead California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (female) which would require a warning under the statute: Lead California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (male) which would require a warning under the statute: Lead California prop. 65 (no significant risk level): Lead: 0.0005 mg/day (value) California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Lead California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Lead Connecticut hazardous material survey.: Lead Illinois toxic substances disclosure to employee act: Lead Illinois chemical safety act: Lead New York release reporting list: Lead Rhode Island RTK hazardous substances: Lead Pennsylvania RTK: Lead

OTHER REGULATIONS

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

OTHER CLASSIFICATIONS

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

R20/22- Harmful by inhalation and if swallowed. R33- Danger of cumulative effects. R61- May cause harm to the unborn child. R62- Possible risk of impaired fertility. S36/37- Wear suitable protective clothing and gloves. S44- If you feel unwell, seek medical advice (show the label when possible). S53- Avoid exposure - obtain special instructions before use.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

SECTION 16, OTHER INFORMATION

Created: September 25, 2014

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Radiation Protection Products, Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Radiation Protection Products, Inc. has been advised of the possibility of such damages.



SECTION 1
CHEMICAL PRODUCT AND IDENTIFICATION

United States Gypsum Company
550 West Adams Street
Chicago, Illinois 60661-3637
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: January 1, 2011
Version: 6

PRODUCT(S) DUROCK® Exterior Cement Board

CHEMICAL FAMILY / GENERAL CATEGORY Cement Board

SYNONYMS Water-durable, mold-resistant panel for tile and other finishes in both interior and exterior applications.

SECTION 2
HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:
ΔWARNING!

This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract. Portland cement is a nuisance dust. However, portland cement is strongly alkaline and can cause severe injury. Contact with eyes or skin can cause irritation and possible irreversible tissue damage, corrosion damage, chemical burning and corneal damage. Wear eye and skin protection.

POTENTIAL HEALTH EFFECTS (See Section 11 for more information)

ACUTE :

Inhalation	Exposure to dust generated during the handling or use of the product may cause temporary irritation to eyes, skin, nose, throat, and upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician. Inhalation of portland cement dust can irritate or burn the nose, throat, and mucous membrane of the upper respiratory tract. Signs of excessive exposure to this dust include shortness of breath and reduced pulmonary function. If respiratory symptoms persist, consult physician.
Eyes	Dust can cause temporary mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician. Portland Cement is a strongly alkaline material and is very irritating to eyes. The extent of damage depends on duration of contact. Rapid response is very important to prevent significant damage to the eye (See Section 4, First Aid Measures). Portland cement can cause burns and cornea damage that may result in permanent damage with risk of blindness. Contact lenses should not be worn when working with portland cement. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.
Skin	None known.
Ingestion	None known.

CHRONIC:

Inhalation	Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or
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MATERIAL SAFETY DATA SHEET

DUROCK® Exterior Cement Board

MSDS #14-090-003

Page 2 of 9

	lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.
Eyes	None known.
Skin	None known.
Ingestion	None known.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S) All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11: Toxicology Information for detailed information.

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Fiber Glass Scrim	3	2	A3	Not Listed
Crystalline silica	1	1	A2	Listed

IARC - International Agency for Research on Cancer: 1- Carcinogenic to humans; 2A – Probably carcinogenic to humans; 2B – Possibly carcinogenic to humans; 3 - Not classifiable as a carcinogen; 4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS): 1- Known to be carcinogen; 2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists: A1 – Confirmed human carcinogen; A2 – Suspected human carcinogen; A3 – Animal carcinogen; A4 - Not classifiable as a carcinogen; A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 “Chemicals known to the State of California to Cause Cancer”

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent of crystalline silica given represents total quartz and not the respirable fraction. The weight percent of respirable silica has not been measured in this product.

POTENTIAL ENVIRONMENTAL EFFECTS: Portland cement is expected to be toxic to fish due to its high alkalinity (pH > 12). Discharge of large quantities directly into waterways would be expected to cause significant fish kills. (See Section 12 for more information.)

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	CAS #
Portland Cement	10-30	65997-15-1
Expanded Clay Aggregate Or Expanded Shale	30-50	68334-37-2 68476-95-9
High Alumina Cement	0-10	65997-16-2
Fly Ash	10-20	68131-74-8
Gypsum (CaSO ₄ •2H ₂ O)	0-10	13397-24-5
Fiber Glass Scrim	1-5	65997-17-3
Soda Ash	0-2	497-19-8
Crystalline Silica	<5	14808-60-7 [^]

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory and the Canadian Domestic Substances List (DSL).

[^]The weight percent for silica represents total quartz and not the respirable fraction.



SECTION 4
FIRST AID MEASURES

FIRST AID PROCEDURES

Inhalation	Remove to fresh air. Leave the area of exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.
Eyes	In case of contact, do not rub or scratch your eyes. Due to portland cement content in this product, if eye contact occurs immediately flush eyes with copious amounts of water, occasionally lifting the lower and upper lids. Get medical attention immediately. Contact lenses should not be worn when working with this material.
Skin	Because of the potential of chemical burns due to the portland cement content of this product, flush exposed skin with copious amounts of water for at least 15 minutes depending on concentration, amount and duration of exposure. Wash with mild soap and water. Immediately remove all contaminated clothing, including footwear. Launder clothing before reuse. If irritation or pain persists get medical attention immediately. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.
Ingestion	Due to the alkalinity caused by the portland cement content of this product, get medical attention immediately.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis. Some individuals with unusual hypersensitivity to hexavalent chromium (chromium+6) salts may exhibit an allergic response to portland cement, due to trace amounts of chromium in the portland cement. The response may appear in a variety of forms ranging from a mild rash to severe skin ulcers. Sensitized individuals may react immediately upon contact and others may first experience this effect after years of contact with portland cement products.

NOTES TO PHYSICIAN: Skin irritation may occur hours or days after the time of portland cement exposure. The main types of skin reactions seen are dermatitis of the hands, forearms, and feet seborrheic eczema, stasis dermatitis, and, occasionally exfoliative dermatitis.

SECTION 5
FIRE FIGHTING MEASURES

General Fire Hazards	None known		
Extinguishing Media	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures	Wear appropriate personal protective equipment. See section 8.		
Unusual Fire/ Explosion Hazards	None known		
Hazardous Combustion Products	None known		
Flash Point	Not Applicable	Auto Ignition	Not Applicable
Method Used	Not Applicable	Flammability Classification	Not Applicable
Upper Flammable Limit (UFL)	Not Determined		
Lower Flammable Limit (LFL)	Not Determined	Rate of Burning	Not Applicable



**SECTION 6
 ACCIDENTAL RELEASE MEASURES**

CONTAINMENT: Collect panels from spillage and if not damaged or contaminated by foreign material, panels may be reclaimed.

CLEAN-UP: Use normal clean up procedures. No special precautions.

DISPOSAL: Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters.

**SECTION 7
 HANDLING AND STORAGE**

HANDLING: Avoid dust contact with eyes and skin. Wear the appropriate eye and skin protection against dust (See Section 8). Minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Use good safety and industrial hygiene practices. When moving board with a forklift or similar equipment, it is essential that the equipment be rated capable of handling the loads. The forks should always be long enough to extend completely through the width of the load. Fork spacing between supports should be one half the length of the panels or base being handled so that a maximum of 4' extends beyond the supports on either end. Cement panels are very heavy awkward loads posing the risk of severe back injury. Use proper lifting techniques.

STORAGE: Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities (see Section 10). Protect product from physical damage. Protect from weather and prevent exposure to sustained moisture. Storing board flat will prevent the potential safety hazards of the board falling over. However, in other situations, storing the board flat may cause a tripping hazard or exceed floor limit loads.

**SECTION 8
 EXPOSURE CONTROLS/PERSONAL PROTECTION**

MATERIAL	WT%	TLV (mg/m ³)	PEL(mg/m ³)
Portland Cement	10-30	10	15 (T) / 5 (R)
Expanded Clay Aggregate	30-50	(NE)	(NE)
Or Expanded Shale		(NE)	(NE)
High Alumina Cement	0-10	10 (T)	10 (T) / 5 (R)
Fly Ash	10-20	10	15 (T) / 5 (R)
Gypsum (CaSO4•2H2O)	0-10	10	15 (T) / 5 (R)
Fiber Glass Scrim	1-5	1 f/cc (R) *	15 (T) / 5 (R)
Soda Ash	0-2	10 (T)	15 (T) / 5 (R)
Crystalline Silica	<5	0.025 (R)	0.1 (R)

(T)-Total; (R)-Respirable; (NE)-Not Established; (C)-Ceiling; (STEL)-Short-term exposure limit
 (F)-Fume; (Du)-Dust; (M)-Mist
 ppm-part per million; f/cc-fiber per cubic centimeter; mppcf- million particles per cubic foot



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DUROCK® Exterior Cement Board

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*ACGIH: 1 fiber/cubic centimeter air for fibers longer than 5 micrometers and thinner than 3 micrometers.

ENGINEERING CONTROLS: Provide ventilation sufficient to control airborne dust levels. If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits. Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits.

RESPIRATORY PROTECTION: Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face	Due to portland cement content in this product, wear safety glasses with side shields or goggles for eye protection to avoid irritation and severe chemical burns of the eye. Facilities storing or using this material should be equipped with an adequate number of eyewash facilities and safety showers. Contact lenses should not be worn when working with portland cement.
Skin	Wear gloves and protective clothing to prevent repeated or prolonged skin contact.
General	Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gray	Vapor Density (Air = 1)	Not Applicable
Odor	Low to no odor	Specific Gravity (H ₂ O = 1)	1.2
Odor Threshold	Not Determined	Solubility in water (g/100g)	Not Determined
Physical State	Solid (board)	Partition Coefficient	Not Applicable
pH @ 25 ° C	~12	Auto-ignition Temp	Not Determined
Melting Point	Not Applicable	Decomposition Temp	Not Determined
Freezing Point	Not Applicable	Viscosity	Not Applicable
Boiling Point	Not Applicable	Particle Size	Varies
Flash Point	Not Applicable	Bulk Density	~ 2-3 lb/ft ² / 9-15 kg/m ²
Evaporation Rate (BuAc = 1)	Not Applicable	Molecular Weight	Mixture
Upper Flammable Limit (UFL)	Not Determined	VOC Content	Zero g/L
Lower Flammable Limit (LFL)	Not Determined	Percent Volatile	Zero
Vapor Pressure (mm Hg)	Not Applicable		

SECTION 10 CHEMICAL STABILITY AND REACTIVITY

STABILITY	Stable.
CONDITIONS TO AVOID	Contact with incompatibles (see below).



INCOMPATIBILITY	None known.
HAZARDOUS POLYMERIZATION	None known.
HAZARDOUS DECOMPOSITION	None known.

**SECTION 11
TOXICOLOGICAL INFORMATION**

ACUTE EFFECTS: None known.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline Silica: Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. The weight percent of respirable crystalline silica may not have been measured in this product. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. Smoking in combination with silica exposures increases the risk of cancer. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

Portland Cement: NIOSH conducted a portland cement worker study, "The Mortality of U.S. Portland Cement and Quarry Workers", March 1985, which found "There is no excess mortality from all causes of death, lung cancer, non-malignant respiratory disease, or ischemic heart disease" among the workers studied.

**SECTION 12
ECOLOGICAL INFORMATION**

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on ecology. Portland cement is expected to be toxic to fish due to its high alkalinity (pH > 12). Discharge of large quantities directly into waterways would be expected to cause significant fish kills.

Ecotoxicity value	Not determined.
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**SECTION 13
DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD: Dispose of material in accordance with federal, state, and local regulations. Never discharge directly into sewers or surface waters. Consult with environmental regulatory agencies for guidance on acceptable disposal practices.



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SECTION 14 TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name Same as product name.

Hazard Class Not classified.

UN/NA # None. Not classified.

Packing Group None.

Label (s) Required Not applicable.

GGVSec/MDG-Code Not classified.

ICAO/IATA-DGR Not applicable.

RID/ADR None.

ADNR None.

SECTION 15 REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	3 0 2	3 0 4	3 1 3	CERCLA	CAA Sec. 112	RCRA Code
Portland Cement	10-30	NL	NL	NL	NL	NL	NL
Expanded Clay Aggregate Or Expanded Shale	30-50	NL	NL	NL	NL	NL	NL
High Alumina Cement	0-10	NL	NL	NL	NL	NL	NL
Fly Ash	10-20	NL	NL	NL	NL	NL	NL
Gypsum (CaSO ₄ •2H ₂ O)	0-10	NL	NL	NL	NL	NL	NL
Fiber Glass Scrim	1-5	NL	NL	NL	NL	NL	NL
Soda Ash	0-2	NL	NL	NL	NL	NL	NL
Crystalline Silica	<5	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code

CANADIAN REGULATIONS



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This product has been classified in accordance with the hazard criteria of Controlled Product regulations and the MSDS contains all the information required by the Controlled Products Regulations. All ingredients of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification
Portland Cement	10-30	Not Listed	E
Expanded Clay Aggregate	30-50	Not Listed	Not Listed
Or Expanded Shale		Not Listed	Not Listed
High Alumina Cement	0-10	Not Listed	Not Listed
Fly Ash	10-20	Not Listed	Not Listed
Gypsum (CaSO ₄ •2H ₂ O)	0-10	Not Listed	Not Listed
Fiber Glass Scrim	1-5	Not Listed	Not Listed
Soda Ash	0-2	Not Listed	Not Listed
Crystalline Silica	<5	1406	D2A

IDL Item#: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

Risk and Safety Phrases defined by European Union Directive 67/548/EEC (Annex III and IV)

R-Phrase(s): R49

S-Phrase(s): S22

SECTION 16 OTHER INFORMATION

Label Information

Δ WARNING!

Dust can be corrosive to eyes, skin, and respiratory tract. Contact can cause severe chemical burns. Avoid breathing dust. Dust can contain silica. Prolonged and repeated breathing of silica dust can cause lung damage and/or cancer. Wear eye, skin and respiratory protection as necessary per working conditions. If eye contact occurs flush immediately with water for 30 minutes. Do not ingest. If ingested, call physician. If cutting board with a power tool, use a wet or vacuum saw to reduce the amount of dust generated. Panels are heavy and can fall over, causing serious injury or death. Avoid creating a tripping hazard and do not exceed floor limit loads. Dust can contain silica. Prolonged and repeated breathing of silica dust can cause lung damage and/or cancer. Product safety information: 800-507-8899 or usg.com. Customer Service: 800 USG-4-YOU (800 874-4968). KEEP OUT OF REACH OF CHILDREN.

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:		HMIS Ratings:	<table border="1"> <tbody> <tr> <td>HEALTH</td> <td>*</td> <td>1</td> </tr> <tr> <td>FLAMMABILITY</td> <td></td> <td>0</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td></td> <td>0</td> </tr> <tr> <td>PERSONAL PROTECTION</td> <td></td> <td>E</td> </tr> </tbody> </table>	HEALTH	*	1	FLAMMABILITY		0	PHYSICAL HAZARD		0	PERSONAL PROTECTION		E	0 = Minimal Hazard
HEALTH		*		1												
FLAMMABILITY				0												
PHYSICAL HAZARD				0												
PERSONAL PROTECTION		E														
Health: 1	Health: 1	1 = Slight Hazard														
Fire: 0	Fire: 0	2 = Moderate Hazard														
Reactivity: 0	Reactivity: 0	3 = Serious Hazard														
			4 = Severe Hazard													

E – Safety glasses, gloves and dust respirator; * - Contains silica

Key/Legend

ANSI American National Standards Institute



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ACGIH	American Conference of Governmental Industrial Hygienists
CAA	Clean Air Act
CAS	Chemical Abstracts Service (Registry Number)
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
DOT	United States Department of Transportation
DSL	Canadian Domestic Substances List
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning & Community Right-to-know Act
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
MSHA	Mine Safety and Health Administration
NDSL	Canadian Non-Domestic Substances List
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Health and Safety Administration
PEL	Permissible Exposure Limit
PPE	Personal Protection Equipment
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act of 1986
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
UN/NA#	United Nations/North America number
WHMIS	Workplace Hazardous Material Information System

Prepared by:
Product Safety
USG Corporation
550 West Adams Street
Chicago, IL 60661-3637

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his/her own particular use.

END



Material Safety Data Sheet

PermaBase® BRAND Cement Board Products

MSDS No: GB-1504

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Date: April 03, 2013

Supersedes Date: July 23, 2012

1. PRODUCT AND COMPANY INFORMATION

Manufacturer Information:

National Gypsum Company
2001 Rexford Road
Charlotte, NC 28211

For Emergency Product Information Call:

Director Quality Services
(704) 551-5820 - 24 Hour Emergency Response
Website: www.nationalgypsum.com

Product Name: **PermaBase**
PermaBase Flex
PermaBase UltraBacker
PermaBase Plus

Use: Underlayment for Ceramic Tile on floors, countertops, EIFS systems.

Generic Descriptions: Gray cementitious material sandwiched between two layers of a fiberglass mesh scrim or a fiberglass mat laminate with a reinforced edge.

2. HAZARDS IDENTIFICATION

Appearance and Odor: Gray solid with slight organic odor upon opening that dissipates quickly.

Contains no asbestos. HMIS Hazard Class No. 1, 0, 0.

Emergency Overview

PermaBase® BRAND Cement Board Products do not present an inhalation, ingestion, or contact health hazard unless subjected to operations such as sawing, sanding or machining which result in the generation of airborne particulate. Dust generated is alkaline, and could cause corrosive damage to skin, tissues, and eyes. Wear eye and skin protection. This product also contains quartz (crystalline silica) as a naturally occurring contaminant. It is recommended that a NIOSH approved particulate respirator be worn whenever working with this product results in airborne dust exposure exceeding the prescribed limits. (See Section 11 - Toxicological Information)

OSHA Regulatory Status

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

2. HAZARDS IDENTIFICATION (CONTINUED)**Potential Health Effects**

Primary Routes of Entry: Inhalation, Dermal contact

Target Organs: Respiratory system, skin, eyes.

Inhalation: Acute exposure to airborne dust concentrations in excess of the PEL/TLV may result in coughing, dyspnea, wheezing, and a burning irritation of the nose, throat, and upper respiratory tract, along with possible impaired pulmonary function. Chronic exposures may result in lung disease (silicosis and/or lung cancer). (See Section 11 - Toxicological Information)

Exposures to respirable crystalline silica have not been documented during normal use of this product. However, good housekeeping practices and industrial hygiene monitoring is recommended when the potential for significant exposure exists.

Skin Contact: Contact with wet portland cement may cause severe irritation, redness, and possible burns. Continued and prolonged contact may result in drying of the skin. Contact with dust or glass fibers may produce itching, rash and/or redness. Repeated or prolonged exposure may result in dermatitis.

Eye Contact: Contact with dust may cause burns and/or mechanical irritation. Do not wear contact lenses if dust will be generated.

Ingestion: Wet product is alkaline, and may cause chemical burns to the mouth, throat, esophagus and stomach. Gastrointestinal irritation or bleeding may develop.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS-Number</u>	<u>Weight Percent</u>
Portland Cement	65997-15-1	<25
High Alumina Cement	65997-16-2	<6
Pozzolan		<25
Sand		<50
Naphthalene Sulfonate		<2
Crystalline Silica (Quartz)	14808-60-7	<5
Fiberglass scrim or fiberglass glass mat laminate	65997-17-3	<5

4. FIRST AID MEASURES

- **Inhalation:** Remove exposed individual to fresh air immediately. If breathing difficulty persists, seek medical attention.
- **Skin:** Flush and wash skin with soap and water. Utilize lotions to alleviate dryness if present. Seek medical attention if irritation persists.
- **Eye:** Do not rub or scratch eyes. Immediately flush eyes with water for 15 minutes. Seek medical attention to evaluate for burns or scratches.

- **Ingestion:** Product is not intended to be ingested. Large amounts may cause abdominal discomfort or possible obstruction of the digestive tract. Seek medical attention if problems persist.

5. FIRE FIGHTING MEASURES

Flammable Properties

- Not flammable or combustible
- NFPA Hazard Class No: 0/0/0

Extinguishing media

- Dry chemical, foam, water, fog or spray

Protection of firefighters

- Standard protective equipment and precautions

Fire and Explosion Hazards

- None

Hazardous Combustion Products

- None known

6. ACCIDENTAL RELEASE MEASURES

Not applicable, as product is an article composite.

General recommendations:

- Wear appropriate Personal Protective Equipment. (See Section 8)
- Maintain proper ventilation.
- Pick-up larger pieces to avoid a tripping hazard. Sweep or vacuum remaining material into a waste container for disposal. Use a light water spray to minimize dust generation.
- Waste material is not a hazardous waste. Dispose of in accordance with applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

- Avoid contact with eyes, skin and clothing.
- Wear recommended personal protective equipment when handling. (See Section 8)
- Avoid breathing dust.
- Minimize generation of dust.
- Utilize proper lifting techniques when moving product and employ mechanical/ergonomic assistance when possible (i.e. move with forklifts, hold in place with lifts) to minimize the risk of back injury.
- Store material in a cool, dry, ventilated area, away from excessive heat or sunlight.
- Store panels flat to minimize damage.
- Do not stack panels too high when storing to minimize the risk of falling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure Guidelines**

	Exposure Limits	
Component	OSHA PEL (mg/m ³)	ACGIH TLV (mg/m ³)
Portland Cement	15 ^(T) 5 ^(R)	10 ^(T)
High Alumina Cement	10 ^(T) 5 ^(R)	10 ^(T)
Pozzolan		
Sand		
Naphthalene Sulfonate		
Crystalline Silica (Quartz)	0.1 ^(R)	0.025 ^(R)
Fiberglass Scrim	15 ^(T) 5 ^(R)	1 f/cc ^(R)

T- Total Dust
- Respirable Dust

Engineering Controls

- Work/Hygiene Practices: The score and snap method of cutting is recommended. Sawing, drilling or machining will produce dust.
- Ventilation: Provide local and general exhaust ventilation to maintain a dust level below the PEL/TLV.
- Utilize wet methods, when appropriate, to reduce generation of dust.

Personal Protective Equipment

- Respiratory Protection: A NIOSH approved particulate respirator is recommended in poorly ventilated areas or if the PEL/TLV is exceeded. OSHA's 29 CFR 1910.134 (Respiratory Protection Standard) must be followed whenever work conditions require respirator use.
- Eye Protection: Safety glasses or goggles.
- Skin: Gloves, protective clothing and/or barrier creams may be utilized if conditions warrant.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Gray color
Odor: Low to none
Physical State: Solid
Ph: ~12
Solubility (H₂O): Slight
Boiling, Freezing, Melting Point: Not Applicable
Decomposition Temperature: Not Applicable
Vapor pressure: Not Applicable

Flammability: Not Applicable
Flash Point: Not Applicable
Upper/Lower explosive limits: Not applicable
Auto-ignition temperature: Not Applicable
Partition coefficient: n-octanol/water: Not applicable
Evaporation rate: Not Applicable
Molecular weight: mixture
Molecular formula: Not applicable

Vapor density: Not Applicable
Volatile organic compounds (VOC) content: None

Specific Gravity: ~1.2
Bulk Density: ~73 lbs/ft³

10. STABILITY AND REACTIVITY

Chemical stability: Stable in dry environments.

Conditions to avoid: Contact with strong acids

Incompatibility: None

Hazardous decomposition: None known

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Human Data

There is no information on toxicokinetics, metabolism and distribution.

There have been reports of irritation and burns to mucus membranes of the eyes and respiratory tract upon acute exposure to dusts in excess of the recommended limits.

Chronic exposure to crystalline silica (a naturally occurring contaminant) in the respirable size has been shown to cause silicosis, a debilitating lung disease. In addition, the International Agency for Research on Cancer (IARC) classifies crystalline silica inhaled in the form of quartz or cristobalite from occupational sources as carcinogenic to humans, Group 1. The National Toxicology Program (NTP) classifies respirable crystalline silica as a substance which may be reasonably anticipated to be a carcinogen. OSHA does not regulate crystalline silica as a human carcinogen. Industrial hygiene monitoring to date has not identified any detectable respirable crystalline silica in dust sampling conducted during gypsum panel installation utilizing recommended procedures.

Animal Data

LD₅₀ and LC₅₀ data not available.

12. ECOLOGICAL INFORMATION

This product could be toxic to fish due to its high alkalinity from the portland cement. No studies are available.

13. DISPOSAL CONSIDERATIONS

- Dispose of according to Local, State, Federal, and Provincial Environmental Regulations.
- Recycle if possible.

14. TRANSPORT INFORMATION

- This product is not a DOT hazardous material
- Shipping Name: Same as product name
- ICAO/IATA/IMO: Not applicable

15. REGULATORY INFORMATION

All ingredients are included on the TSCA inventory.

Federal Regulations

SARA Title III: Not listed under Sections 302, 304, and 313

CERCLA: Not listed

RCRA: Not listed

OSHA: Dust and potential respirable crystalline silica generated during product use may be hazardous.

15. Regulatory Information (Continued)

State Regulations

California Prop 65: Respirable crystalline silica is known to the state of California to cause cancer. Industrial hygiene monitoring during recommended use of this product failed to identify any respirable crystalline silica.

Canada WHMIS

All components of this product are included in the Canadian Domestic Substances List (DSL).
Crystalline silica: WHMIS Classification D2A

16. OTHER INFORMATION

MSDS Revision Summary

Effective Date Change: 04/03/13

Supersedes: July 23,2012

Format Changes: Added PermaBase Plus

Key/Legend

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Services Number
CFR	Code of Federal Regulations
DOT	Department of Transportation
EPA	Environmental Protection Agency
HEPA	High Efficiency Particulate Air
HMIS	Hazardous Material Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
NIOSH	National Institute for Occupational Safety and Health
NFPA	National Fire Protection Association
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPE	Personal Protective Equipment
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein. This material safety data sheet was prepared to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and with the Workplace Hazardous Materials Information System (WHMIS).

Disclaimer of Liability:

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of the material. Information contained herein is believed to be true and accurate, but all statements or suggestions are made without any warranty, express or implied, regarding accuracy of the information, the hazards connected with the use of the material, or the results to be obtained for the use thereof.

WALLBOARD FINISHING

- 1. JOINT TAPE**
- 2. FINISHING MUDS**
- 3. SPRAY TEXTURE**



**SECTION 1
 CHEMICAL PRODUCT AND IDENTIFICATION**

United States Gypsum Company
 550 West Adams Street
 Chicago, Illinois 60661-3637
 A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
 Version Date: January 1, 2011
 Version: 6

PRODUCT(S) SHEETROCK® Joint Tape

**CHEMICAL FAMILY /
 GENERAL CATEGORY** Tape

SYNONYMS Cellulose Tape

**SECTION 2
 HAZARD IDENTIFICATION**

EMERGENCY OVERVIEW:

⚠CAUTION!

This product is not expected to produce any unusual hazards during normal use. Direct contact may irritate the skin, or eyes.

POTENTIAL HEALTH EFFECTS (See Section 11 for more information)

ACUTE :

Inhalation	Due to the physical nature of this product, inhalation is unlikely. There are no known health effects due to inhalation.
Eyes	Direct contact can cause irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician. Direct contact or dust from sanding of the product may cause mechanical irritation of the eyes.
Skin	Direct, prolonged or repeated contact with the skin may cause irritation. Contact along a length of the edge of the paper may result in a paper cut of the skin.
Ingestion	None known.

CHRONIC:

Inhalation	None known.None known.
Eyes	None known.
Skin	None known.
Ingestion	None known. This product is not intended to be eaten. Wash hands before eating.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S) All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11: Toxicology Information for detailed information.



MATERIAL SAFETY DATA SHEET

SHEETROCK® Joint Tape

MSDS #88-905-001
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MATERIAL	IARC	NTP	ACGIH	CAL- 65
Crystalline silica	1	1	A2	Listed
IARC - International Agency for Research on Cancer: 1- Carcinogenic to humans; 2A – Probably carcinogenic to humans; 2B – Possibly carcinogenic to humans; 3 - Not classifiable as a carcinogen; 4 – Probably not a carcinogen				
NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS): 1- Known to be carcinogen; 2- Anticipated to be carcinogens				
ACGIH – American Conference of Governmental Industrial Hygienists: A1 – Confirmed human carcinogen; A2 – Suspected human carcinogen; A3 – Animal carcinogen; A4 - Not classifiable as a carcinogen; A5 – Not suspected as a human carcinogen				
CAL-65 – California Proposition 65 “Chemicals known to the State of California to Cause Cancer”				

POTENTIAL ENVIRONMENTAL EFFECTS: This product has no known adverse effect on ecology. (See Section 12 for more information.)

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	CAS #
Cellulose	>99	9004-34-6
Limestone	<1	1317-65-3
Aluminum Sulfate	<1	10043-01-3
Crystalline Silica	<5	14808-60-7^

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory and the Canadian Domestic Substances List (DSL).

^The weight percent for silica represents total quartz and not the respirable fraction.

SECTION 4 FIRST AID MEASURES

FIRST AID PROCEDURES

Inhalation	Remove to fresh air. Leave the area of exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.
Eyes	In case of contact, do not rub or scratch your eyes. To prevent mechanical irritation, flush thoroughly with water for 15 minutes. If irritation persists, consult physician.
Skin	Wash with mild soap and water. If irritation persists, consult physician.
Ingestion	This product is not intended to be ingested or eaten. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

NOTES TO PHYSICIAN: Treatment should be directed at the control of symptoms and the clinical condition.



**SECTION 5
FIRE FIGHTING MEASURES**

General Fire Hazards				Emits toxic gases under fire conditions.			
Extinguishing Media				Water or use extinguishing media appropriate for surrounding fire.			
Special Fire Fighting Procedures				Wear appropriate personal protective equipment. See section 8.			
Unusual Fire/ Explosion Hazards				If paper fiber or dust is dried to bone dry condition, a paper or cellulose dust explosion problem exists.			
Hazardous Combustion Products				Emits toxic gases under fire conditions.			
Flash Point		Not Determined		Auto Ignition		Not Applicable	
Method Used		Not Applicable		Flammability Classification		Not Applicable	
Upper Flammable Limit (UFL)		Not Determined					
Lower Flammable Limit (LFL)		Not Determined		Rate of Burning		Not Applicable	

**SECTION 6
ACCIDENTAL RELEASE MEASURES**

CONTAINMENT: No special precautions. Wear appropriate personal protective equipment. See section 8.			
CLEAN-UP: Use normal clean up procedures. No special precautions.			
DISPOSAL: Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters.			

**SECTION 7
HANDLING AND STORAGE**

HANDLING: Avoid contact with eyes. Wear the appropriate eye protection (See Section 8). Use good safety and industrial hygiene practices.			
STORAGE: Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities (see Section 10). Keep dry, paper stored in wet conditions can become a fire hazard via methane production by microbe activity.			

**SECTION 8
EXPOSURE CONTROLS/PERSONAL PROTECTION**

MATERIAL	WT%	TLV (mg/m³)	PEL(mg/m³)
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MATERIAL SAFETY DATA SHEET

SHEETROCK® Joint Tape

MSDS #88-905-001
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Cellulose	>99	10	15 (T) / 5 (R)
Limestone	<1	10	15 (T) / 5 (R)
Aluminum Sulfate	<1	2*	15 (T) / 5 (R)
Crystalline Silica	<5	0.025 (R)	0.1 (R)

(T)–Total; (R)–Respirable; (NE)-Not Established; (C)-Ceiling; (STEL)-Short-term exposure limit
(F)-Fume; (Du)-Dust; (M)-Mist
ppm-part per million; f/cc-fiber per cubic centimeter; mppcf- million particles per cubic foot

ENGINEERING CONTROLS: If user operations generate exposures, use ventilation to keep exposure concentrations below permissible exposure limits. Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control exposure levels below permissible exposure limits.

RESPIRATORY PROTECTION: A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face	Wear eye protection, safety glasses or goggles, to avoid possible eye contact.
Skin	Wear gloves and protective clothing to prevent repeated or prolonged skin contact.
General	Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Manila paper in various widths.	Vapor Density (Air = 1)	Not Applicable
Odor	Low to no odor.	Specific Gravity (H ₂ O = 1)	Not Applicable
Odor Threshold	Not Determined	Solubility in water (g/100g)	Not Applicable
Physical State	Solid/ Tape	Partition Coefficient	Not Applicable
pH @ 25 ° C	Not Applicable	Auto-ignition Temp	Not Applicable
Melting Point	Not Applicable	Decomposition Temp	Not Determined
Freezing Point	Not Applicable	Viscosity	Not Applicable
Boiling Point	Not Applicable	Particle Size	Not Applicable
Flash Point	Not Determined	Bulk Density	Not Determined
Evaporation Rate (BuAc = 1)	Not Applicable	Molecular Weight	Not Applicable
Upper Flammable Limit (UFL)	Not Determined	VOC Content	Zero g/L
Lower Flammable Limit (LFL)	Not Determined	Percent Volatile	Zero
Vapor Pressure (mm Hg)	Not Applicable		

SECTION 10 CHEMICAL STABILITY AND REACTIVITY



MATERIAL SAFETY DATA SHEET

SHEETROCK® Joint Tape

MSDS #88-905-001
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STABILITY	Stable.
CONDITIONS TO AVOID	Contact with incompatibles (see below).
INCOMPATIBILITY	None known.
HAZARDOUS POLYMERIZATION	None known.
HAZARDOUS DECOMPOSITION	None known.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE EFFECTS: None known.
CHRONIC EFFECTS / CARCINOGENICITY: None known.

SECTION 12 ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on ecology.	
Ecotoxicity value	Not determined.

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of material in accordance with federal, state, and local regulations. Never discharge directly into sewers or surface waters. Consult with environmental regulatory agencies for guidance on acceptable disposal practices.
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SECTION 14 TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.	
Shipping Name	Same as product name.
Hazard Class	Not classified.
UN/NA #	None. Not classified.
Packing Group	None.
Label (s) Required	Not applicable.
GGVSec/MDG-Code	Not classified.
ICAO/IATA-DGR	Not applicable.
RID/ADR	None.



MATERIAL SAFETY DATA SHEET
SHEETROCK® Joint Tape

ADNR	None.
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**SECTION 15
 REGULATORY INFORMATION**

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

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MATERIAL	WT%	302	304	313	CERCLA	CAA Sec. 112	RCRA Code
Cellulose	>99	NL	NL	NL	NL	NL	NL
Limestone	<1	NL	NL	NL	NL	NL	NL
Aluminum Sulfate	<1	NL	NL	NL	5,000	NL	NL
Crystalline Silica	<5	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of Controlled Product regulations and the MSDS contains all the information required by the Controlled Products Regulations. All ingredients of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification
Cellulose	>99	Not Listed	Not Listed
Limestone	<1	Not Listed	D2A
Aluminum Sulfate	<1	53	D2B
Crystalline Silica	<5	1406	D2A

IDL Item#: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

Risk and Safety Phrases defined by European Union Directive 67/548/EEC (Annex III and IV)

R-Phrase(s): None known.

S-Phrase(s): None known.



MATERIAL SAFETY DATA SHEET

SHEETROCK® Joint Tape

MSDS #88-905-001
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SECTION 16 OTHER INFORMATION

Label Information

Δ CAUTION!

Product safety information: 800-507-8899 or usg.com. Customer Service: 800 USG-4-YOU (800 874-4968). KEEP OUT OF REACH OF CHILDREN.

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:			HMIS Ratings:		HEALTH <input type="text" value="0"/>	0 = Minimal Hazard
Health:	0		Health:	0	FLAMMABILITY <input type="text" value="0"/>	1 = Slight Hazard
Fire:	0		Fire:	0	PHYSICAL HAZARD <input type="text" value="0"/>	2 = Moderate Hazard
Reactivity:	0		Reactivity:	0	PERSONAL PROTECTION <input type="text" value="B"/>	3 = Serious Hazard
						4 = Severe Hazard

B - Safety glasses and gloves

Key/Legend

ANSI	American National Standards Institute
ACGIH	American Conference of Governmental Industrial Hygienists
CAA	Clean Air Act
CAS	Chemical Abstracts Service (Registry Number)
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
DOT	United States Department of Transportation
DSL	Canadian Domestic Substances List
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning & Community Right-to-know Act
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
MSHA	Mine Safety and Health Administration
NDSL	Canadian Non-Domestic Substances List
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Health and Safety Administration
PEL	Permissible Exposure Limit
PPE	Personal Protection Equipment
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act of 1986
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
UN/NA#	United Nations/North America number
WHMIS	Workplace Hazardous Material Information System



MATERIAL SAFETY DATA SHEET

SHEETROCK® Joint Tape

MSDS #88-905-001
Page 8 of 8

Prepared by:
Product Safety
USG Corporation
550 West Adams Street
Chicago, IL 60661-3637

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his/her own particular use.

END



MATERIAL SAFETY DATA SHEET

SHEETROCK® All Purpose Joint Compound

MSDS #61-320-001
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SECTION 1 CHEMICAL PRODUCT AND IDENTIFICATION

United States Gypsum Company
550 West Adams Street
Chicago, Illinois 60661-3637
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: January 1, 2011
Version: 7

PRODUCT(S) SHEETROCK® All Purpose Joint Compound

**CHEMICAL FAMILY /
GENERAL CATEGORY** Joint Treatment

SYNONYMS Joint Compound, Taping Compound, Mud

SECTION 2 HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:
ΔWARNING!

This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract. Prolonged and repeated breathing of respirable mica dust may cause lung disease (pneumoconiosis).

POTENTIAL HEALTH EFFECTS (See Section 11 for more information)

ACUTE :

Inhalation	Exposure to dust generated during the handling or sanding of the product may cause temporary irritation to eyes, skin, nose, throat, and upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.
Eyes	Dust can cause temporary mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.
Skin	None known.
Ingestion	None known.

CHRONIC:

Inhalation	Prolonged and repeated breathing of respirable mica dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury correlates with the length of exposure and dust concentration. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.
Eyes	None known.
Skin	None known.
Ingestion	None known.



MATERIAL SAFETY DATA SHEET

SHEETROCK® All Purpose Joint Compound

MSDS #61-320-001

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TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S) All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11: Toxicology Information for detailed information.

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Crystalline silica	1	1	A2	Listed

IARC - International Agency for Research on Cancer: 1- Carcinogenic to humans; 2A – Probably carcinogenic to humans; 2B – Possibly carcinogenic to humans; 3 - Not classifiable as a carcinogen; 4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS): 1- Known to be carcinogen; 2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists: A1 – Confirmed human carcinogen; A2 – Suspected human carcinogen; A3 – Animal carcinogen; A4 - Not classifiable as a carcinogen; A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 “Chemicals known to the State of California to Cause Cancer”

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent of crystalline silica given represents total quartz and not the respirable fraction. The weight percent of respirable silica has not been measured in this product.

Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

POTENTIAL ENVIRONMENTAL EFFECTS: This product has no known adverse effect on ecology. (See Section 12 for more information.)

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	CAS #
Limestone	>65	1317-65-3
Or Dolomite		16389-88-1
Mica	<20	12001-26-2
Attapulgate	<5	12174-11-7
Vinyl Alcohol Polymer	<5	9002-89-5
Hydroxypropyl Amylopectin Phosphate	<5	113894-92-1
Crystalline Silica	<5	14808-60-7 [^]

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory and the Canadian Domestic Substances List (DSL).

[^]The weight percent for silica represents total quartz and not the respirable fraction.

SECTION 4 FIRST AID MEASURES

FIRST AID PROCEDURES

Inhalation	Remove to fresh air. Leave the area of exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.
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MATERIAL SAFETY DATA SHEET

SHEETROCK® All Purpose Joint Compound

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Eyes	In case of contact, do not rub or scratch your eyes. To prevent mechanical irritation, flush thoroughly with water for 15 minutes. If irritation persists, consult physician.
Skin	Wash with mild soap and water. If irritation persists, consult physician.
Ingestion	This product is not intended to be ingested or eaten. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

NOTES TO PHYSICIAN: Treatment should be directed at the control of symptoms and the clinical condition.

SECTION 5 FIRE FIGHTING MEASURES

General Fire Hazards	None known		
Extinguishing Media	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures	Wear appropriate personal protective equipment. See section 8.		
Unusual Fire/ Explosion Hazards	None known		
Hazardous Combustion Products	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂).		
Flash Point	Not Determined	Auto Ignition	Not Applicable
Method Used	Not Applicable	Flammability Classification	Not Applicable
Upper Flammable Limit (UFL)	Not Determined	Rate of Burning	Not Applicable
Lower Flammable Limit (LFL)	Not Determined		

SECTION 6 ACCIDENTAL RELEASE MEASURES

CONTAINMENT: No special precautions. Wear appropriate personal protective equipment. See section 8.
CLEAN-UP: Use normal clean up procedures. No special precautions.
DISPOSAL: Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters.

SECTION 7 HANDLING AND STORAGE

HANDLING: Avoid dust contact with eyes and skin. Wear the appropriate eye and skin protection against dust (See Section 8). Minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Use good safety and industrial hygiene practices.
--



MATERIAL SAFETY DATA SHEET

SHEETROCK® All Purpose Joint Compound

MSDS #61-320-001

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STORAGE: Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities (see Section 10).

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)
Limestone	>65	10	15 (T) / 5 (R)
Or Dolomite		10	15 (T) / 5 (R)
Mica	<20	3 (R)	20 mppcf
Attapulgate	<5	(NE)	(NE)
Vinyl Alcohol Polymer	<5	(NE)	(NE)
Hydroxypropyl Amylopectin Phosphate	<5	(NE)	(NE)
Crystalline Silica	<5	0.025 (R)	0.1 (R)

(T)–Total; (R)–Respirable; (NE)–Not Established; (C)–Ceiling; (STEL)–Short-term exposure limit

(F)–Fume; (Du)–Dust; (M)–Mist

ppm–part per million; f/cc–fiber per cubic centimeter; mppcf– million particles per cubic foot

ENGINEERING CONTROLS: Provide ventilation sufficient to control airborne dust levels. If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits. Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits.

RESPIRATORY PROTECTION: Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face	Wear eye protection, safety glasses or goggles, to avoid possible eye contact.
Skin	Wear gloves and protective clothing to prevent repeated or prolonged skin contact.
General	Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to off white	Vapor Density (Air = 1)	Not Applicable
Odor	Low to no odor	Specific Gravity (H ₂ O = 1)	~2.3 - 2.6
Odor Threshold	Not Determined	Solubility in water (g/100g)	~ 0.15 g/100 g
Physical State	Solid/ Powder	Partition Coefficient	Not Determined
pH @ 25 ° C	~7.5-9	Auto-ignition Temp	Not Determined
Melting Point	Not Applicable	Decomposition Temp	Not Determined



MATERIAL SAFETY DATA SHEET

SHEETROCK® All Purpose Joint Compound

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Freezing Point	Not Applicable	Viscosity	Not Applicable
Boiling Point	Not Applicable	Particle Size	Varies
Flash Point	Not Determined	Bulk Density	~ 40-80 lb/ft3
Evaporation Rate (BuAc = 1)	Not Applicable	Molecular Weight	Mixture
Upper Flammable Limit (UFL)	Not Determined	VOC Content	Zero g/L
Lower Flammable Limit (LFL)	Not Determined	Percent Volatile	Zero
Vapor Pressure (mm Hg)	Not Applicable		

SECTION 10 CHEMICAL STABILITY AND REACTIVITY

STABILITY	Stable.
CONDITIONS TO AVOID	Contact with incompatibles (see below).
INCOMPATIBILITY	None known.
HAZARDOUS POLYMERIZATION	None known.
HAZARDOUS DECOMPOSITION	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂).

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE EFFECTS: None known.

CHRONIC EFFECTS / CARCINOGENICITY:

Mica: Prolonged and repeated breathing of respirable mica dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury correlates with the length of exposure and dust concentration.

Crystalline Silica: Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. The weight percent of respirable crystalline silica may not have been measured in this product. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. Smoking in combination with silica exposures increases the risk of cancer. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

SECTION 12 ECOLOGICAL INFORMATION



MATERIAL SAFETY DATA SHEET

SHEETROCK® All Purpose Joint Compound

MSDS #61-320-001
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ENVIRONMENTAL TOXICITY: This product has no known adverse effect on ecology.

Ecotoxicity value	Not determined.
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SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of material in accordance with federal, state, and local regulations. Never discharge directly into sewers or surface waters. Consult with environmental regulatory agencies for guidance on acceptable disposal practices.

SECTION 14 TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name	Same as product name.
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Hazard Class	Not classified.
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UN/NA #	None. Not classified.
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Packing Group	None.
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Label (s) Required	Not applicable.
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GGVSec/MDG-Code	Not classified.
------------------------	-----------------

ICAO/IATA-DGR	Not applicable.
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RID/ADR	None.
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ADNR	None.
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SECTION 15 REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	3 0 2	3 0 4	3 1 3	CERCLA	CAA Sec. 112	RCRA Code
Limestone Or Dolomite	>65	NL	NL	NL	NL	NL	NL
Mica	<20	NL	NL	NL	NL	NL	NL
Attapulgate	<5	NL	NL	NL	NL	NL	NL
Vinyl Alcohol Polymer	<5	NL	NL	NL	NL	NL	NL



MATERIAL SAFETY DATA SHEET

SHEETROCK® All Purpose Joint Compound

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Hydroxypropyl Amylopectin Phosphate	<5	NL	NL	NL	NL	NL	NL
Crystalline Silica	<5	NL	NL	NL	NL	NL	NL

Key: NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of Controlled Product regulations and the MSDS contains all the information required by the Controlled Products Regulations. All ingredients of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification
Limestone	>65	Not Listed	D2A
Or Dolomite		Not Listed	Not Listed
Mica	<20	1088	Not Listed
Attapulgate	<5	Not Listed	Not Listed
Vinyl Alcohol Polymer	<5	Not Listed	Not Listed
Hydroxypropyl Amylopectin Phosphate	<5	Not Listed	Not Listed
Crystalline Silica	<5	1406	D2A

IDL Item#: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

Risk and Safety Phrases defined by European Union Directive 67/548/EEC (Annex III and IV)

R-Phrase(s): R36/37/38

S-Phrase(s): S51 S38 S39

SECTION 16 OTHER INFORMATION

Label Information**Δ WARNING!**

Dust can cause irritation to eyes, skin and respiratory tract. Use wet-sanding to reduce dust created. Wear eye, skin and respiratory protection as necessary per working conditions. If eye contact occurs flush with water for 15 minutes. Do not ingest. If ingested, call physician. Frequent breathing of mica dust can cause lung disease (pneumoconiosis). Product safety information: 800-507-8899 or usg.com. Customer Service: 800 USG-4-YOU (800 874-4968). KEEP OUT OF REACH OF CHILDREN.



MATERIAL SAFETY DATA SHEET

SHEETROCK® All Purpose Joint Compound

MSDS #61-320-001

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INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:			HMIS Ratings:		HEALTH * 1	0 = Minimal Hazard
Health:	1		Health:	1	FLAMMABILITY 0	1 = Slight Hazard
Fire:	0		Fire:	0	PHYSICAL HAZARD 0	2 = Moderate Hazard
Reactivity:	0		Reactivity:	0	PERSONAL PROTECTION E	3 = Serious Hazard
						4 = Severe Hazard

E – Safety glasses, gloves and dust respirator; * - Contains silica

Key/Legend

ANSI	American National Standards Institute
ACGIH	American Conference of Governmental Industrial Hygienists
CAA	Clean Air Act
CAS	Chemical Abstracts Service (Registry Number)
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
DOT	United States Department of Transportation
DSL	Canadian Domestic Substances List
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning & Community Right-to-know Act
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
MSHA	Mine Safety and Health Administration
NDSL	Canadian Non-Domestic Substances List
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Health and Safety Administration
PEL	Permissible Exposure Limit
PPE	Personal Protection Equipment
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act of 1986
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
UN/NA#	United Nations/North America number
WHMIS	Workplace Hazardous Material Information System

Prepared by:
 Product Safety
 USG Corporation
 550 West Adams Street
 Chicago, IL 60661-3637

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his/her own particular use.

END



MATERIAL SAFETY DATA SHEET
SHEETROCK® Lightweight Setting-Type Joint Compounds
Easy Sand™45

MSDS #61-205-006

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SECTION 1
CHEMICAL PRODUCT AND IDENTIFICATION

United States Gypsum Company
 550 West Adams Street
 Chicago, Illinois 60661-3637
 A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
 Version Date: January 1, 2011
 Version: 7

PRODUCT(S) SHEETROCK® Lightweight Setting-Type Joint Compounds Easy Sand™45

CHEMICAL FAMILY / GENERAL CATEGORY Joint Treatment

SYNONYMS Joint Compound, Taping Compound, Mud

SECTION 2
HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:

ΔWARNING!

This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract. Prolonged and repeated breathing of respirable mica dust may cause lung disease (pneumoconiosis).

POTENTIAL HEALTH EFFECTS (See Section 11 for more information)

ACUTE :

Inhalation	Exposure to dust generated during the handling or sanding of the product may cause temporary irritation to eyes, skin, nose, throat, and upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.
Eyes	Dust can cause temporary mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.
Skin	None known.
Ingestion	None known.

CHRONIC:

Inhalation	Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration. Prolonged and repeated breathing of respirable mica dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury correlates with the length of exposure and dust concentration.
Eyes	None known.
Skin	None known.
Ingestion	None known.



MATERIAL SAFETY DATA SHEET

MSDS #61-205-006

SHEETROCK® Lightweight Setting-Type Joint Compounds

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Easy Sand™ 45

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S) All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11: Toxicology Information for detailed information.

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Crystalline silica	1	1	A2	Listed

IARC - International Agency for Research on Cancer: 1- Carcinogenic to humans; 2A – Probably carcinogenic to humans; 2B – Possibly carcinogenic to humans; 3 - Not classifiable as a carcinogen; 4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS): 1- Known to be carcinogen; 2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists: A1 – Confirmed human carcinogen; A2 – Suspected human carcinogen; A3 – Animal carcinogen; A4 - Not classifiable as a carcinogen; A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 “Chemicals known to the State of California to Cause Cancer”

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent of crystalline silica given represents total quartz and not the respirable fraction. The weight percent of respirable silica has not been measured in this product.

Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

POTENTIAL ENVIRONMENTAL EFFECTS: Toxicity studies performed with fish, aquatic invertebrates and aquatic plants showed no toxic effect. (See Section 12 for more information.)

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	CAS #
Plaster of Paris (CaSO4•½H2O)	60-70	26499-65-0
Limestone	<10	1317-65-3
Or Dolomite		16389-88-1
Expanded Perlite	<10	93763-70-3
Mica	<10	12001-26-2
Vinyl Alcohol Polymer	<5	9002-89-5
Attapulgate	<5	12174-11-7
Crystalline Silica	<5	14808-60-7^

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory and the Canadian Domestic Substances List (DSL).

^The weight percent for silica represents total quartz and not the respirable fraction.

SECTION 4 FIRST AID MEASURES

FIRST AID PROCEDURES

Inhalation	Remove to fresh air. Leave the area of exposure and remain away until coughing and other symptoms
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MATERIAL SAFETY DATA SHEET

MSDS #61-205-006

SHEETROCK® Lightweight Setting-Type Joint Compounds

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Easy Sand™ 45

	subside. Other measures are usually not necessary, however if conditions warrant, contact physician.
Eyes	In case of contact, do not rub or scratch your eyes. To prevent mechanical irritation, flush thoroughly with water for 15 minutes. If irritation persists, consult physician.
Skin	To prevent the drying effect of plaster of paris, wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult physician.
Ingestion	Plaster of paris hardens and, if ingested, may result in obstruction of the gut, especially the pyloric region. Drinking gelatin solutions or large volumes of water may delay setting.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

NOTES TO PHYSICIAN: Treatment should be directed at the control of symptoms and the clinical condition.

SECTION 5 FIRE FIGHTING MEASURES

General Fire Hazards	Not expected to burn.		
Extinguishing Media	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures	Wear appropriate personal protective equipment. See section 8.		
Unusual Fire/ Explosion Hazards	None known		
Hazardous Combustion Products	Above 1450° C - decomposes to calcium oxide (CaO) and sulfur dioxide (SO ₂). Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂).		
Flash Point	Not Determined	Auto Ignition	Not Applicable
Method Used	Not Applicable	Flammability Classification	Not Applicable
Upper Flammable Limit (UFL)	Not Determined	Rate of Burning	Not Applicable
Lower Flammable Limit (LFL)	Not Determined		

SECTION 6 ACCIDENTAL RELEASE MEASURES

CONTAINMENT: No special precautions. Wear appropriate personal protective equipment. See section 8.
CLEAN-UP: Use normal clean up procedures. No special precautions.
DISPOSAL: Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters.

SECTION 7 HANDLING AND STORAGE



MATERIAL SAFETY DATA SHEET

MSDS #61-205-006

SHEETROCK® Lightweight Setting-Type Joint Compounds

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Easy Sand™ 45

HANDLING: Avoid dust contact with eyes and skin. Wear the appropriate eye and skin protection against dust (See Section 8). Minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Use good safety and industrial hygiene practices.

STORAGE: Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities (see Section 10). As a dry powder, dew point conditions or other conditions causing presence of liquid will harden plaster of paris during storage.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)
Plaster of Paris (CaSO ₄ •½H ₂ O)	60-70	10	15 (T) / 5 (R)
Limestone	<10	10	15 (T) / 5 (R)
Or Dolomite		10	15 (T) / 5 (R)
Expanded Perlite	<10	10	15 (T) / 5 (R)
Mica	<10	3 (R)	20 mppcf
Vinyl Alcohol Polymer	<5	(NE)	(NE)
Attapulgate	<5	(NE)	(NE)
Crystalline Silica	<5	0.025 (R)	0.1 (R)

(T)-Total; (R)-Respirable; (NE)-Not Established; (C)-Ceiling; (STEL)-Short-term exposure limit
(F)-Fume; (Du)-Dust; (M)-Mist
ppm-part per million; f/cc-fiber per cubic centimeter; mppcf- million particles per cubic foot

ENGINEERING CONTROLS: Provide ventilation sufficient to control airborne dust levels. If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits. Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits.

RESPIRATORY PROTECTION: Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face	Wear eye protection, safety glasses or goggles, to avoid possible eye contact.
Skin	Wear gloves and protective clothing to prevent repeated or prolonged skin contact.
General	Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to off-white	Vapor Density (Air = 1)	Not Applicable
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MATERIAL SAFETY DATA SHEET

SHEETROCK® Lightweight Setting-Type Joint Compounds Easy Sand™ 45

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Odor	Low to no odor	Specific Gravity (H ₂ O = 1)	~2.96 (Plaster of Paris), ~2.6 (Limestone), ~2.8 (Mica), <1 (Ex. Perlite)
Odor Threshold	Not Determined	Solubility in water (g/100g)	0.15 - 0.40 (Plaster of Paris); 0.15 (Limestone); Insoluble (Mica)
Physical State	Solid/ Powder	Partition Coefficient	Not Determined
pH @ 25 ° C	~7	Auto-ignition Temp	Not Determined
Melting Point	Not Applicable	Decomposition Temp	2642°F/1450°C
Freezing Point	Not Applicable	Viscosity	Not Applicable
Boiling Point	Not Applicable	Particle Size	Varies
Flash Point	Not Determined	Bulk Density	55-70 lb/ft ³ (dry) / 881-1,121 kg/m ³ (dry)
Evaporation Rate (BuAc = 1)	Not Applicable	Molecular Weight	~ 145 g/mole (Plaster of Paris)
Upper Flammable Limit (UFL)	Not Determined	VOC Content	Zero g/L
Lower Flammable Limit (LFL)	Not Determined	Percent Volatile	Zero
Vapor Pressure (mm Hg)	Not Applicable		

SECTION 10 CHEMICAL STABILITY AND REACTIVITY

STABILITY	Stable.
CONDITIONS TO AVOID	Contact with acids, water, high humidity.
INCOMPATIBILITY	Acids. Exposure to water and acids must be supervised because the reactions are vigorous and produce large amounts of heat.
HAZARDOUS POLYMERIZATION	None known.
HAZARDOUS DECOMPOSITION	Above 1450° C - calcium oxide (CaO) and sulfur dioxide (SO ₂). Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂).

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE EFFECTS: The acute oral toxicity study [OECD TG 420] of calcium sulfate dihydrate showed that this chemical did not cause any changes even at 2,000 mg/kg b.w. Therefore, the oral LD₅₀ value was more than 2,000-mg/kg b.w. for female rats. Gypsum paste applied experimentally to the eyes of rabbits was not an irritant. Gypsum dust particulate has shown an irritant action on mucous membranes of the respiratory tract and eyes. The sulfate ion has caused gastro-intestinal disturbance in humans following large oral doses. Limited studies involving the repeated inhalation of an (unspecified) calcium sulfate failed to identify any particular target organs in monkeys, rats and hamsters. No evidence of mutagenicity was found in Ames bacterial tests.

CHRONIC EFFECTS / CARCINOGENICITY:

Plaster of Paris: Testing of dust from USG plaster of paris has not detected respirable crystalline silica.



Crystalline Silica: Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. The weight percent of respirable crystalline silica may not have been measured in this product. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. Smoking in combination with silica exposures increases the risk of cancer. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

Mica: Prolonged and repeated breathing of respirable mica dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury correlates with the length of exposure and dust concentration.

**SECTION 12
ECOLOGICAL INFORMATION**

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on ecology. Toxicity studies performed with fish, aquatic invertebrates and aquatic plants showed no toxic effect.

Ecotoxicity value	Not determined.
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**SECTION 13
DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD: Dispose of material in accordance with federal, state, and local regulations. Never discharge directly into sewers or surface waters. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Slurry may plug drains. Trace amounts of residue can be flushed to a drain, using plenty of water.

**SECTION 14
TRANSPORT INFORMATION**

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name	Same as product name.
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Hazard Class	Not classified.
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UN/NA #	None. Not classified.
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Packing Group	None.
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Label (s) Required	Not applicable.
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GGVSec/MDG-Code	Not classified.
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ICAO/IATA-DGR	Not applicable.
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MATERIAL SAFETY DATA SHEET
SHEETROCK® Lightweight Setting-Type Joint Compounds
Easy Sand™ 45

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RID/ADR	None.
ADNR	None.

SECTION 15
REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	3 0 2	3 0 4	3 1 3	CERCLA	CAA Sec. 112	RCRA Code
Plaster of Paris (CaSO4•½H2O)	60-70	NL	NL	NL	NL	NL	NL
Limestone	<10	NL	NL	NL	NL	NL	NL
Or Dolomite		NL	NL	NL	NL	NL	NL
Expanded Perlite	<10	NL	NL	NL	NL	NL	NL
Mica	<10	NL	NL	NL	NL	NL	NL
Vinyl Alcohol Polymer	<5	NL	NL	NL	NL	NL	NL
Attapulgate	<5	NL	NL	NL	NL	NL	NL
Crystalline Silica	<5	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of Controlled Product regulations and the MSDS contains all the information required by the Controlled Products Regulations. All ingredients of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification
Plaster of Paris (CaSO4•½H2O)	60-70	Not Listed	Not Listed
Limestone	<10	Not Listed	D2A
Or Dolomite		Not Listed	Not Listed
Expanded Perlite	<10	Not Listed	D2A
Mica	<10	1088	Not Listed
Vinyl Alcohol Polymer	<5	Not Listed	Not Listed
Attapulgate	<5	Not Listed	Not Listed
Crystalline Silica	<5	1406	D2A

IDL Item#: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System



MATERIAL SAFETY DATA SHEET

SHEETROCK® Lightweight Setting-Type Joint Compounds

Easy Sand™ 45

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Risk and Safety Phrases defined by European Union Directive 67/548/EEC (Annex III and IV)

R-Phrase(s): R36/37/38

S-Phrase(s): S51 S38 S39

SECTION 16 OTHER INFORMATION

Label Information

Δ WARNING!

When mixed with water, this material hardens and becomes very hot sometimes quickly. DO NOT attempt to make a cast enclosing any part of the body using this material. Failure to follow these instructions can cause severe burns that may require surgical removal of affected tissue or amputation of limb. Dust can cause irritation to eyes, skin and respiratory tract. Use wet-sanding to reduce dust created. Wear eye, skin and respiratory protection as necessary per working conditions. If eye contact occurs flush with water for 15 minutes. Do not ingest. If ingested, call physician. Frequent breathing of mica dust can cause lung disease (pneumoconiosis). Product safety information: 800-507-8899 or usg.com. Customer Service: 800 USG-4-YOU (800 874-4968). KEEP OUT OF REACH OF CHILDREN.

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:			HMIS Ratings:		<table border="1"> <tr> <td>HEALTH</td> <td>*</td> <td>1</td> </tr> <tr> <td>FLAMMABILITY</td> <td></td> <td>0</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td></td> <td>1</td> </tr> <tr> <td>PERSONAL PROTECTION</td> <td></td> <td>E</td> </tr> </table>	HEALTH	*	1	FLAMMABILITY		0	PHYSICAL HAZARD		1	PERSONAL PROTECTION		E	0 = Minimal Hazard
HEALTH	*		1															
FLAMMABILITY			0															
PHYSICAL HAZARD			1															
PERSONAL PROTECTION		E																
Health:	1	Health:	1	1 = Slight Hazard														
Fire:	0	Fire:	0	2 = Moderate Hazard														
Reactivity:	0	Reactivity:	1	3 = Serious Hazard														
					4 = Severe Hazard													

E – Safety glasses, gloves and dust respirator; * - Contains silica

Key/Legend

ANSI	American National Standards Institute
ACGIH	American Conference of Governmental Industrial Hygienists
CAA	Clean Air Act
CAS	Chemical Abstracts Service (Registry Number)
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
DOT	United States Department of Transportation
DSL	Canadian Domestic Substances List
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning & Community Right-to-know Act
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
MSHA	Mine Safety and Health Administration
NDSL	Canadian Non-Domestic Substances List
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health



MATERIAL SAFETY DATA SHEET

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SHEETROCK® Lightweight Setting-Type Joint Compounds

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OSHA	Occupational Health and Safety Administration
PEL	Permissible Exposure Limit
PPE	Personal Protection Equipment
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act of 1986
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
UN/NA#	United Nations/North America number
WHMIS	Workplace Hazardous Material Information System

Prepared by:
Product Safety
USG Corporation
550 West Adams Street
Chicago, IL 60661-3637

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his/her own particular use.

END



Material Safety Data Sheet

MSDS No: GB-5002

Ready Mix Joint Compounds

Date: June 12, 2014

Supersedes Date: April 29, 2014

1. PRODUCT AND COMPANY INFORMATION

Manufacturer Information:

National Gypsum Company
2001 Rexford Road
Charlotte, NC 28211

For Emergency Product Information Call:

Director Quality Services
(704) 551-5820 - 24 Hour Emergency Response
Website: www.nationalgypsum.com

Product Name:	Easy Finish Topping Easy Finish All Purpose ProForm All Purpose Heavy Viscosity ProForm All Purpose Export EX 70 ProForm Multi-Use ProForm Taping ProForm Taping Lite ProForm Lite Blue ProForm Texture Grade ProForm Tinted Lite ProForm Pre-Blend 50 lb. bag	ProForm All Purpose ProForm All Purpose Machine Grade ProForm Lite ProForm Lite with Dust-Tech ProForm Ultra Lite All Purpose ProForm Topping ProForm XP with Dust-Tech Advantage Advantage Lite Advantage Topping ProForm Concrete-Cover Compound ProForm Factory Built Housing Texture Grade Compound
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Use: All-purpose drying type compounds for finishing gypsum board products.

Generic Descriptions: Pre-mixed compounds that are off white in color, and dry to a white finish.

2. HAZARDS IDENTIFICATION

Appearance and Odor: A white to gray paste with mild latex odor.

Contains no asbestos. HMIS Hazard Class No. 1, 0, 0.

Emergency Overview

ProForm® Ready Mix Joint Compound Products do not present an inhalation, ingestion, or contact health hazard unless subjected to operations such as sanding or machining which result in the generation of airborne particulate. A slight odor from the latex may be evident upon opening the container, which will dissipate quickly. This product contains quartz (crystalline silica) as a naturally occurring contaminant. It is recommended that a NIOSH approved particulate respirator be worn whenever working with this product results in airborne dust exposure exceeding the prescribed limits. (See Section 11 - Toxicological Information)

OSHA Regulatory Status

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

2. HAZARDS IDENTIFICATION (CONTINUED)**Potential Health Effects**

Primary Routes of Entry: Inhalation, Dermal contact

Target Organs: Respiratory system, skin, eyes.

Inhalation: Acute exposure to airborne dust concentrations in excess of the PEL/TLV may result in coughing, dyspnea, wheezing, general irritation of the nose, throat, and upper respiratory tract, and impaired pulmonary function. Chronic exposures may result in lung disease (silicosis and/or lung cancer). (See Section 11 - Toxicological Information)

Skin Contact: Continued and prolonged contact may result in irritation to the skin. Continued chronic exposure may result in dermatitis.

Eye Contact: Direct contact may cause mechanical irritation.

Ingestion: No known adverse effects. May result in obstruction or temporary irritation of the digestive tract.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS Number</u>	<u>Weight Percent</u>
<u>Contains:</u>		
Calcium Carbonate or Dolomite (Limestone)	1317-65-3 16389-88-1	>50
Crystalline Silica (Quartz)	14808-60-7	<5
<u>And may contain one or more of the following:</u>		
Mica	12001-26-2	<10
Pyrophyllite	12269-78-2	<10
Talc (non-asbestiform)	14807-96-6	<5
Perlite	93763-70-3	<10
Attapulgite Clay	12174-11-7	<5
Sepiolite Clay	63800-37-3	<5
Smectite Clay	1302-78-9	<5
Polyvinyl Acetate Latex	NE	<5
Ethylene Vinyl Acetate Latex	NE	<5

4. FIRST AID MEASURES

- **Inhalation:** Remove exposed individual to fresh air immediately. If breathing difficulty persists, seek medical attention.
- **Skin:** Flush and wash skin with soap and water. Utilize lotions to alleviate dryness if present. Seek medical attention if irritation persists.
- **Eye:** Immediately flush eyes with water for 15 minutes. Remove contact lenses (if applicable). Seek medical attention if irritation persists.
- **Ingestion:** This product is not expected to be hazardous and no harmful effects are expected upon ingestion of small amounts. Larger amounts may cause abdominal discomfort or possible obstruction of the digestive tract. Seek medical attention if problems persist.

5. FIRE FIGHTING MEASURES

Flammable Properties

- Not flammable or combustible
- NFPA Hazard Class No: 1/0/0

Extinguishing media

- Dry chemical, foam, water, fog or spray

Protection of firefighters

- Standard protective equipment and precautions

Fire and Explosion Hazards

- None

Hazardous Combustion Products

- None
- Above 800°C, limestone (calcium carbonate) can decompose to lime (calcium oxide) and release carbon dioxide (CO₂)

6. ACCIDENTAL RELEASE MEASURES

No special precautions required.

General recommendations:

- Wear appropriate Personal Protective Equipment. (See Section 8)
- Shovel or scoop spilled material back into container for use, if possible, or disposal.
- Maintain proper ventilation to minimize dust.
- Avoid washing material down drains. This material will eventually set and can cause clogs.
- Waste material is not a hazardous waste. Dispose of in accordance with applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

- Avoid contact with eyes, skin and clothing.
- Wear recommended personal protective equipment when handling. (See Section 8)
- Avoid breathing vapors when opening container.
- Minimize generation of dust.
- Avoid breathing dust.
- Store material in a cool, dry, ventilated area. Do not store outside or in direct sunlight.
- Keep from freezing to preserve usefulness.
- Keep containers closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure Guidelines**

Component	Exposure Limits	
	OSHA PEL (mg/m ³)	ACGIH TLV (mg/m ³)
Calcium Carbonate or Dolomite (limestone)	15 ^(T) 5 ^(R)	10 ^(T)
Crystalline silica (Quartz)	0.1 ^(R)	0.025 ^(R)
Mica	20 mppcf	3
Talc (non-asbestiform)	20 mppcf	2
Perlite	15 ^(T) 5 ^(R)	10 ^(T)
Attapulgite Clay	NL	NL
Sepiolite Clay	NL	NL
Smectite Clay	NL	NL
Polyvinyl Acetate Latex	NE	NE
Ethylene Vinyl Acetate Latex	NE	NE

T- Total Dust

R- Respirable Dust

NL - Not Listed

NE - Not Established

mppcf - million particles per cubic foot

8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

Engineering Controls

- Work/Hygiene Practices: Utilize methods to minimize dust production. Use sanders equipped with vacuum capabilities whenever possible. Utilize a light water spray when feasible.
- Ventilation: Provide local and general exhaust ventilation sufficient to maintain a dust level below the PEL/TLV.

Personal Protective Equipment

- Respiratory Protection: A NIOSH approved particulate respirator is recommended in poorly ventilated areas or if the PEL/TLV is exceeded. OSHA's 29 CFR 1910.134 (Respiratory Protection Standard) must be followed whenever work conditions require respirator use.
- Eye Protection: Safety glasses or goggles.
- Skin: Gloves, protective clothing and/or barrier creams may be utilized if conditions warrant.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White to off white

Odor: Mild latex initially, Low to none after opening

Physical State: Solid (dry)

Ph: 7-9

Solubility (H₂O): insoluble

Boiling, Freezing, Melting Point: Not Applicable

Decomposition Temperature: 825°C

Vapor pressure: Not Applicable

Vapor density: Not Applicable

Volatile organic compounds (VOC) content: <2 g/l

Flammability: Not Applicable

Flash Point: Not Applicable

Upper/Lower explosive limits: Not applicable

Auto-ignition temperature: Not Applicable

Partition coefficient: n-octanol/water: Not applicable

Evaporation rate: Not Applicable

Molecular weight: Mixture

Molecular formula: Not applicable

Specific Gravity: ~1.0 - 1.8

Bulk Density: 62-105 lbs/ft.³

10. STABILITY AND REACTIVITY

Chemical stability: Stable in dry environments.

Conditions to avoid: Contact with strong acids may result in generation of carbon dioxide.

Incompatibility: Strong acids

Hazardous decomposition: Above 825°C decomposes to calcium oxide (CaO) and carbon dioxide (CaCO₃)

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Human Data

There is no information on toxicokinetics, metabolism and distribution.

This product contains quartz (crystalline silica) as a naturally occurring contaminant. Chronic exposure to crystalline silica in the respirable size has been shown to cause silicosis, a debilitating lung disease. In addition, the International Agency for Research on Cancer (IARC) classifies crystalline silica inhaled in the form of quartz or cristobalite from occupational sources as carcinogenic to humans, Group 1. The National Toxicology Program (NTP) classifies respirable crystalline silica as a substance, which may be reasonably anticipated to be a carcinogen. OSHA does not regulate crystalline silica as a human carcinogen.

11. TOXICOLOGICAL INFORMATION (CONTINUED)**Human Data (Continued)**

Some products may contain attapulgite clay. IARC classifies attapulgite (long fiber) carcinogenic to humans, Group 2B. Attapulgite is not classified as a carcinogen by NTP or OSHA.

Animal Data

LD₅₀ and LC₅₀: Not available

12. ECOLOGICAL INFORMATION

This product does not present an ecological hazard to the environment.

Ecotoxicological Information

None available

Environmental Fate

Limestone is a naturally occurring mineral. Biodegradation and/or bioaccumulation potential is not applicable.

13. DISPOSAL CONSIDERATIONS

This material is not considered a hazardous waste. Dispose of according to Local, State, Federal, and Provincial Environmental Regulations.

14. TRANSPORT INFORMATION

- This product is not a DOT hazardous material
- Shipping Name: Same as product name
- ICAO/IATA/IMO: Not applicable

15. REGULATORY INFORMATION

All ingredients are included on the TSCA inventory.

Federal Regulations

SARA Title III: Not listed under Sections 302, 304, and 313

CERCLA: Not listed

RCRA: Not listed

OSHA: Dust and potential respirable crystalline silica generated during product use may be hazardous.

State Regulations

California Prop 65: Respirable crystalline silica is known to the state of California to cause cancer. Industrial hygiene monitoring during recommended use of this product failed to identify any respirable crystalline silica.

Canada WHMIS

All components of this product are included in the Canadian Domestic Substances List (DSL).

Crystalline silica: WHMIS Classification D2A

16. OTHER INFORMATION**MSDS Revision Summary**

Effective Date Change: 06/12/2014

Supersedes: 04/29/2014

Format Changes: ANSI Z400.1-2004 - Complies with GHS format

Key/Legend

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Services Number
CFR	Code of Federal Regulations
DOT	Department of Transportation
EPA	Environmental Protection Agency
HEPA	High Efficiency Particulate Air
HMIS	Hazardous Material Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
NIOSH	National Institute for Occupational Safety and Health
NFPA	National Fire Protection Association
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPE	Personal Protective Equipment
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein. This material safety data sheet was prepared to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and with the Workplace Hazardous Materials Information System (WHMIS).

Disclaimer of Liability:

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of the material. Information contained herein is believed to be true and accurate, but all statements or suggestions are made without any warranty, express or implied, regarding accuracy of the information, the hazards connected with the use of the material, or the results to be obtained for the use thereof.



Material Safety Data Sheet

Fast Setting Joint Compounds

MSDS No: GB-5001

Page 1 of 7

Date: June 12, 2014

Supersedes Date: August 19, 2013

1. PRODUCT AND COMPANY INFORMATION

Manufacturer Information:

National Gypsum Company
2001 Rexford Road
Charlotte, NC 28211

For Emergency Product Information Call:

Director Quality Services
(704) 551-5820 - 24 Hour Emergency Response
Website: www.nationalgypsum.com

Product Name: **ProForm[®] BRAND FS90 Fire-Shield[®] Compound**
ProForm[®] BRAND FasTrack[®]
ProForm[®] BRAND FasTrack Plus[®]
ProForm[®] BRAND Quick Set[™] Setting Compound
ProForm[®] BRAND Quick Set[™] Lite Setting Compound
ProForm[®] BRAND Quick Patch Compound

Use: Setting type (or hardening) joint compounds used in joint finishing and repair of drywall.

Generic Descriptions: White powder products sold in bags

2. HAZARDS IDENTIFICATION

Appearance and Odor: A white powder with no odor.

Contains no asbestos. HMIS Hazard Class No. 1, 0, 0.

Emergency Overview

ProForm[®] Fast Setting Joint Compound Products do not present an inhalation, ingestion, or contact health hazard unless subjected to operations such as sanding or machining which result in the generation of airborne particulate. This product contains quartz (crystalline silica) as a naturally occurring contaminant. It is recommended that a NIOSH approved particulate respirator be worn whenever working with this product results in airborne dust exposure exceeding the prescribed limits.
(See Section 11 - Toxicological Information)

OSHA Regulatory Status

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

2. HAZARDS IDENTIFICATION (CONTINUED)**Potential Health Effects**

Primary Routes of Entry: Inhalation, Dermal contact

Target Organs: Respiratory system, skin, eyes.

Inhalation: Acute exposure to airborne dust concentrations in excess of the PEL/TLV may result in coughing, dyspnea, wheezing, general irritation of the nose, throat, and upper respiratory tract, and impaired pulmonary function. Chronic exposures may result in lung disease (silicosis and/or lung cancer). (See Section 11 - Toxicological Information)

Skin Contact: Continued and prolonged contact may result in irritation to the skin. Continued chronic exposure may result in dermatitis.

Eye Contact: Direct contact may cause mechanical irritation.

Ingestion: No known adverse effects. May result in obstruction or temporary irritation of the digestive tract.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	Weight Percent
<u>Contains:</u>		
Crystalline silica (Quartz)	14808-60-7	<5
<u>And may contain one or more of the following:</u>		
Calcium Carbonate or Dolomite (Limestone)	1317-65-3 16389-88-1	>10
Pyrophyllite	12269-78-2	<10
Mica	12001-26-2	<5
Talc (non-asbestiform)	14807-96-6	<5
Perlite	93763-70-3	<10
Attapulgite Clay	12174-11-7	<5
Calcium Sulfate Hemihydrate (Plaster of Paris)	10034-76-1	>70
Polyvinyl Alcohol	25213-24-5	<5
Poly Vinyl Acetate Latex	NE	<5

4. FIRST AID MEASURES

- **Inhalation:** Remove exposed individual to fresh air immediately. If breathing difficulty persists, seek medical attention.
- **Skin:** Flush and wash skin with soap and water. Utilize lotions to alleviate dryness if present. Seek medical attention if irritation persists.
- **Eye:** Immediately flush eyes with water for 15 minutes. Remove contact lenses (if applicable). Seek medical attention if irritation persists.
- **Ingestion:** This product is not expected to be hazardous and no harmful effects are expected upon ingestion of small amounts. Larger amounts may cause abdominal discomfort or possible obstruction of the digestive tract. Seek medical attention if problems persist.

5. FIRE FIGHTING MEASURES**Flammable Properties**

- Not flammable or combustible
- NFPA Hazard Class No: 1/0/0

Extinguishing media

- Dry chemical, foam, water, fog or spray

Protection of firefighters

- Standard protective equipment and precautions

Fire and Explosion Hazards

- None

Hazardous Combustion Products

- None
- Above 800°C, limestone (calcium carbonate) can decompose to lime (calcium oxide) and release carbon dioxide (CO₂)
- Above 1450°C, gypsum can decompose and release sulfur dioxide (SO₂) and oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

No special precautions required.

General recommendations:

- Wear appropriate Personal Protective Equipment. (See Section 8)
- Shovel or scoop spilled material back into container for use, if possible, or disposal.
- Maintain proper ventilation to minimize dust.
- Avoid washing material down drains. This material will eventually set and can cause clogs.
- Waste material is not a hazardous waste. Dispose of in accordance with applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

- Avoid contact with eyes, skin and clothing.
- Wear recommended personal protective equipment when handling. (See Section 8)
- Minimize generation of dust.
- Avoid breathing dust.
- Store material in a cool, dry, ventilated area. Do not store outside or in direct sunlight.
- Keep from freezing to preserve usefulness.
- Keep containers closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure Guidelines**

	Exposure Limits	
Component	OSHA PEL (mg/m ³)	ACGIH TLV (mg/m ³)
Calcium Carbonate or Dolomite (Limestone)	15 ^(T) 5 ^(R)	10 ^(T)
Crystalline silica (Quartz)	0.1 ^(R)	0.025 ^(R)
Mica	20 mppcf	3
Talc (non-asbestiform)	20 mppcf	2
Perlite	15 ^(T) 5 ^(R)	10 ^(T)
Attapulgite Clay	NL	NL
Calcium Sulfate Hemihydrate (Plaster of Paris)	15 ^(T) 5 ^(R)	10 ^(T)
Polyvinyl Alcohol	NE	NE
Polyvinyl Acetate Latex	NE	NE

T- Total Dust

R- Respirable Dust

NL - Not Listed

NE - Not Established

mppcf - million particles per cubic foot

Engineering Controls

- Work/Hygiene Practices: Utilize methods to minimize dust production. Use sanders equipped with vacuum capabilities whenever possible. Utilize a light water spray when feasible.
- Ventilation: Provide local and general exhaust ventilation sufficient to maintain a dust level below the PEL/TLV.

Personal Protective Equipment

- Respiratory Protection: A NIOSH approved particulate respirator is recommended in poorly ventilated areas or if the PEL/TLV is exceeded. OSHA's 29 CFR 1910.134 (Respiratory Protection Standard) must be followed whenever work conditions require respirator use.
- Eye Protection: Safety glasses or goggles.
- Skin: Gloves, protective clothing and/or barrier creams may be utilized if conditions warrant.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White to off white
Odor: None
Physical State: Solid
Ph: 7-9
Solubility (H₂O): insoluble
Boiling, Freezing, Melting Point: Not Applicable
Decomposition Temperature: 825°C; 1450°C
Vapor pressure: Not Applicable
Vapor density: Not Applicable
Volatile organic compounds (VOC) content: None

Flammability: Not Applicable
Flash Point: Not Applicable
Upper/Lower explosive limits: Not applicable
Auto-ignition temperature: Not Applicable
Partition coefficient: n-octanol/water: Not applicable
Evaporation rate: Not Applicable
Molecular weight: Mixture
Molecular formula: Not Applicable
Specific Gravity: ~2.5
Bulk Density: ~55-70 lbs/ft³

10. STABILITY AND REACTIVITY

Chemical stability: Stable in dry environments.
Conditions to avoid: Contact with strong acids may result in generation of carbon dioxide.
Incompatibility: Strong acids
Hazardous decomposition: Above 825°C decomposes to calcium oxide (CaO) and carbon dioxide. (CaCO₃) Above 1450°C, gypsum can decompose and release sulfur dioxide (SO₂) and oxides of carbon.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Human Data

There is no information on toxicokinetics, metabolism and distribution.

This product contains quartz (crystalline silica) as a naturally occurring contaminant. Chronic exposure to crystalline silica in the respirable size has been shown to cause silicosis, a debilitating lung disease. In addition, the International Agency for Research on Cancer (IARC) classifies crystalline silica inhaled in the form of quartz or cristobalite from occupational sources as carcinogenic to humans, Group 1. The National Toxicology Program (NTP) classifies respirable crystalline silica as a substance, which may be reasonably anticipated to be a carcinogen. OSHA does not regulate crystalline silica as a human carcinogen.

Some products may contain attapulgite clay. IARC classifies attapulgite (long fiber) carcinogenic to humans, Group 2B. Attapulgite is not classified as a carcinogen by NTP or OSHA.

Animal Data

Gypsum: The acute oral toxicity study [OECD TG 420, Fixed dose procedure] of calcium sulfate dihydrate showed that this chemical did not cause any changes even at 2,000 mg/kg b.w. Therefore, the oral LD₅₀ value was more than 2,000-mg/kg b.w. for female rats (Sprague-Dawley).

Calcium sulfate, dihydrate was not irritating to the skin of rabbits at 1, 24, 48 and 72 hours after removal of test patches [OECD TG 404]. There is no indication of skin sensitization in guinea pigs [OECD TG 406].

In vivo and *In vitro* studies for mutagenicity were negative.

Reproduction/Developmental Toxicity Screening Tests were negative.

Plaster of Paris: Oral LD₅₀ (rat): >5000 mg/kg
No evidence of mutagenicity on Ames Test.

LD₅₀ and LC₅₀ data not available for the product.

12. ECOLOGICAL INFORMATION

This product does not present an ecological hazard to the environment.

Ecotoxicological Information

None available

Environmental Fate

Limestone and gypsum are naturally occurring minerals. Biodegradation and/or bioaccumulation potential is not applicable.

13. DISPOSAL CONSIDERATIONS

This material is not considered a hazardous waste.
Dispose of according to Local, State, Federal, and Provincial Environmental Regulations.

14. TRANSPORT INFORMATION

- This product is not a DOT hazardous material
- Shipping Name: Same as product name
- ICAO/IATA/IMO: Not applicable

15. REGULATORY INFORMATION

All ingredients are included on the TSCA inventory.

Federal Regulations

SARA Title III: Not listed under Sections 302, 304, and 313

CERCLA: Not listed

RCRA: Not listed

OSHA: Dust and potential respirable crystalline silica generated during product use may be hazardous.

State Regulations

California Prop 65: Respirable crystalline silica is known to the state of California to cause cancer. Industrial hygiene monitoring during recommended use of this product failed to identify any respirable crystalline silica.

Canada WHMIS

All components of this product are included in the Canadian Domestic Substances List (DSL).

Crystalline silica: WHMIS Classification D2A

16. OTHER INFORMATION**MSDS Revision Summary**

Effective Date Change: 06/12/2014

Supersedes: 08/19/2013

Format Changes: ANSI Z400.1

Key/Legend

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Services Number
CFR	Code of Federal Regulations
DOT	Department of Transportation
EPA	Environmental Protection Agency
HEPA	High Efficiency Particulate Air
HMIS	Hazardous Material Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
NIOSH	National Institute for Occupational Safety and Health
NFPA	National Fire Protection Association
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPE	Personal Protective Equipment
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System

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MATERIAL SAFETY DATA SHEET

SHEETROCK® Ceiling Spray Texture –QT Medium Poly

MSDS #48-332-002

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SECTION 1 CHEMICAL PRODUCT AND IDENTIFICATION

United States Gypsum Company
550 West Adams Street
Chicago, Illinois 60661-3637
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: January 1, 2011
Version: 7

PRODUCT(S) SHEETROCK® Ceiling Spray Texture –QT Medium Poly

**CHEMICAL FAMILY /
GENERAL CATEGORY** Texture/Finishing

SYNONYMS Spray Texture

SECTION 2 HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:

⚠CAUTION!

This product is not expected to produce any unusual hazards during normal use. Exposure to high dust and/or mist levels may irritate the skin, eyes, nose, throat, or upper respiratory tract.

POTENTIAL HEALTH EFFECTS (See Section 11 for more information)

ACUTE :

Inhalation	Exposure to dust and mist generated during the handling, spray application or use of the product may cause temporary irritation to eyes, skin, nose, throat, and upper respiratory tract. Persons subjected to large amounts of this dust or mist will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.
Eyes	Dust/mist can cause temporary mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.
Skin	None known.
Ingestion	None known.

CHRONIC:

Inhalation	Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.
Eyes	None known.
Skin	None known.
Ingestion	None known.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.



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CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S) All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11: Toxicology Information for detailed information.

MATERIAL	IARC	NTP	ACGIH	CAL- 65
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Crystalline silica	1	1	A2	Listed
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IARC - International Agency for Research on Cancer: 1- Carcinogenic to humans; 2A – Probably carcinogenic to humans; 2B – Possibly carcinogenic to humans; 3 - Not classifiable as a carcinogen; 4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS): 1- Known to be carcinogen; 2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists: A1 – Confirmed human carcinogen; A2 – Suspected human carcinogen; A3 – Animal carcinogen; A4 - Not classifiable as a carcinogen; A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 “Chemicals known to the State of California to Cause Cancer”

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent of crystalline silica given represents total quartz and not the respirable fraction. The weight percent of respirable silica has not been measured in this product.

Food and Drug Administration [CFR Title 21, v.3, sec 184.1409] – Ground limestone is Generally Recognized as Safe (GRAS).

POTENTIAL ENVIRONMENTAL EFFECTS: This product has no known adverse effect on ecology. (See Section 12 for more information.)

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	CAS #
Limestone	>70	1317-65-3
Or Dolomite		16389-88-1
Kaolin	<20	1332-58-7
Attapulgate	<5	12174-11-7
Starch	<5	9005-25-8
Or Hydroxypropyl Amylopectin Phosphate		113894-92-1
Or Carboxymethyl Starch-Epichlorohydrin		59419-62-4
Polystyrene	<5	9003-53-6
Crystalline Silica	<5	14808-60-7 [^]
Diatomaceous Earth	<5	61790-53-2
Expanded Perlite	<5	93763-70-3

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory and the Canadian Domestic Substances List (DSL).

[^]The weight percent for silica represents total quartz and not the respirable fraction.

SECTION 4 FIRST AID MEASURES

FIRST AID PROCEDURES

Inhalation	Remove to fresh air. Leave the area of exposure and remain away until coughing and other symptoms
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SHEETROCK® Ceiling Spray Texture –QT Medium Poly

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	subside. Other measures are usually not necessary, however if conditions warrant, contact physician.
Eyes	In case of contact, do not rub or scratch your eyes. To prevent mechanical irritation, flush thoroughly with water for 15 minutes. If irritation persists, consult physician.
Skin	Wash with mild soap and water. If irritation persists, consult physician.
Ingestion	This product is not intended to be ingested or eaten. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

NOTES TO PHYSICIAN: Treatment should be directed at the control of symptoms and the clinical condition.

SECTION 5 FIRE FIGHTING MEASURES

General Fire Hazards	None known		
Extinguishing Media	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures	Wear appropriate personal protective equipment. See section 8.		
Unusual Fire/ Explosion Hazards	None known		
Hazardous Combustion Products	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂). Polystyrene is capable of burning, emitting acrid smoke and fumes.		
Flash Point	Not Determined	Auto Ignition	Not Applicable
Method Used	Not Applicable	Flammability Classification	Not Applicable
Upper Flammable Limit (UFL)	Not Determined		
Lower Flammable Limit (LFL)	Not Determined	Rate of Burning	Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

CONTAINMENT: No special precautions. Wear appropriate personal protective equipment. See section 8.
CLEAN-UP: Use normal clean up procedures. No special precautions.
DISPOSAL: Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters.

SECTION 7 HANDLING AND STORAGE



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HANDLING: Avoid dust/mist contact with eyes and skin. Wear the appropriate eye and skin protection against dust/mist (See Section 8). Minimize dust/mist generation and accumulation. Avoid breathing dust/mist. Wear the appropriate respiratory protection against dust/mist in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Use good safety and industrial hygiene practices.

STORAGE: Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities (see Section 10).

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

MATERIAL	WT%	TLV (mg/m ³)	PEL(mg/m ³)
Limestone	>70	10	15 (T) / 5 (R)
Or Dolomite		10	15 (T) / 5 (R)
Kaolin	<20	2 (R)	15 (T) / 5 (R)
Attapulgate	<5	(NE)	(NE)
Starch	<5	10	15 (T) / 5 (R)
Or Hydroxypropyl Amylopectin Phosphate		(NE)	(NE)
Or Carboxymethyl Starch-Epichlorohydrin		(NE)	(NE)
Polystyrene	<5	(NE)	(NE)
Crystalline Silica	<5	0.025 (R)	0.1 (R)
Diatomaceous Earth	<5	10	6
Expanded Perlite	<5	10	15 (T) / 5 (R)

(T)–Total; (R)–Respirable; (NE)-Not Established; (C)-Ceiling; (STEL)-Short-term exposure limit

(F)-Fume; (Du)-Dust; (M)-Mist

ppm-part per million; f/cc-fiber per cubic centimeter; mppcf- million particles per cubic foot

ENGINEERING CONTROLS: Provide ventilation sufficient to control airborne dust/mist levels. If user operations generate airborne dust/mist, use ventilation to keep dust/mist concentrations below permissible exposure limits. Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust/mist levels below permissible exposure limits.

RESPIRATORY PROTECTION: Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty or misty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face	Wear eye protection, safety glasses or goggles, to avoid possible eye contact.
Skin	Wear gloves and protective clothing to prevent repeated or prolonged skin contact.
General	Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES



MATERIAL SAFETY DATA SHEET

SHEETROCK® Ceiling Spray Texture –QT Medium Poly

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Appearance	Gray to off white	Vapor Density (Air = 1)	Not Applicable
Odor	Low to no odor	Specific Gravity (H ₂ O = 1)	0.4-0.9
Odor Threshold	Not Determined	Solubility in water (g/100g)	Slight, unlimited dispersibility
Physical State	Solid/ Powder	Partition Coefficient	Not Determined
pH @ 25 ° C	~7-8.5	Auto-ignition Temp	Not Determined
Melting Point	Not Applicable	Decomposition Temp	Not Determined
Freezing Point	Not Applicable	Viscosity	Not Applicable
Boiling Point	Not Applicable	Particle Size	99% Finer than 600 microns
Flash Point	Not Determined	Bulk Density	0.4-0.9 Kg/L
Evaporation Rate (BuAc = 1)	Not Applicable	Molecular Weight	Mixture
Upper Flammable Limit (UFL)	Not Determined	VOC Content	Zero g/L
Lower Flammable Limit (LFL)	Not Determined	Percent Volatile	Zero
Vapor Pressure (mm Hg)	~24 mmHg@ 25°C		

SECTION 10 CHEMICAL STABILITY AND REACTIVITY

STABILITY	Stable.
CONDITIONS TO AVOID	Contact with incompatibles (see below).
INCOMPATIBILITY	None known.
HAZARDOUS POLYMERIZATION	None known.
HAZARDOUS DECOMPOSITION	Above 800° C – limestone may decompose to calcium oxide (CaO) and carbon dioxide (CO ₂).

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE EFFECTS: None known.

CHRONIC EFFECTS / CARCINOGENICITY:

Crystalline Silica: Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. The weight percent of respirable crystalline silica may not have been measured in this product. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. Smoking in combination with silica exposures increases the risk of cancer. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.



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IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

SECTION 12
ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on ecology.

Ecotoxicity value	Not determined.
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SECTION 13
DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of material in accordance with federal, state, and local regulations. Never discharge directly into sewers or surface waters. Consult with environmental regulatory agencies for guidance on acceptable disposal practices.

SECTION 14
TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name	Same as product name.
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Hazard Class	Not classified.
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UN/NA #	None. Not classified.
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Packing Group	None.
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Label (s) Required	Not applicable.
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GGVSec/MDG-Code	Not classified.
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ICAO/IATA-DGR	Not applicable.
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RID/ADR	None.
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ADNR	None.
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SECTION 15
REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.



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MATERIAL	WT%	3 0 2	3 0 4	3 1 3	CERCLA	CAA Sec. 112	RCRA Code
Limestone	>70	NL	NL	NL	NL	NL	NL
Or Dolomite		NL	NL	NL	NL	NL	NL
Kaolin	<20	NL	NL	NL	NL	NL	NL
Attapulgite	<5	NL	NL	NL	NL	NL	NL
Starch	<5	NL	NL	NL	NL	NL	NL
Or Hydroxypropyl Amylopectin Phosphate		NL	NL	NL	NL	NL	NL
Or Carboxymethyl Starch-Epichlorohydrin		NL	NL	NL	NL	NL	NL
Polystyrene	<5	NL	NL	NL	NL	NL	NL
Crystalline Silica	<5	NL	NL	NL	NL	NL	NL
Diatomaceous Earth	<5	NL	NL	NL	NL	NL	NL
Expanded Perlite	<5	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of Controlled Product regulations and the MSDS contains all the information required by the Controlled Products Regulations. All ingredients of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification
Limestone	>70	Not Listed	D2A
Or Dolomite		Not Listed	Not Listed
Kaolin	<20	Not Listed	D2A
Attapulgite	<5	Not Listed	Not Listed
Starch	<5	Not Listed	Not Listed
Or Hydroxypropyl Amylopectin Phosphate		Not Listed	Not Listed
Or Carboxymethyl Starch-Epichlorohydrin		Not Listed	Not Listed
Polystyrene	<5	Not Listed	Not Listed
Crystalline Silica	<5	1406	D2A
Diatomaceous Earth	<5	Not Listed	Not Listed
Expanded Perlite	<5	Not Listed	D2A

IDL Item#: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

Risk and Safety Phrases defined by European Union Directive 67/548/EEC (Annex III and IV)

R-Phrase(s): R36/37/38

S-Phrase(s): S51 S38 S39

SECTION 16 OTHER INFORMATION



MATERIAL SAFETY DATA SHEET

SHEETROCK® Ceiling Spray Texture –QT Medium Poly

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Label Information**Δ CAUTION!**

Dust and/or mist can cause irritation to eyes, skin and respiratory tract. Wear eye, skin and respiratory protection as necessary per working conditions. If eye contact occurs flush with water for 15 minutes. Do not ingest. If ingested, call physician. Product safety information: 800-507-8899 or usg.com. Customer Service: 800 USG-4-YOU (800 874-4968). KEEP OUT OF REACH OF CHILDREN.

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:			HMIS Ratings:		HEALTH * 1	0 = Minimal Hazard
Health:	1		Health:	1	FLAMMABILITY 0	1 = Slight Hazard
Fire:	0		Fire:	0	PHYSICAL HAZARD 0	2 = Moderate Hazard
Reactivity:	0		Reactivity:	0	PERSONAL PROTECTION E	3 = Serious Hazard
						4 = Severe Hazard

E – Safety glasses, gloves and dust respirator; * - Contains silica

Key/Legend

ANSI	American National Standards Institute
ACGIH	American Conference of Governmental Industrial Hygienists
CAA	Clean Air Act
CAS	Chemical Abstracts Service (Registry Number)
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
DOT	United States Department of Transportation
DSL	Canadian Domestic Substances List
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning & Community Right-to-know Act
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
MSHA	Mine Safety and Health Administration
NDSL	Canadian Non-Domestic Substances List
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Health and Safety Administration
PEL	Permissible Exposure Limit
PPE	Personal Protection Equipment
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act of 1986
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
UN/NA#	United Nations/North America number
WHMIS	Workplace Hazardous Material Information System



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SHEETROCK® Ceiling Spray Texture –QT Medium Poly

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Prepared by:
Product Safety
USG Corporation
550 West Adams Street
Chicago, IL 60661-3637

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his/her own particular use.

END

ACOUSTICAL CEILINGS

- 1. UNITED STATES GYPSUM (USG) - CEILINGS GRID AND TILE**
- 2. ARMSTRONG - CEILINGS GRID AND TILE**
- 3. CERTAINTEED - CEILING TILE**
- 4. CHICAGO METALLIC (CM) - CEILING GRID**



**SECTION 1
CHEMICAL PRODUCT AND IDENTIFICATION**

United States Gypsum Company
550 West Adams Street
Chicago, Illinois 60661-3637
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: January 1, 2011
Version: 2

PRODUCT(S) DONN® Suspension System - DX®/DXL™

**CHEMICAL FAMILY /
GENERAL CATEGORY** Steel

SYNONYMS Ceiling Tile Grid

**SECTION 2
HAZARD IDENTIFICATION**

EMERGENCY OVERVIEW:

CAUTION!

This product is not expected to produce any unusual hazards during normal use. Direct contact may irritate the skin, or eyes. Edges may be sharp and can cut skin. Unload from package with caution and handle carefully.

POTENTIAL HEALTH EFFECTS (See Section 11 for more information)

ACUTE :

Inhalation	Due to the physical nature of this product, inhalation is unlikely. There are no known health effects due to inhalation. Welding, burning, grinding or machining can generate metal particulate or elemental oxide fumes. Inhalation overexposure to manganese fume has been reported to cause "metal fume fever" characterized by fever and chills (i.e., flu-like symptoms). Such an overexposure is unlikely due to the small amount of manganese available. Fumes or mists of surface treatment oils may irritate the eyes and upper respiratory tract, and cause headache, dizziness and / or nausea if exposure is excessive.
Eyes	Direct contact can cause irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.
Skin	Edges may be sharp and can cut skin. Unload from package with caution and handle carefully.
Ingestion	None known.

CHRONIC:

Inhalation	Repeated and prolonged exposure to iron oxide fume may cause a benign pneumoconiosis called siderosis. The ACGIH recommended limit is set to protect against siderosis, any exposure is expected to remain well below OSHA regulatory and ACGIH recommended limits during normal handling and use of this product. None known.
Eyes	None known.
Skin	None known.
Ingestion	None known. This product is not intended to be eaten. Wash hands before eating.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.



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DONN® Suspension System - DX®/DXL™

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CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S) All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11: Toxicology Information for detailed information.

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Tin	Not Listed	Not Listed	A4 (Organic)	Not Listed
Certain Nickel Compounds	1	1	A1	Listed
Chromium (hexavalent compounds)	1	1	A1	Listed
Certain Lead Compounds	2A	2	A3	Not Listed

IARC - International Agency for Research on Cancer: 1- Carcinogenic to humans; 2A – Probably carcinogenic to humans; 2B – Possibly carcinogenic to humans; 3 - Not classifiable as a carcinogen; 4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS): 1- Known to be carcinogen; 2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists: A1 – Confirmed human carcinogen; A2 – Suspected human carcinogen; A3 – Animal carcinogen; A4 - Not classifiable as a carcinogen; A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 “Chemicals known to the State of California to Cause Cancer”

IARC lists certain hexavalent chromium compounds under its Group 1 - "Confirmed Human Carcinogen". IARC lists certain nickel compounds under its Group 2A - "Suspected Human Carcinogen". IARC lists certain lead compounds under its Group 2A - "Suspected Human Carcinogen". Welding fume may also contain contaminants from fluxes and / or other welding consumables.

POTENTIAL ENVIRONMENTAL EFFECTS: This product has no known adverse effect on ecology. (See Section 12 for more information.)

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	CAS #
Iron	>90	7439-89-6
Manganese	<10	7439-96-5
Zinc	<10	7440-66-6
Aluminum	<10	7429-90-5
Tin	<2	7440-31-5
Phosphorus	<2	7723-14-0
Sulfur	<2	7704-34-9
Nickel	<1	7440-02-0
Chromium	<1	7440-47-3
Copper	<1	7440-50-8
Lead	<1	7439-92-1
Silicon	<1	7440-21-3

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory and the Canadian Domestic Substances List (DSL).

SECTION 4 FIRST AID MEASURES



FIRST AID PROCEDURES

Inhalation	In the unlikely event of over exposure to metals fumes if welding, remove to fresh air. Leave the area of exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.
Eyes	In case of contact, do not rub or scratch your eyes. To prevent mechanical irritation, flush thoroughly with water for 15 minutes. If irritation persists, consult physician.
Skin	Wash with mild soap and water. If irritation persists, consult physician.
Ingestion	This product is not intended to be ingested or eaten. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

NOTES TO PHYSICIAN: Treatment should be directed at the control of symptoms and the clinical condition.

**SECTION 5
FIRE FIGHTING MEASURES**

General Fire Hazards	None known		
Extinguishing Media	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures	Wear appropriate personal protective equipment. See section 8.		
Unusual Fire/ Explosion Hazards	None known		
Hazardous Combustion Products	None known		
Flash Point	Not Applicable	Auto Ignition	Not Applicable
Method Used	Not Applicable	Flammability Classification	Not Applicable
Upper Flammable Limit (UFL)	Not Applicable		
Lower Flammable Limit (LFL)	Not Applicable	Rate of Burning	Not Applicable

**SECTION 6
ACCIDENTAL RELEASE MEASURES**

CONTAINMENT: No special precautions. Wear appropriate personal protective equipment. See section 8.

CLEAN-UP: Use normal clean up procedures. No special precautions.

DISPOSAL: Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters.

**SECTION 7
HANDLING AND STORAGE**



HANDLING: Avoid contact with eyes. Wear the appropriate eye protection (See Section 8). Use good safety and industrial hygiene practices.

STORAGE: Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities (see Section 10).

**SECTION 8
 EXPOSURE CONTROLS/PERSONAL PROTECTION**

MATERIAL	WT%	TLV (mg/m ³)	PEL(mg/m ³)
Iron	>90	5 (F)	10 (F)
Manganese	<10	5 (Du) / 1 (F)	5 (C) / 1 (F)
Zinc	<10	5 (F) / 10 (Du)	5 (F)
Aluminum	<10	10	15 (T) / 5 (R)
Tin	<2	2	2
Phosphorus	<2	0.02 ppm	0.1
Sulfur	<2	5 (as SO ₂)	13 (as SO ₂)
Nickel	<1	1 (as Ni)	1 (as Ni)
Chromium	<1	0.5 (as Cr)	1.0 (as Cr)
Copper	<1	0.2 (F)	0.1 (as Cu)
Lead	<1	0.15 (Du/F)	0.05
Silicon	<1	10	15 (T) / 5 (R)

(T)–Total; (R)–Respirable; (NE)-Not Established; (C)-Ceiling; (STEL)-Short-term exposure limit
 (F)-Fume; (Du)-Dust; (M)-Mist
 ppm-part per million; f/cc-fiber per cubic centimeter; mppcf- million particles per cubic foot

ENGINEERING CONTROLS: If user operations generate exposures, use ventilation to keep exposure concentrations below permissible exposure limits. Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control exposure levels below permissible exposure limits.

RESPIRATORY PROTECTION: A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face	Wear eye protection, safety glasses or goggles, to avoid possible eye contact.
Skin	Wear gloves and protective clothing to prevent cuts, edges may be sharp and can cut skin.
General	Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

**SECTION 9
 PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	Formed metal	Vapor Density (Air = 1)	Not Applicable
Odor	Low to no odor	Specific Gravity (H₂O = 1)	7.0-8.5



Odor Threshold	Not Determined	Solubility in water (g/100g)	Insoluble
Physical State	Solid	Partition Coefficient	Not Applicable
pH @ 25 °C	Not Applicable	Auto-ignition Temp	Not Applicable
Melting Point	Base Metal: 2750 °F	Decomposition Temp	Not Applicable
Freezing Point	Not Applicable	Viscosity	Not Applicable
Boiling Point	Not Applicable	Particle Size	Not Applicable
Flash Point	Not Applicable	Bulk Density	7.0-8.5
Evaporation Rate (BuAc = 1)	Not Applicable	Molecular Weight	Not Applicable
Upper Flammable Limit (UFL)	Not Applicable	VOC Content	Zero g/L
Lower Flammable Limit (LFL)	Not Applicable	Percent Volatile	Zero
Vapor Pressure (mm Hg)	Not Applicable		

**SECTION 10
 CHEMICAL STABILITY AND REACTIVITY**

STABILITY	Stable.
CONDITIONS TO AVOID	Contact with incompatibles (see below).
INCOMPATIBILITY	Contact with strong mineral acids will release flammable hydrogen gas.
HAZARDOUS POLYMERIZATION	None known.
HAZARDOUS DECOMPOSITION	None known.

**SECTION 11
 TOXICOLOGICAL INFORMATION**

ACUTE EFFECTS: Welding, burning, grinding or machining can generate metal particulate or elemental oxide fumes. Inhalation overexposure to manganese fume has been reported to cause "metal fume fever" characterized by fever and chills (i.e., flu-like symptoms). Such an overexposure is unlikely due to the small amount of manganese available. Fumes or mists of surface treatment oils may irritate the eyes and upper respiratory tract, and cause headache, dizziness and / or nausea if exposure is excessive.

CHRONIC EFFECTS / CARCINOGENICITY: Repeated and prolonged exposure to iron oxide fume may cause a benign pneumoconiosis called siderosis. The ACGIH recommended limit is set to protect against siderosis, any exposure is expected to remain well below OSHA regulatory and ACGIH recommended limits during normal handling and use of this product.

**SECTION 12
 ECOLOGICAL INFORMATION**

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on ecology.



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Ecotoxicity value	Not determined.
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SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of material in accordance with federal, state, and local regulations. Never discharge directly into sewers or surface waters. Consult with environmental regulatory agencies for guidance on acceptable disposal practices.

SECTION 14 TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name	Same as product name.
Hazard Class	Not classified.
UN/NA #	None. Not classified.
Packing Group	None.
Label (s) Required	Not applicable.
GGVSec/MDG-Code	Not classified.
ICAO/IATA-DGR	Not applicable.
RID/ADR	None.
ADNR	None.

SECTION 15 REGULATORY INFORMATION

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	3 0 2	3 0 4	3 1 3	CERCLA	CAA Sec. 112	RCRA Code
Iron	>90	NL	NL	NL	NL	NL	NL
Manganese	<10	NL	NL	X	NL	NL	NL
Zinc	<10	NL	NL	X	1,000	NL	NL
Aluminum	<10	NL	NL	X	NL	NL	NL
Tin	<2	NL	NL	NL	NL	NL	NL
Phosphorus	<2	100	1	X	1	NL	NL
Sulfur	<2	NL	NL	NL	NL	NL	NL
Nickel	<1	NL	NL	X	100	NL	NL



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Chromium	<1	NL	NL	X	5,000NL	NL
Copper	<1	NL	NL	X	5,000NL	NL
Lead	<1	NL	NL	X	10 NL	NL
Silicon	<1	NL	NL	NL	NL NL	NL

Metals. For metals listed under CERCLA no reporting of releases of the solid form is required if the mean diameter of the pieces of the solid metal released is greater than 100 micrometers (0.004 inches). The RQs shown on the consolidated list apply to smaller particles.

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of Controlled Product regulations and the MSDS contains all the information required by the Controlled Products Regulations. All ingredients of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification
Iron	>90	Not Listed	Not Listed
Manganese	<10	974	Not Listed
Zinc	<10	Not Listed	Not Listed
Aluminum	<10	47	Not Listed
Tin	<2	1570	Not Listed
Phosphorus	<2	1295	B4, D1A, E
Sulfur	<2	Not Listed	B4
Nickel	<1	1126	D2A
Chromium	<1	399	Not Listed
Copper	<1	433	Not Listed
Lead	<1	937	Not Listed
Silicon	<1	Not Listed	Not Listed

IDL Item#: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

Risk and Safety Phrases defined by European Union Directive 67/548/EEC (Annex III and IV)

R-Phrase(s): None known.

S-Phrase(s): None known.

SECTION 16 OTHER INFORMATION



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Label Information**Δ CAUTION!**

Edges may be sharp and can cut skin. Unload from package with caution and handle carefully. Product safety information: 800-507-8899 or usg.com. Customer Service: 800 USG-4-YOU (800 874-4968). **KEEP OUT OF REACH OF CHILDREN.**

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:			HMIS Ratings:		HEALTH <input type="text" value="0"/>	0 = Minimal Hazard
Health:	0		Health:	0	FLAMMABILITY <input type="text" value="0"/>	1 = Slight Hazard
Fire:	0		Fire:	0	PHYSICAL HAZARD <input type="text" value="0"/>	2 = Moderate Hazard
Reactivity:	0		Reactivity:	0	PERSONAL PROTECTION <input type="text" value="B"/>	3 = Serious Hazard
						4 = Severe Hazard

B - Safety glasses and gloves

Key/Legend

ANSI	American National Standards Institute
ACGIH	American Conference of Governmental Industrial Hygienists
CAA	Clean Air Act
CAS	Chemical Abstracts Service (Registry Number)
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
DOT	United States Department of Transportation
DSL	Canadian Domestic Substances List
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning & Community Right-to-know Act
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
MSHA	Mine Safety and Health Administration
NDSL	Canadian Non-Domestic Substances List
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Health and Safety Administration
PEL	Permissible Exposure Limit
PPE	Personal Protection Equipment
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act of 1986
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
UN/NA#	United Nations/North America number
WHMIS	Workplace Hazardous Material Information System



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Prepared by:
Product Safety
USG Corporation
550 West Adams Street
Chicago, IL 60661-3637

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his/her own particular use.

END



SECTION 1
CHEMICAL PRODUCT AND IDENTIFICATION

USG Interiors
550 West Adams Street
Chicago, Illinois 60661-3637
A Subsidiary of USG Corporation

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: January 1, 2011
Version: 8

PRODUCT(S) RADAR™

CHEMICAL FAMILY / GENERAL CATEGORY Ceiling Tiles

SYNONYMS Water Felted Mineral Fiber Ceiling Panel

MANUFACTURED AT 850 N. Broadway, Greenville, MS 38701 and/or 35 Arch St., Cloquet, MN 55720

SECTION 2
HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:
ΔWARNING!

This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract. Man-made mineral fibres have been classified by the European Union as irritating to skin (R:38).

POTENTIAL HEALTH EFFECTS (See Section 11 for more information)

ACUTE :

Inhalation	Exposure to dust generated during the handling or cutting, especially with power tools, of the product may cause irritate eyes, skin, nose, throat, and upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.
Eyes	Dust and/or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.
Skin	Direct contact with the skin can cause temporary irritation and itchiness. Rubbing of this product against the skin can result in abrasions. If irritation persists, consult a physician.
Ingestion	This product is not intended to be eaten. Unlikely to occur, but if ingested may cause temporary irritation to the gastrointestinal tract, especially the throat and stomach.

CHRONIC:

Inhalation	Panels do not release respirable dust in their installed state and therefore do not present any known health hazards when installed and properly maintained. Slag wool fiber has been classified as "not classifiable as to its carcinogenicity to humans" (Group 3) by the International Agency for Research on Cancer (IARC). (See Section 11) Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration. FIRECODE® products may contain silica. Prolonged and repeated exposures to airborne respirable crystalline silica can cause lung cancer. Smoking in combination with silica exposures increases the
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MATERIAL SAFETY DATA SHEET

RADAR™

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	risk of cancer. The concentration of respirable crystalline silica measured in airborne dust samples was below the detection limit using NIOSH Method 7500 in industrial hygiene testing of workers installing USG Acoustical Ceiling Panels for an 8 hour work day.
Eyes	None known.
Skin	None known.
Ingestion	None known.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S) All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11: Toxicology Information for detailed information.

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Slag Wool Fiber	3	2	A3	Not Listed
Crystalline silica	1	1	A2	Listed

IARC - International Agency for Research on Cancer: 1- Carcinogenic to humans; 2A – Probably carcinogenic to humans; 2B – Possibly carcinogenic to humans; 3 - Not classifiable as a carcinogen; 4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS): 1- Known to be carcinogen; 2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists: A1 – Confirmed human carcinogen; A2 – Suspected human carcinogen; A3 – Animal carcinogen; A4 - Not classifiable as a carcinogen; A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 “Chemicals known to the State of California to Cause Cancer”

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent of crystalline silica given represents total quartz and not the respirable fraction. The weight percent of respirable silica has not been measured in this product.

POTENTIAL ENVIRONMENTAL EFFECTS: This product has no known adverse effect on ecology. (See Section 12 for more information)

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	CAS #
Slag Wool Fiber	10-75	65997-17-3
Expanded Perlite	5-75	93763-70-3
Cellulose	1-25	9004-34-6
Starch	5-15	9005-25-8
Kaolin	0-15	1332-58-7
Calcium Sulfate Dihydrate	0-80	10101-41-4
Limestone	<2	1317-65-3
Or Dolomite		16389-88-1
Crystalline Silica	<5	14808-60-7^
Vinyl Acetate Polymer*	<2	9003-20-7
Or Ethylene Vinyl Acetate Polymer		24937-78-8
May be available with foil-backing:		[]
Aluminum Foil (as Aluminum and Cmpds)	0-2	7429-90-5



All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory and the Canadian Domestic Substances List (DSL).

This material is slag wool. Other generic terms that are used or have been used to classify this material include mineral wool, man made mineral fiber (MMMF), and man made vitreous fiber (MMVF). A more recent generic term that has appeared in the literature to describe these glassy materials is synthetic vitreous fiber (SVF). ^The weight percent for silica represents total quartz and not the respirable fraction. *This polymer is a uniquely formulated formaldehyde-free binder.

**SECTION 4
FIRST AID MEASURES**

FIRST AID PROCEDURES

Inhalation	Remove to fresh air. Leave the area of exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.
Eyes	In case of contact, do not rub or scratch your eyes. To prevent mechanical irritation, flush thoroughly with water for 15 minutes. If irritation persists, consult physician.
Skin	A commercially available skin cream or lotion may be helpful to treat dry skin areas. If skin has become cracked, take appropriate action to prevent infection and promote healing. Wash with mild soap and water. If irritation persists, consult physician.
Ingestion	This product is not intended to be ingested or eaten. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

NOTES TO PHYSICIAN: This product is a mechanical irritant, and is not expected to produce any chronic health effects from acute exposures. Treatment should be directed at the control of symptoms and the clinical condition.

**SECTION 5
FIRE FIGHTING MEASURES**

General Fire Hazards	None known		
Extinguishing Media	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures	Wear appropriate personal protective equipment. See section 8.		
Unusual Fire/ Explosion Hazards	None known		
Hazardous Combustion Products	Organic material in panels can produce oxides of carbon. None known		
Flash Point	Not Determined	Auto Ignition	Not Applicable
Method Used	Not Applicable	Flammability Classification	Not Applicable
Upper Flammable Limit (UFL)	Not Applicable		
Lower Flammable Limit (LFL)	Not Applicable	Rate of Burning	Not Applicable

**SECTION 6
ACCIDENTAL RELEASE MEASURES**



CONTAINMENT: No special precautions.

CLEAN-UP: Use normal clean up procedures. No special precautions.

DISPOSAL: Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters.

**SECTION 7
 HANDLING AND STORAGE**

HANDLING: Avoid dust contact with eyes and skin. Wear the appropriate eye and skin protection against dust (See Section 8). Minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Use good safety and industrial hygiene practices.

Follow traditional building practices; such as management of water away from the interior of the structure to avoid the growth of mold, mildew and fungus. Remove from the jobsite any building products suspected of being exposed to sustained moisture and considered conducive to mold growth.

STORAGE: Warehouse storage should be in accordance with package directions. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities (see Section 10). Protect from weather and prevent exposure to sustained moisture. Protect product from physical damage.

**SECTION 8
 EXPOSURE CONTROLS/PERSONAL PROTECTION**

MATERIAL	WT%	TLV (mg/m ³)	PEL(mg/m ³)
Slag Wool Fiber	10-75	1 f/cc (R)	15 (T) /5 (R)
Expanded Perlite	5-75	10	15 (T) /5 (R)
Cellulose	1-25	10	15 (T) /5 (R)
Starch	5-15	10	15 (T) /5 (R)
Kaolin	0-15	2 (R)	15 (T) /5 (R)
Calcium Sulfate Dihydrate	0-80	10	15 (T) /5 (R)
Limestone	<2	10	15 (T) /5 (R)
Or Dolomite		10	15 (T) /5 (R)
Crystalline Silica	<5	0.025 (R)	0.1 (R)
Vinyl Acetate Polymer*	<2	(NE)	(NE)
Or Ethylene Vinyl Acetate Polymer		(NE)	(NE)
May be available with foil-backing:		[]
Aluminum Foil (as Aluminum and Cmpds)	0-2	10	15 (T) /5 (R)

(T)–Total; (R)–Respirable; (NE)–Not Established; (C)–Ceiling; (STEL)–Short-term exposure limit
 (F)–Fume; (Du)–Dust; (M)–Mist
 ppm–part per million; f/cc–fiber per cubic centimeter; mppcf– million particles per cubic foot

TWA is 1 f/cc [respirable fibers: length >5µm; aspect ratio greater or equal to 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination]. NIOSH recommended exposure level is 3 fibers/cc.



ENGINEERING CONTROLS: Provide ventilation sufficient to control airborne dust levels. If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits. Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits. If cutting or trimming with power tools, dust collectors and local ventilation should be used.

Avoid unnecessary exposure to dust and handle with care. Keep work area clean of dust by using an industrial vacuum cleaner with high efficiency filter or wetting down area with water. Never use compressed air and avoid dry sweeping.

RESPIRATORY PROTECTION: Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face	Wear eye protection, safety glasses or goggles, to avoid possible eye contact, especially when working overhead.
Skin	Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions should be needed.
General	Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

**SECTION 9
PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	White or colored surface; beige/gray core	Vapor Density (Air = 1)	Not Applicable
Odor	Low to no odor	Specific Gravity (H₂O = 1)	~2.9
Odor Threshold	Not Determined	Solubility in water (g/100g)	Very low
Physical State	Solid panel	Partition Coefficient	Not Applicable
pH @ 25 ° C	~9	Auto-ignition Temp	Not Determined
Melting Point	2200°F/ 1200°C (Slag wool)	Decomposition Temp	Not Determined
Freezing Point	Not Determined	Viscosity	Not Applicable
Boiling Point	Not Applicable	Particle Size	Not Applicable
Flash Point	Not Determined	Bulk Density	~250 - 400 kg/m ³
Evaporation Rate (BuAc = 1)	Not Applicable	Molecular Weight	Mixture
Upper Flammable Limit (UFL)	Not Applicable	VOC Class*	Low-emitting
Lower Flammable Limit (LFL)	Not Applicable	VOC Content	Zero g/L
Vapor Pressure (mm Hg)	Not Applicable		

*Formaldehyde/VOC product emission classification.



SECTION 10
CHEMICAL STABILITY AND REACTIVITY

STABILITY	Stable.
CONDITIONS TO AVOID	Moisture and contact with incompatibles (see below). For non-ClimaPlus™ products, avoid high humidity.
INCOMPATIBILITY	None known.
HAZARDOUS POLYMERIZATION	None known.
HAZARDOUS DECOMPOSITION	The decomposition products from this material are those that would be expected from any organic (carbon-containing) material, and are mainly derived from pyrolysis (burning) of the organics. These decomposition products may include carbon monoxide, carbon dioxide, and carbon particles. None known.

SECTION 11
TOXICOLOGICAL INFORMATION

ACUTE EFFECTS: Direct contact with dust can cause eye and skin irritation (mechanical) and itchiness. Inhalation of dust can cause coughing and sneezing due to temporary irritation of nose and throat. None known.

CHRONIC EFFECTS / CARCINOGENICITY:

Slag Wool Fiber: Large morbidity and mortality studies of both European and North American mineral wool manufacturing workers have been conducted. These studies have found no significant association of non-malignant (i.e. fibrosis) or malignant (i.e., lung cancer or mesothelioma) lung disease and exposures to slag wool fibers and have not established a causal relationship between exposure and malignant diseases.

In 2001, the International Agency for Research on Cancer (IARC) assigned slag wool fiber to the Group 3 category ["not classifiable as to carcinogenicity to humans"].

The synthetic mineral fiber used in this product is exonerated from classification as a carcinogen in accordance with Note Q in the EU Commission Directive 97/69/EC.

Industrial hygiene testing on workers installing acoustical ceiling panels for an 8 hour work day showed that the average respirable fiber exposure was 0.12 f/cc per NIOSH Method 7400-B.

Crystalline Silica: Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. The weight percent of respirable crystalline silica may not have been measured in this product. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. Smoking in combination with silica exposures increases the risk of cancer. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

The concentration of respirable crystalline silica measured in airborne dust samples was below the detection limit using NIOSH Method 7500 in industrial hygiene testing of workers installing USG Acoustical Ceiling Panels for an 8 hour work day.



**SECTION 12
ECOLOGICAL INFORMATION**

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on ecology.

Ecotoxicity value	Not determined.
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**SECTION 13
DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD: Certain ceiling tile products may be recycled. If unable to recycle with the USG Ceilings Recycling Program, dispose of material in accordance with federal, state, and local regulations. Never discharge directly into sewers or surface waters. Consult with environmental regulatory agencies for guidance on acceptable disposal practices.

**SECTION 14
TRANSPORT INFORMATION**

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name	Same as product name.
Hazard Class	Not classified.
UN/NA #	None. Not classified.
Packing Group	None.
Label (s) Required	Not applicable.
GGVSec/MDG-Code	Not classified.
ICAO/IATA-DGR	Not applicable.
RID/ADR	None.
ADNR	None.

**SECTION 15
REGULATORY INFORMATION**

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	3 0 2	3 0 4	3 1 3	CERCLA	CAA Sec. 112	RCRA Code
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Slag Wool Fiber	10-75	NL	NL	NL	NL	NL	NL
Expanded Perlite	5-75	NL	NL	NL	NL	NL	NL
Cellulose	1-25	NL	NL	NL	NL	NL	NL
Starch	5-15	NL	NL	NL	NL	NL	NL
Kaolin	0-15	NL	NL	NL	NL	NL	NL
Calcium Sulfate Dihydrate	0-80	NL	NL	NL	NL	NL	NL
Limestone	<2	NL	NL	NL	NL	NL	NL
Or Dolomite		NL	NL	NL	NL	NL	NL
Crystalline Silica	<5	NL	NL	NL	NL	NL	NL
Vinyl Acetate Polymer*	<2	NL	NL	NL	NL	NL	NL
Or Ethylene Vinyl Acetate Polymer		NL	NL	NL	NL	NL	NL
May be available with foil-backing:		[]
Aluminum Foil (as Aluminum and Cmpds)	0-2	NL	NL	X	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of Controlled Product regulations and the MSDS contains all the information required by the Controlled Products Regulations. All ingredients of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification
Slag Wool Fiber	10-75	Not Listed	Not Listed
Expanded Perlite	5-75	Not Listed	D2A
Cellulose	1-25	Not Listed	Not Listed
Starch	5-15	Not Listed	Not Listed
Kaolin	0-15	Not Listed	D2A
Calcium Sulfate Dihydrate	0-80	Not Listed	Not Listed
Limestone	<2	Not Listed	D2A
Or Dolomite		Not Listed	Not Listed
Crystalline Silica	<5	1406	D2A
Vinyl Acetate Polymer*	<2	Not Listed	Not Listed
Or Ethylene Vinyl Acetate Polymer		Not Listed	Not Listed
May be available with foil-backing:		[]
Aluminum Foil (as Aluminum and Cmpds)	0-2	47	Not Listed

IDL Item#: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

Risk and Safety Phrases defined by European Union Directive 67/548/EEC (Annex III and IV)

R-Phrase(s): R36/37/38

S-Phrase(s): None known.

SECTION 16 OTHER INFORMATION



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Label Information

Δ WARNING!

Dust can cause irritation to eyes, skin and respiratory tract. Cut and trim with a razor knife or hand saw to minimize dust levels. Using power tools for cutting will generate high dust levels. Power tools must be equipped with a dust collection system. Wear eye, skin and respiratory protection as necessary per working conditions. If eye contact occurs flush with water for 15 minutes. FIRECODE® products may contain silica. Prolonged and repeated exposures to airborne respirable crystalline silica can cause lung cancer. Smoking in combination with silica exposures increases the risk of cancer. Do not ingest. If ingested, call physician. Product safety information: 800-507-8899 or usg.com. Customer Service: 800 USG-4-YOU (800 874-4968). KEEP OUT OF REACH OF CHILDREN.

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:			HMIS Ratings:		<table border="1"> <tr> <td>HEALTH</td> <td>*</td> <td>1</td> </tr> <tr> <td>FLAMMABILITY</td> <td></td> <td>0</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td></td> <td>0</td> </tr> <tr> <td>PERSONAL PROTECTION</td> <td></td> <td>E</td> </tr> </table>	HEALTH	*	1	FLAMMABILITY		0	PHYSICAL HAZARD		0	PERSONAL PROTECTION		E	0 = Minimal Hazard
HEALTH	*		1															
FLAMMABILITY			0															
PHYSICAL HAZARD			0															
PERSONAL PROTECTION		E																
Health:	1	Health:	1	1 = Slight Hazard														
Fire:	0	Fire:	0	2 = Moderate Hazard														
Reactivity:	0	Reactivity:	0	3 = Serious Hazard														
					4 = Severe Hazard													

E – Safety glasses, gloves and dust respirator; * - Contains silica

Key/Legend

ANSI	American National Standards Institute
ACGIH	American Conference of Governmental Industrial Hygienists
CAA	Clean Air Act
CAS	Chemical Abstracts Service (Registry Number)
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
DOT	United States Department of Transportation
DSL	Canadian Domestic Substances List
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning & Community Right-to-know Act
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
MSHA	Mine Safety and Health Administration
NDSL	Canadian Non-Domestic Substances List
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Health and Safety Administration
PEL	Permissible Exposure Limit
PPE	Personal Protection Equipment
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act of 1986
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
UN/NA#	United Nations/North America number
WHMIS	Workplace Hazardous Material Information System



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Prepared by:
Product Safety
USG Corporation
550 West Adams Street
Chicago, IL 60661-3637

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his/her own particular use.

END



MATERIAL INFORMATION SHEET*

Armstrong World Industries, Inc.
Environment, Health and Safety
2500 Columbia Avenue, P.O. Box 3001
Lancaster, PA 17604
Telephone (717) 396-2328 or 396-2935

Issued By : Safety, Health and
Industrial Hygiene Department

Date: 6/1/00 (replaces 2/25/97)

HMIS (0 = minimal hazard; 4 = severe hazard)
Health = 0
Flammability = 0
Reactivity = 0

Division: Building Products Division

I. Product Information

- A. Product Name: Hot Dipped Galvanized Sheet Steel Suspension Systems - MIS #9
Ceiling Grid and Steel Components
- B. Chemical Name and Synonyms: Product is galvanized sheet - low C and HSLA steel (hot dipped)
Accessory components are galvanized steel.
- C. Description and Ingredient Information: Normally T shaped, hot dipped galvanized cold formed solid sheet steel.
Capped with hot dipped polyester painted solid sheet steel or aluminum solid sheet 3005 alloy.

II. Miscellaneous Information

This product is classified as an "article" according to Title 29 of the Code of Federal Regulations, OSHA Part 1910.1200(c). It is formed to a specific shape or design during manufacture, has end use function dependent upon its shape or design, and does not release any hazardous chemical under normal conditions of use.

* This Material Information Sheet is provided in lieu of a Material Safety Data Sheet. An MSDS is required only for chemicals or products that are hazardous as defined by the OSHA Standard 1910.1200. Please refer to the product's label for specific instructions and cautions before using the product.



MATERIAL SAFETY DATA SHEET

Armstrong World Industries, Inc.
Environment, Health and Safety
2500 Columbia Avenue, P.O. Box 3001
Lancaster, PA 17604
Telephone (717) 396-2328 or 396-2935

Division: Building Products

Date: 2/14 (replaces 9/09)

Issued By : Safety, Health and
Industrial Hygiene Department

N/A = Not applicable or Not Available

N/K = None Known or Not Known

HMIS (0 = minimal hazard, 4 = severe hazard)

Health = 1

Flammability = 0

Reactivity = 0

Department of Transportation Information

Shipping name : Not Classified

Hazard Class : N/A

ID No : N/A

Emergency Only Contact: CHEM-TEL 800-255-3924

I. Product Information

A. Product Name : Man-made Vitreous Fiber Ceilings and Wall Panels (Class A) - MSDS #1

B. Chemical Name and Synonyms : N/A

C. Chemical or Product Family : Man-made Vitreous Fibers

II. Ingredient Information

A. Hazardous Components (Chemical Identity; Common Name)	<u>C.A.S.No.</u>	<u>%</u>	<u>OSHA PEL</u> Respirable:	<u>ACGIH TLV</u> Respirable:
Mineral Wool Fiber	N/A	0-60	1 f/cc	1 f/cc
Fibrous Glass	65997-17-3	0-13	1 f/cc	1 f/cc
Crystalline Silica	14808-60-7	<1.0	0.1 mg/m ³	0.025 mg/m ³ (as respirable crystalline silica)

This product formulation does not contain asbestos.

III. Physical Data

A. Appearance and Color : Gray, pressed man-made vitreous fiber panel of various colors

B. Boiling Point (degrees F) : N/A

C. Vapor pressure (mm Hg @ 20 degrees C) : N/A

D. Vapor density (Air = 1) : N/A

E. Solubility in Water : N/A

F. Specific Gravity (H₂O = 1) : N/A

G. Percent Volatile by weight (30 min. @ 275 degrees F) : N/A

H. Evaporation Rate (Butyl Acetate = 1) : N/A

I. pH : N/A

IV. Fire and Explosion Data

A. Flash point : N/A

B. Flammable Range : LEL = N/A ; UEL = N/A

C. Extinguishing Media : Water fog, dry chemical ABC rated

D. Special Fire Fighting Procedures : None

E. Unusual Fire and Explosion Hazards : None

V. Health Data

A. Primary Route (s) of Entry: Inhalation, skin, and eye contact

B. Target Organs: Lungs, skin and eyes

Effects of Overexposure :

Acute Health Effects: Products are a transient mechanical irritant to the skin, eyes and upper respiratory system.

Refer to special protection information for handling instructions.

Chronic Health Effects:

Mineral Wool Fiber: Mineral wool fiber has been classified as "not classifiable as to its carcinogenicity to human" (Group 3) by the International Agency for Research on Cancer (IARC).

Fibrous Glass: Fibrous glass has been classified as "not classifiable as to its carcinogenicity to human" (Group 3) by the International Agency for Research on Cancer (IARC).

C. Carcinogenicity: NTP : No IARC Monographs : No OSHA Regulated : No

D. Medical Conditions Generally aggravated by Exposure: Any condition generally aggravated by respiratory and mechanical irritants in the air or on the skin. Pre-existing upper respiratory and lung disease such as, but not limited to bronchitis, emphysema, and asthma.

E. First Aid Procedures:

Skin: Wash with mild soap and running water

Eyes: Flush with flowing water for at least 15 minutes and if symptoms persist, seek immediate medical attention.

VI. Reactivity Data

A. Stability : Material is stable

B. Incompatibility: N/K

C. Hazardous Decomposition Products: Carbon dioxide, and other trace pyrolysis products typical of decomposition of any organic chemical.

D. Hazardous Polymerization: N/A

VII. Spill or Leak Procedures

A. Steps to be taken if material is released or spilled : N/A

B. Recycling Information : Armstrong Ceilings can be recycled through the Armstrong Ceiling Recycling Program. For more information on the program, requirements and local resources, please visit www.armstrong.com/ceilings/recycling or call our Recycling Center at 877-276-7876, press 1 (Ceilings), then press 8.

If the Armstrong Ceiling Recycling Program cannot be used, please dispose in accordance with federal, state and local waste disposal regulations

VIII. Special Protection Information

During the installation, be certain that the work site is well ventilated, and avoid breathing dust.

Wear long-sleeve, loose fitting clothes, gloves and eye protection.

Handle these materials carefully to minimize airborne dust.

If high dust levels are anticipated during installation, such as with the use of power tools, use the appropriate NIOSH approved dust respirator.

All power cutting tools must be equipped with dust collectors.

After using these materials, wash with warm water and mild soap. Do not scratch or rub skin if it becomes irritated.

Wash work clothes separately, and then rinse the washer.

The information presented herein is supplied as a guide to those who handle or use this product. Safe work practices must be employed when working with any materials. It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product.

TRADE NAMES: (Wet-Felted – Safetone® Class A and Protectone®)
Alaska, Baroque™, Baroque Customline®,
Directional Fissured, Fine Fissured,
Fine Fissured Customline®,
Sand Micro™, School Board®,
Serene™, Vantage 10™

MSDS #: 00024-85L
Effective Date: 06/17/02
Revised Date: 04/30/10

CertainTeed Ceilings
P.O. Box 860
Valley Forge, PA 19482
Professional: 800-233-8990
Consumer: 800-782-8777
www.certainteed.com

I. PRODUCT IDENTIFICATION

Products: Wet-Felted (Safetone Class A, Protectone and Time-Rated) Acoustical Ceiling Products.

II. INGREDIENTS

Material	CAS Number	WT%* (Approx.)	OSHA PEL**	ACGIH TLV***	Comments
01 Slag Wool	NONE	<50	5	10	See Below
02 Starch	9005-84-9	<10	5	10	mg/m ³ Resp
03 Clay	1332-58-7	<16	5	10	See Below
04 Cellulose	9004-34-6	<20	5	10	mg/m ³ Resp
05 Perlite	93763-70-3	<60	5	10	See Below
06 Crystalline Silica	14808-60-7	<5	0.1	0.1	mg/m ³ Resp

* % Approximate

**PEL - OSHA Permissible Exposure Limit, 1910.1000, Nuisance Dust (Respirable)

***TLV - Threshold Limit Value, adopted by American Conference of Governmental Industrial Hygienists, 1984-85 OSHA/PEL = 10 / (2X% SiO₂) mg/m³ Respirable

NA = Not Applicable, NE = Not Established

Carcinogenicity NTP Listed IARC Listed OSHA Regulated

Ingredient Number: 06

SARA Title III Section 313:

Ingredients Listed: All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act (TSCA) Chemical Substance Inventory and the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).

As a manufactured article this product is exempt from the requirements of Canada's WHMIS.

III. PHYSICAL DATA

Boiling Point:	N/A	Sp. Gravity:	SAFE 0.18-0.26
Vap Pressure:		PCT. Volatiles:	PROT. 0.28-0.40
Vap Density:	N/A	EVAP. Rate:	N/A
Sol. in Water:	N/A	Appearance/Odor:	Various Colors; slight earthy odor.

IV. FIRE AND EXPLOSION HAZARD DATA

Flash Point (method):	N/A
Flammable Limits:	LEL % N/A UEL % N/A
Extinguishing Media:	Water fog, foam or dry chemical.
Sp. Fire Fighting Procedures:	None Known
Unusual Fire & Explosion Hazards:	May smolder - extinguish completely.
NFPA Ratings:	4 = Severe Hazard, 3 = Serious Hazard, 2 = Moderate Hazard, 1 = Slight Hazard, 0 = Minimal Hazard
Flammability:	0
Health:	0
Reactivity:	0
	Special Hazards:

V. HEALTH HAZARD DATA

Primary Routes of Exposure:	Inhalation, eyes and skin
Signs & Symptoms of Overexposure:	
Acute	Irritation of eyes, nose, throat, lungs and/or skin
Chronic	Loss or reduction of pulmonary functions. In October 2001, the International Agency for Research on Cancer (IARC) concluded there is "no evidence" for the carcinogenicity of man-made vitreous fibers (glass wool, rock wool and slag wool) in humans. Epidemiologic studies published during the 15 years since the previous IARC Monographs review of these fibers in 1988 provide no evidence of increased risks of lung cancer or of mesothelioma from occupational exposures during manufacture of these materials, and inadequate evidence overall of any cancer risk. IARC states that man-made vitreous fibers (glass wool, rock wool and slag wool) are "not classifiable as to carcinogenicity to humans" (Group 3). In June 1997, the International Agency for Research on Cancer (IARC) concluded there is "sufficient evidence" in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite from occupational sources. In making the overall evaluation, the Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs. IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources "is carcinogenic to humans" (Group 1). Aggravated Medical Conditions: Respiratory illness
Emergency and First Aid Procedures:	
Inhalation	Dust generated from making modifications of tile may cause temporary irritation. Prolonged exposures to high levels of respirable dust may cause a loss or reduction of pulmonary functions.
Eyes	Dust generated from making modifications of tile may cause irritation.
Skin	Contact with dust generated from making modifications of tile may cause irritation.
Ingestion	N/A
Other:	

VI. REACTIVITY DATA

Stable	Hazardous polymerization will not occur.
Conditions to avoid:	High humidity and water.
Incompatibilities:	Strong acids
Hazardous Decomposition Products:	H ₂ S gas can be formed on contact with strong acids.

VII. SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled:

Broken or damaged tiles should be picked up and placed in a container. Dust generated from making modifications of tile should be cleaned by wet wiping or filtered vacuuming. Do not dry sweep or use compressed air to remove dust.

Disposal Method:

In accordance with local, state and federal regulations.

VIII. SPECIAL PROTECTION INFORMATION

Ventilation:

OBSERVE THE FOLLOWING PRACTICES WHEN MAKING MODIFICATIONS OF TILE:

Exhaust ventilation:

Respiratory Protection (use only NIOSH/MSHA certified devices):

Wear NIOSH/MSHA approved respirator if airborne concentrations are at or above the PEL.

Protective Clothing:

Wear long sleeved, loose fitting shirts or blouses that are closed at the neck and wrist if airborne concentrations are at or above the PEL. Gloves, long pants and caps should also be considered.

Eye Protection:

Wear safety glasses or goggles.

IX. SPECIAL PRECAUTIONS

WARNING:

This product contains crystalline silica.

Minimize dust during cutting and trimming of these products. Avoid breathing dust/fiber and placing these materials in contact with skin or eyes to avoid irritation. When making modifications of tile, do not cut with power equipment, unless the equipment utilizes a dust collection system which maintains the exposure level below the OSHA/PEL. Use a NIOSH/MSHA approved dust mask when dust levels exceed the OSHA PEL or for comfort. Failure to follow these instructions may result in over exposure to airborne respirable crystalline silica dust which can cause eye, skin, respiratory irritation and in some cases loss of pulmonary functions. Studies have found that breathing respirable crystalline silica dust can cause lung cancer and other diseases. Breathing respirable airborne crystalline silica dust can also cause silicosis. Sustained high level exposure increases these risks. Smoking greatly increases health risks, including the risk of cancer and other diseases.

RECOMMENDED WORK PRACTICES:

PREVENT DUST:

When making modifications of tile, do not use power equipment. Use local exhaust ventilation whenever the dust exposure may exceed established allowable levels.

Operations which have the potential to create high dust exposures, such as power cutting, power kerfing or use of compressed air to remove (blow down) dust must be avoided.

USE RESPIRATORS:

In work settings, where dust levels are at or above allowable levels. Use a NIOSH/MSHA approved respirator. Consult respirator manufacturers for specific recommendations on the proper respirator. An appropriate fit testing program must be incorporated in all respiratory protection programs.

PROTECT YOUR EYES:

Wear safety glasses or goggles whenever handling or installing ceiling tile.

WEAR PROPER CLOTHING:

Wear long sleeved, loose fitting shirts or blouses that are closed at the neck and wrists, along with long pants and caps to help prevent the skin from coming into contact with ceiling tile dust. Depending upon job conditions, gloves may also be necessary.

PROTECT YOUR SKIN:

If ceiling tile dust gets on your skin do not rub or scratch that area. Remove the dust by washing your skin thoroughly, but gently, with warm water and mild soap. Using a skin cream or lotion after washing may also help.

**KEEP YOUR WORK
AREA CLEAN:**

Avoid unnecessary handling of scrap ceiling tile material or debris pile up on the floor. Follow an organized housekeeping program at all times.

CLEAN UP PROCEDURES:

Surfaces where dust collects must be cleaned by wet wiping or filtered vacuuming. Do not dry sweep or use compressed air to remove dust.

As of the date of preparation of this document, the foregoing information is believed to be accurate and is provided in good faith to comply with applicable Federal and State Laws. However, no warranty or representation with respect to such information is intended or given.

4849 SOUTH AUSTIN AVE.
CHICAGO, IL 60638
TEL 708.563.4600 / 800.323.7164
FAX 800.322.3744
CHICAGOMETALLIC.COM



CHICAGO METALLIC®
Elevate Your Ceilings | Accelerate Your Projects | Celebrate Your Success

MATERIAL SAFETY DATA SHEETS

Material Safety Data Sheets are used to supply information about any purchased product which may contain any hazardous or toxic substances.

With this in mind, Suspended Ceiling Systems produced by Chicago Metallic fall under the classification of “Articles” as defined by OSHA Standard 1910.1200, Paragraph “C”. By this definition, an “Article” is a manufactured item which:

- I. Is formed to a specific shape or design during manufacture, or
- II. Has end use function(s) dependent in whole, or in part, upon its shape or design during end use, and
- III. Which does not release, or otherwise result in exposure to a hazardous chemical under normal conditions of use.

Products classified as “Articles” are exempt under the standard and therefore, do not require labels or data sheets.

Sincerely,

CHICAGO METALLIC CORPORATION

FIRESTOP AND FIREPROOFING

- 1. HILTI - CP 506 SMOKE & ACOUSTICAL SEALANT**
- 2. HILTI - CP 606 FLEXIBLE FIRESTOP SEALANT**
- 3. HILTI - CFS-SP WB FIRESTOP JOINT SPRAY**
- 4. HILTI - CP 672 FC SPEED SPRAY**
- 5. HILTI - CP 777 SPEEDPLUGS**
- 6. HILTI - MINERAL WOOL**
- 7. STI – ES FIRE CAULK**
- 8. STI – AS FIRE SPRAY**
- 9. STI – SNS SMOKE N SOUND CAULK**
- 10. STI – SNS SMOKE N SOUND SPRAY**
- 11. GRACE – MONOKOTE MK-6**



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Revision Date: 12/01/09
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MATERIAL SAFETY DATA SHEET

Product name: CP 506 Smoke & Acoustic Sealant
Description: Smoke/Acoustic Sealant for Non Fire Rated Assemblies
Supplier: Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121
Emergency # (Chem-Trec.): 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

INGREDIENTS AND EXPOSURE LIMITS

Ingredients:	CAS Number:	TLV:	PEL:	STEL:
Ethylene glycol	00107-21-1	NE	NE	C: 100 mg/m ³ (A)
Titanium dioxide	13463-67-7	10 mg/m ³	15 (T) mg/m ³	NE

Abbreviations: PEL = OSHA Permissible Exposure Limit. TLV = ACGIH Threshold Limit Value. STEL = Short Term Exposure Limit. NE = None Established. (R) = Respirable dust (T) = Total dust (A) = Aerosol

PHYSICAL DATA

Appearance:	White paste.	Odor:	Negligible.
Boiling Point:	Not applicable.	Vapor Pressure:	Not applicable.
Melting Point:	Not determined.	VOC Content:	57.0 g/l
Evaporation Rate:	Not applicable.	Solubility in Water:	Miscible.
pH:	9.2	Specific Gravity:	1.50

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Not applicable.	Flammable Limits:	Not applicable.
Fire / Explosion Hazards:	None known.		
Extinguishing Media:	As appropriate for surrounding fire.		
Special Fire Fighting Procedures:	As appropriate for surrounding fire.		

REACTIVITY DATA

Stability:	Stable.	Hazardous Polymerization:	Will not occur.
Incompatibility:	Strong oxidizing agents.		
Hazardous Decomposition Products:	Thermal decomposition can yield oxides of carbon and nitrogen.		
Conditions to Avoid:	Avoid temperature extremes that could shorten the shelf life of this product. See handling and storage requirements.		

HEALTH HAZARD DATA

Known Hazards:	Acute: Product is slightly alkaline; minor irritation is possible. Chronic: None known.		
Signs and Symptoms of Exposure:	Eyes - Can cause slight irritation but injury is unlikely. Skin - Can cause irritation with some individuals. Inhalation - No effects expected. Ingestion - Not considered to be a route of exposure. Effects of ingestion have not been determined.		
Routes of Exposure:	Inhalation, Dermal.		
Medical Conditions Aggravated by Exposure:	Eye, skin, and respiratory conditions.		
Carcinogenicity:	No ingredients are classified as a carcinogen by IARC, NTP or OSHA.		

EMERGENCY AND FIRST AID PROCEDURES

Eyes:	Flush with plenty of water. Contact a Physician if symptoms occur.
Skin:	Wash with soap and water.
Inhalation:	Move victim to fresh air. Call a Physician if symptoms occur.
Ingestion:	Seek medical attention. Do not induce vomiting unless directed by a Physician. Never give anything by mouth to an unconscious person.
Other:	Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure.

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation:	General (natural or mechanically induced fresh air movements).
Eye Protection:	Safety glasses with side shields.
Skin Protection:	Impermeable gloves are recommended.
Respiratory Protection:	Not normally required. Where ventilation is inadequate to control vapors, use a NIOSH-approved respirator with organic vapor cartridges. Never enter a confined space without an appropriate air supplied respirator.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	Store in a cool dry area. Keep from freezing. Shelf life is one year from date of manufacture if stored between 40° and 77° F (5 - 25° C). For industrial use only. Keep out of reach of children. Keep container sealed when not in use to prevent curing of the product. Avoid contact with the eyes and skin. Practice good hygiene; i.e. wash after using and before eating or smoking.
Spill Procedures:	Allow to cure and place in a container for proper disposal in accordance with all applicable local, state, or federal requirements. Not regulated as a hazardous waste according to federal EPA definitions.

REGULATORY INFORMATION

Hazard Communication:	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
HMIS Codes:	Health 1, Flammability 0, Reactivity 0, PPE B (Gloves, Glasses)
DOT Shipping Name:	Not regulated.
IATA / ICAO Shipping Name:	Not regulated.
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product contains approximately 3-4% ethylene glycol which is subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).
EPA Waste Code(s):	Not regulated by EPA as a hazardous waste.
Waste Disposal Methods:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, state, and federal safety, health and environmental regulations.

CONTACTS

Customer Service:	1 800 879 8000	Technical Service:	1 800 879 8000
Health / Safety:	1 800 879 6000	Jerry Metcalf	(x1003704)
Emergency # (Chem-Trec):	1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)		

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.



MATERIAL SAFETY DATA SHEET

Product name: CP 606 Flexible Firestop Sealant
Description: Fire resistant sealant
Supplier: Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121
Emergency # (Chem-Trec.): 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

INGREDIENTS AND EXPOSURE LIMITS

Ingredients:	CAS Number:	TLV:	PEL:	STEL:
Calcium carbonate	01317-65-3	NE	5 (R) mg/m ³	NE
Ethylene glycol	00107-21-1	C: 100 mg/m ³ (A)	NE	NA
Pigments:		NE	NE	NE
• Titanium dioxide	13463-67-7 ¹	10 mg/m ³	15 (T) mg/m ³	NE
• Red iron oxide	1309-37-1 ²	5 (R) mg/m ³	10 (fume) mg/m ³	NE
• Black Iron oxide	1317-61-9 ³	NE	NE	NE

¹ CP 606 white; ² CP 606 red, ^{1,3} CP 606 grey

Abbreviations: PEL = OSHA Permissible Exposure Limit. TLV = ACGIH Threshold Limit Value. STEL = Short Term Exposure Limit. NE = None Established. (R) = Respirable dust (T) = Total dust (A) = Aerosol

PHYSICAL DATA

Appearance:	White, red, or grey paste.	Odor:	Negligible.
Boiling Point:	Not applicable.	Vapor Pressure:	Not applicable.
Melting Point:	Not determined.	VOC Content:	71.0 g/L
Evaporation Rate:	Not applicable.	Solubility in Water:	Miscible.
pH:	Not determined.	Specific Gravity:	1.55

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Not applicable.	Flammable Limits:	Not applicable.
Fire / Explosion Hazards:	None known.		
Extinguishing Media:	As appropriate for surrounding fire; material itself does not burn.		
Special Fire Fighting Procedures:	As appropriate for surrounding fire.		

REACTIVITY DATA

Stability:	Stable.	Hazardous Polymerization:	Will not occur.
Incompatibility:	Strong oxidizing agents.		
Hazardous Decomposition Products:	Not applicable.		
Conditions to Avoid:	Avoid temperature extremes that could shorten the shelf life of this product. See handling and storage requirements.		

HEALTH HAZARD DATA

Known Hazards:	Acute: Product is slightly alkaline; minor irritation is possible. Chronic: None known.		
Signs and Symptoms of Exposure:	Eyes - Can cause slight irritation but injury is unlikely. Skin - Can cause irritation with some individuals. Inhalation - No effects expected. Ingestion - Not considered to be a route of exposure. Effects of ingestion have not been determined.		
Routes of Exposure:	Inhalation, Dermal.		
Medical Conditions Aggravated by Exposure:	Eye, skin, and respiratory conditions.		
Carcinogenicity:	No ingredients are classified as a carcinogen by IARC, NTP or OSHA.		

EMERGENCY AND FIRST AID PROCEDURES

Eyes:	Flush with plenty of water. Contact a Physician if symptoms occur.
Skin:	Wash with soap and water.
Inhalation:	Move victim to fresh air. Call a Physician if symptoms occur.
Ingestion:	Seek medical attention. Do not induce vomiting unless directed by a Physician.
Other:	Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure.

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation:	General (natural or mechanically induced fresh air movements).
Eye Protection:	Safety glasses with side shields.
Skin Protection:	Impermeable gloves are recommended.
Respiratory Protection:	Not normally required. Where ventilation is inadequate to control vapors, use a NIOSH-approved respirator with organic vapor cartridges. Never enter a confined space without an appropriate air supplied respirator.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	Store in a cool dry area. Keep from freezing. Shelf life is one year from date of manufacture if stored between 40° and 77° F (5 - 25° C). For industrial use only. Keep out of reach of children. Keep container sealed when not in use to prevent curing of the product. Avoid contact with the eyes and skin. Practice good hygiene; i.e. wash after using and before eating or smoking.
Spill Procedures:	Allow to cure and place in a container for proper disposal in accordance with all applicable local, state, or federal requirements. Not regulated as a hazardous waste according to federal EPA definitions.

REGULATORY INFORMATION

Hazard Communication:	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
HMIS Codes:	Health 1, Flammability 0, Reactivity 0, PPE B (Gloves, Glasses)
DOT Shipping Name:	Not regulated.
IATA / ICAO Shipping Name:	Not regulated.
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product contains approximately 3% ethylene glycol which is subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).
EPA Waste Code(s):	Not regulated by EPA as a hazardous waste.
Waste Disposal Methods:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, state, and federal safety, health and environmental regulations.

CONTACTS

Customer Service:	1 800 879 8000	Technical Service:	1 800 879 8000
Health / Safety:	1 800 879 6000	Jerry Metcalf	(x1003704)
Emergency # (Chem-Trec):	1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)		

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.



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MATERIAL SAFETY DATA SHEET

Product name: CFS-SP WB Firestop Joint Spray
Description: Fire rated mastic for construction joints
Supplier: Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121
Emergency # (Chem-Trec.): 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

INGREDIENTS AND EXPOSURE LIMITS

This is not a Hazardous Material as defined in the OSHA Hazard Communication Standard

PHYSICAL DATA

Appearance:	Red, grey, or white sprayable paste	Odor:	Mild odor
Vapor Density: (air = 1)	Not applicable	Vapor Pressure:	Not determined
Boiling Point:	Not determined	VOC Content:	34 g/l
Evaporation Rate:	Not determined	Solubility in Water:	Soluble
Specific Gravity:	1.3	pH:	8.0 - 9.0

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	None	Flammable Limits:	Not applicable
Extinguishing Media:	As appropriate for surrounding fire (e.g. Water, Carbon Dioxide, Dry Chemical, Foam)		
Special Fire Fighting Procedures:	A NIOSH-approved self-contained breathing apparatus (SCBA) should be worn when fighting fires involving chemicals.		
Unusual Fire and Explosion Hazards:	None known. Thermal decomposition products such as carbon monoxide and carbon dioxide can be produced under fire conditions. See below.		

REACTIVITY DATA

Stability:	Stable.	Hazardous Polymerization:	Will not occur.
Incompatibility:	None known		
Decomposition Products:	Thermal decomposition can yield carbon monoxide and carbon dioxide.		
Conditions to Avoid:	Avoid temperature extremes which could shorten the shelf-life of this product; i.e. below 40° and above 77° F. (See handling and storage requirements).		

HEALTH HAZARD DATA

Known Hazards:	Acute: No effects expected; irritation is possible. Chronic: None known		
Signs and Symptoms of Exposure:	Eyes: Can cause irritation or watering but injury is unlikely. Skin: Irritation is possible with some individuals. Inhalation: No effects expected. Ingestion: Effects of ingestion have not been determined. Considered to have a low acute oral toxicity.		
Routes of Exposure:	Contact.		
Carcinogenicity:	No ingredients are classified as a carcinogen by IARC, NTP or OSHA.		
Medical Conditions Aggravated by Exposure:	None known		

EMERGENCY AND FIRST AID PROCEDURES

Eyes:	Flush with plenty of water. Contact a Physician if symptoms occur.
Skin:	Wash with soap and water. Seek medical attention if any effects persist.
Inhalation:	Move victim to fresh air. Contact a Physician if symptoms occur.
Ingestion:	Do not induce vomiting unless directed by a Physician. Contact a Physician immediately.
Other:	Referral to a Physician is recommended if there is any question about the seriousness of the injury/exposure.

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation:	General (natural or mechanically induced fresh air movements).
Eye Protection:	While spraying, chemical goggles are recommended. As a minimum, wear safety glasses with side shields.
Skin Protection:	Impermeable (neoprene or rubber) gloves recommended. Use other protective clothing as required to prevent skin contact when spraying product.
Respiratory Protection:	None normally required.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	Store in a cool dry area. Keep from freezing. Store between 41° and 77° F. For industrial use only. Keep out of reach of children. Use with adequate ventilation. Keep container closed when not in use. Do not get into the eyes. Avoid prolonged or repeated contact with the skin. Practice good hygiene; i.e. wash after using and before eating or smoking.
Spill Procedures:	Wipe away spilled material before it hardens. Place in a container for proper disposal in accordance with all applicable local, state, or federal requirements.

REGULATORY INFORMATION

Hazard Communication:	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard. 29 CFR 1910.1200.
HMIS Codes:	Health 1, Flammability 0, Reactivity 0, PPE B (Glasses, Gloves)
DOT Shipping Name:	Not regulated.
IATA / ICAO Shipping Name:	Not regulated.
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product does not contain any chemicals which are subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).
EPA Waste Code(s):	Not regulated by EPA as a hazardous waste
Waste Disposal Methods:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, state, and federal safety, health and environmental regulations.

CONTACTS

Customer Service:	1 800 879 8000	Technical Service:	1 800 879 8000
Health / Safety:	1 800 879 6000	Jerry Metcalf	(x1003704)
Emergency # (Chem-Trec):	1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)		

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.



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Revision Date: 10/31/08
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MATERIAL SAFETY DATA SHEET

Product name: CP 672 FC Speed Spray
Description: Acrylic Fire Stop Joint Spray
Supplier: Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121
Emergency # (Chem-Trec.): 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

INGREDIENTS AND EXPOSURE LIMITS

Ingredients:	CAS Number:	TLV: mg/m ³	PEL: mg/m ³	STEL: mg/m ³
Calcium carbonate	1317-65-3	NE	15 (T); 5 (R)	NE
Ethylene glycol	107-21-1	NE	NE	C: 100
Zinc borate	1332-07-6	NE	NE	NE
Polyethylenimine	9002-98-6 or 25987-06-8	NE	NE	NE

Abbreviations: PEL = OSHA Permissible Exposure Limit. TLV = ACGIH Threshold Limit Value. STEL = Short Term Exposure Limit. C = Ceiling. NE = None Established. T = Total dust. R = Respirable dust

PHYSICAL DATA

Appearance:	Grey sprayable paste	Odor:	Mild odor
Vapor Density: (air = 1)	Not applicable	Vapor Pressure:	Not determined
Boiling Point:	Not determined	VOC Content:	24.7 g/L
Evaporation Rate:	Not determined	Solubility in Water:	Soluble
Specific Gravity:	1.3	pH:	7 - 11

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	None	Flammable Limits:	Not applicable
Extinguishing Media:	As appropriate for surrounding fire (e.g. Water, Carbon Dioxide, Dry Chemical, Foam)		
Special Fire Fighting Procedures:	Wear full protective clothing. A NIOSH-approved self-contained breathing apparatus (SCBA) should be worn when fighting fires involving chemicals.		
Unusual Fire and Explosion Hazards:	None known. Thermal decomposition products such as oxides of carbon and nitrogen can be produced under fire conditions.		

REACTIVITY DATA

Stability:	Stable.	Hazardous Polymerization:	Will not occur.
Incompatibility:	None known.		
Decomposition Products:	Thermal decomposition can yield oxides of carbon and nitrogen.		
Conditions to Avoid:	Avoid temperature extremes which could shorten the shelf-life of this product; i.e. below 40° and above 77° F. (See handling and storage requirements).		

HEALTH HAZARD DATA

Known Hazards:	Acute: No effects expected; irritation is possible. Chronic: None known		
Signs and Symptoms of Exposure:	Eyes: Can cause irritation or watering but injury is unlikely. Skin: Irritation is possible with some individuals. Inhalation: No effects expected. Ingestion: Effects of ingestion have not been determined.		
Routes of Exposure:	Contact.		
Carcinogenicity:	No ingredients are classified as a carcinogen by IARC, NTP or OSHA.		
Medical Conditions Aggravated by Exposure:	None known		

EMERGENCY AND FIRST AID PROCEDURES

Eyes:	Flush with plenty of water. Contact a Physician if symptoms occur.
Skin:	Wash with soap and water. Contact a Physician if symptoms occur.
Inhalation:	Move victim to fresh air. Contact a Physician if symptoms occur.
Ingestion:	Do not induce vomiting unless directed by a Physician. Contact a Physician immediately.
Other:	Referral to a Physician is recommended if there is any question about the seriousness of the injury/exposure.

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation:	General (natural or mechanically induced fresh air movements).
Eye Protection:	While spraying, chemical goggles are recommended. As a minimum, wear safety glasses with side shields.
Skin Protection:	Impermeable gloves recommended.
Respiratory Protection:	Dust/mist respirator may be required during spraying operations.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	Store in a cool dry area. Keep from freezing. Store between 40° and 77° F. For industrial use only. Keep out of reach of children. Use with adequate ventilation. Keep container closed when not in use. Do not get into the eyes. Avoid prolonged or repeated contact with the skin. Practice good hygiene; i.e. wash after using and before eating or smoking.
Spill Procedures:	Wipe away spilled material before it hardens. Place in a container for proper disposal in accordance with all applicable local, state, or federal requirements.

REGULATORY INFORMATION

Hazard Communication:	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard. 29 CFR 1910.1200.
HMIS Codes:	Health 1, Flammability 0, Reactivity 0, PPE B (Glasses, Gloves)
DOT Shipping Name:	Not regulated.
IATA / ICAO Shipping Name:	Not regulated.
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product contains 1 – 2.5% ethylene glycol (CAS 107-21-1) and 1-2.5% Zinc borate (CAS #1332-07-6) which is subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).
EPA Waste Code(s):	Not regulated by EPA as a hazardous waste
Waste Disposal Methods:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, state, and federal safety, health and environmental regulations.

CONTACTS

Customer Service:	1 800 879 8000	Technical Service:	1 800 879 8000
Health / Safety:	1 800 879 6000	Jerry Metcalf	(x6704)
Emergency # (Chem-Trec):	1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)		

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.



MSDS No.: 285
Revision No.: 005
Revision Date: 09/08/14
Page: 1 of 2

MATERIAL SAFETY DATA SHEET

Product name: CP 777 Speed Plugs
Description: 1.5", 2" or 3" x 36" deck plugs; Mineral wool, rock wool, synthetic vitreous fiber
Supplier: Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121
Emergency # (Chem-Trec.): 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

INGREDIENTS AND EXPOSURE LIMITS

Ingredients:	CAS Number:	PEL:	TLV:	STEL:
Synthetic vitreous fiber	NE	NE	1 fiber / cc	NE
Phenolic resin	25104-55-6	NE	NE	NE
Lubricant	08012-95-1	NE	NE	NE

Abbreviations: PEL = OSHA Permissible Exposure Limit. TLV = ACGIH Threshold Limit Value. STEL = Short Term Exposure Limit. NE = None Established. NA = Not Applicable.

PHYSICAL DATA

Appearance:	Fibrous yellow plugs.	Odor:	None.
Boiling Point:	Not applicable.	Vapor Pressure:	Not applicable.
Melting Point:	Approx. 2000° F	VOC Content:	<1% w/w
Evaporation Rate:	Not applicable.	Solubility in Water:	Insoluble.
pH:	Not applicable.	Density:	8 PCF

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Not applicable.	Flammable Limits:	Not applicable.
Extinguishing Media:	As appropriate for surrounding fire; material does not burn.		
Special Fire Fighting Procedures:	Soak cartons to help prevent the spread of fire. Use a self-contained breathing apparatus when fighting fires involving chemicals.		
Unusual Fire and Explosion Hazards:	None known.		

REACTIVITY DATA

Stability:	Stable.	Hazardous Polymerization:	Will not occur.
Incompatibility:	Strong acids.		
Hazardous Decomposition Products:	Thermal decomposition products can be formed at temperatures exceeding 2000° F. Thermal decomposition can yield CO and CO ₂ .		
Conditions to Avoid:	None known.		

HEALTH HAZARD DATA

Known Hazards:	Acute: Eye, skin and respiratory irritation. Chronic: Respiratory impairment.		
Routes of Exposure:	Inhalation, Dermal.		
Signs and Symptoms of Exposure:	Eyes: Mechanical irritation. Skin: Itching, irritation. Inhalation: Nose, throat and upper respiratory tract irritation.		
Carcinogenicity:	Rock wool and slag wool have been classified by the IARC as Group 2B (animal) carcinogens. Studies of workers at slag wool plants were inconclusive. Recent animal studies show that any changes associated with long-term inhalation of high concentrations of slag wool are reversible (i.e. non-carcinogenic).		
Medical Conditions Aggravated by Exposure:	Eye, skin, and respiratory conditions.		

EMERGENCY AND FIRST AID PROCEDURES

Eyes:	Flush with plenty of water while holding eyelids apart. Avoid rubbing the eyes as mechanical abrasions can occur. Call a physician if symptoms persist.
Skin:	Wash with soap and water. Launder clothing before reuse.
Inhalation:	Move to fresh air.
Ingestion:	No ill effects expected.
Other:	Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure.

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation:	General (natural or mechanically induced fresh air movements).
Eye Protection:	Safety goggles recommended to prevent fibers from irritating the eyes.
Skin Protection:	Cloth gloves and long sleeves to protect skin from irritating fibers.
Respiratory Protection:	Use local exhaust and/or a NIOSH-approved dust respirator when air movement is inadequate to control dusts / fibers below recommended exposure levels.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	Avoid generating dusts / fibers. Wear appropriate personal protective equipment. Store away from moisture; keep dry.
Spill Procedures:	Not applicable.

REGULATORY INFORMATION

Hazard Communication:	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
HMIS Codes:	Health 1, Flammability 0, Reactivity 0, PPE B (Gloves, Goggles)
DOT Shipping Name:	Not regulated.
IATA / ICAO Shipping Name:	Not regulated.
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product does not contain any toxic chemicals which are subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).
EPA Waste Code(s):	Not regulated by EPA as a hazardous waste.
Waste Disposal Methods:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, state, and federal safety, health and environmental regulations.

CONTACTS

Customer Service:	1 800 879 8000	Technical Service:	1 800 879 8000
Health / Safety:	1 800 879 6000	Jerry Metcalf	(x1003704)
Emergency # (Chem-Trec):	1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (Other countries)		

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.



MATERIAL SAFETY DATA SHEET

Product name: Mineral wool
Description: Synthetic vitreous fiber
Supplier: Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121
Emergency # (Chem-Trec.): 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

INGREDIENTS AND EXPOSURE LIMITS

Ingredients:	CAS Number:	PEL:	TLV:	STEL:
Slag wool fiber	65997-17-3	NE	1 fiber / cc	NE
Phenolic resin	09003-35-4	NE	NE	NE
Polyvinyl alcohol	09002-89-5	NE	NE	NE

Abbreviations: PEL = OSHA Permissible Exposure Limit. TLV = ACGIH Threshold Limit Value. STEL = Short Term Exposure Limit. NE = None Established. NA = Not Applicable.

PHYSICAL DATA

Appearance:	2' x 4' x 4" sheets.	Odor:	Negligible.
Boiling Point:	Not applicable.	Vapor Pressure:	Not applicable.
Melting Point:	Approx. 2400° F	VOC Content:	< 1% w/w
Evaporation Rate:	Not applicable.	Solubility in Water:	Insoluble.
pH:	Not applicable.	Specific Gravity:	Not determined.

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Not applicable.	Flammable Limits:	Not applicable.
Extinguishing Media:	As appropriate for surrounding fire; material does not burn.		
Special Fire Fighting Procedures:	Soak cartons to help prevent the spread of fire. Use a self-contained breathing apparatus when fighting fires involving chemicals.		
Unusual Fire and Explosion Hazards:	None known.		

REACTIVITY DATA

Stability:	Stable.	Hazardous Polymerization:	Will not occur.
Incompatibility:	Strong acids.		
Hazardous Decomposition Products:	Thermal decomposition products can be formed at temperatures exceeding 2000° F. Thermal decomposition can yield CO and CO ₂ .		
Conditions to Avoid:	None known.		

HEALTH HAZARD DATA

Known Hazards:	Acute: Eye, skin and respiratory irritation. Chronic: Respiratory impairment.		
Routes of Exposure:	Inhalation, Dermal.		
Signs and Symptoms of Exposure:	Eyes: Mechanical irritation. Skin: Itching, irritation. Inhalation: Nose, throat and upper respiratory tract irritation.		
Carcinogenicity:	Slag wool has been classified by the IARC as Group 3 – Unclassifiable as to Carcinogenicity in Humans.		
Medical Conditions Aggravated by Exposure:	Eye, skin, and respiratory conditions.		

EMERGENCY AND FIRST AID PROCEDURES

Eyes:	Flush with plenty of water while holding eyelids apart. Avoid rubbing the eyes as mechanical abrasions can occur. Call a physician if symptoms persist.
Skin:	Wash with soap and water. Launder clothing before reuse.
Inhalation:	Move to fresh air.
Ingestion:	No ill effects expected.
Other:	Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure.

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation:	General (natural or mechanically induced fresh air movements).
Eye Protection:	Safety goggles recommended to prevent particulates from irritating the eyes.
Skin Protection:	Cloth gloves and long sleeves to protect skin from irritating fibers.
Respiratory Protection:	Use local exhaust and/or a NIOSH-approved dust respirator when air movement is inadequate to control dusts / fibers below recommended exposure levels.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	Avoid generating dusts. Local exhaust may be required to control dusts if power tools are used for cutting / trimming. Wear appropriate personal protective equipment. Store away from moisture; keep dry.
Spill Procedures:	Not applicable.

REGULATORY INFORMATION

Hazard Communication:	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
HMIS Codes:	Health 1, Flammability 0, Reactivity 0, PPE B (Gloves, Goggles)
DOT Shipping Name:	Not regulated.
IATA / ICAO Shipping Name:	Not regulated.
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product does not contain any toxic chemicals which are subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).
EPA Waste Code(s):	Not regulated by EPA as a hazardous waste.
Waste Disposal Methods:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, state, and federal safety, health and environmental regulations.

CONTACTS

Customer Service:	1 800 879 8000	Technical Service:	1 800 879 8000
Health / Safety:	1 800 879 6000	Jerry Metcalf	(x1003704)
Emergency # (Chem-Trec):	1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)		

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.



Material Safety Data Sheet

14-AUGUST-2014

SpecSeal® SERIES ES SEALANT

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

PRODUCT NAME.....SpecSeal® ES Sealant

CHEMICAL FAMILY.....Mixture

Company Identification

MANUFACTURER/DISTRIBUTOR

Specified Technologies Inc.
210 Evans Way
Somerville, NJ 08876

PHONE NUMBERS

Product Information : 1-908-526-8000
Emergency : 1-800-255-3924

HAZARDS IDENTIFICATION

*****EMERGENCY OVERVIEW*****
* Possible skin and eye irritant. Paste. *

Potential Health Effects:

EYE: Contact may cause irritation.

SKIN: Contact may cause irritation.

INGESTION: Relatively non-toxic.

INHALATION: Irritation of the nose, throat, and lungs may result from over-exposure to vapors or mist.

CHRONIC (CANCER) INFORMATION: Not classified as carcinogenic.

LONG TERM TOXIC EFFECTS: None known.

COMPOSITION/INFORMATION ON INGREDIENTS

Proprietary mixture containing in part:

INGREDIENT NAME	CAS NUMBER
ACRYLIC POLYMER	67967-61-7
CALCIUM CARBONATE	1317-65-3
DIETHYLENE GLYCOL DIBENZOATE AND MONOBENZOATE	120-55-8
	20587-61-5
TITANIUM DIOXIDE	13463-67-7

FIRST AID MEASURES

First Aid

INHALATION: Remove to fresh air.

SKIN CONTACT: Wash thoroughly.

EYE CONTACT: Irrigate eyes with running water for at least 15 minutes. Get medical attention if irritation develops.

INGESTION: None applicable.

FIRE FIGHTING MEASURES

Flash point >93 deg. C.

EXTINGUISHING MEDIA.....Dry Chemical; Carbon Dioxide; Foam; Water spray for large fires.

SPECIAL FIRE FIGHTING PROCEDURES:.....As for surrounding fire.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up

HANDLING AND STORAGE

Store under ambient conditions. No special handling required.

EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION REQUIREMENTS:..... Safety glasses/goggles.

SKIN PROTECTION REQUIREMENTS: Gloves.

RESPIRATOR REQUIREMENTS: None.

VENTILATION REQUIREMENTS:.....If needed, use local exhaust ventilation to keep airborne concentrations below the TLV.

Exposure Guidelines

Exposure Limits

PEL(OSHA) : Particulates (Not Otherwise Classified) 15 mg/m³, 8 Hr. TWA, total dust 5 mg/m³, 8 Hr. TWA, respirable dust

TLV(ACGIH): None Established

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM Smooth paste, slight ammonia odor

SPECIFIC GRAVITY 1.2 - 1.5

PERCENT VOLATILES 17 - 20

EVAPORATION RATE (ether=1) slower

BOILING POINT 100 - 105 deg. C

SOLUBILITY IN WATER..... Dissolves wet, insoluble when cured

CARB VOC (Calculated)..... 3.04 Wt. %

SCAQMD VOC (US EPA Method 24).....44 Grams/Liter

STABILITY AND REACTIVITY

STABILITY:..... This is a stable material.

CONDITIONS TO AVOID Excessive heat and freezing

HAZARDOUS POLYMERIZATION:..... Will not occur.

INCOMPATIBILITIES:.....None special.

TOXICOLOGICAL INFORMATION

Mixture not tested but based on components:

May be irritating to skin and eyes and may aggravate existing skin and eye conditions.

None of the components are listed as carcinogens.

ECOLOGICAL INFORMATION

No data.

DISPOSAL CONSIDERATIONS

Waste Disposal:

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

TRANSPORTATION INFORMATION

DOT – not regulated.

REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status: Reported/Included.

Section 313 Supplier Notifications.

This product contains no toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

OTHER INFORMATION

NPCA-HMIS Rating

Health : 1

Flammability : 2

Reactivity : 0

Personal Protection rating to be supplied by user depending on use conditions.

STATE RIGHT-TO-KNOW LAWS

No substances on the state hazardous substances list, for the states indicated below, are used in the manufacture of products on this Material Safety Data Sheet, with the exceptions indicated. While we do not specifically analyze these products, or the raw materials used in their manufacture, for substances on various state hazardous substances lists, to the best of our knowledge the products on this Material Safety Data Sheet contain no such substances except for those specifically listed below:

SUBSTANCES ON THE NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE LIST PRESENT AT A CONCENTRATION OF 1% OR MORE (0.1% FOR SUBSTANCES IDENTIFIED AS CARCINOGENS, MUTAGENS OR TERATOGENS): Titanium dioxide

WARNING: SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER: None known.

WARNING: SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM: None known.

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the data compiled. However, no representation, warranty, or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information.

Responsibility for MSDS :

Specified Technologies Inc.

210 Evans Way

Somerville, NJ 08876



Material Safety Data Sheet

14-AUGUST-2014

SpecSeal® AS200 ELASTOMERIC SPRAY

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

PRODUCT NAME.....SpecSeal® AS200 SPRAY
CHEMICAL FAMILY.....Mixture

Company Identification

MANUFACTURER/DISTRIBUTOR

Specified Technologies Inc.
210 Evans Way
Somerville, NJ 08876

PHONE NUMBERS

Product Information : 1-908-526-8000
Emergency : 1-800-255-3924

HAZARDS IDENTIFICATION

*****EMERGENCY OVERVIEW*****
* Possible skin and eye irritant. Paste. *

Potential Health Effects:

EYE: Contact may cause irritation.

SKIN: Contact may cause irritation.

INGESTION: Relatively non-toxic.

INHALATION: Irritation of the nose, throat, and lungs may result from over-exposure to vapors or mist.

CHRONIC (CANCER) INFORMATION: Not classified as carcinogenic.

LONG TERM TOXIC EFFECTS: None known.

COMPOSITION/INFORMATION ON INGREDIENTS

Proprietary mixture containing in part:

INGREDIENT NAME	CAS NUMBER
ACRYLIC COPOLYMER	Non Hazardous
CALCIUM CARBONATE	1317-65-3
TITANIUM DIOXIDE	13463-67-7
ALUMINA TRIHYDRATE	21645-51-2

FIRST AID MEASURES

First Aid

INHALATION: Remove to fresh air.

SKIN CONTACT: Wash thoroughly.

EYE CONTACT: Irrigate eyes with running water for at least 15 minutes. Get medical attention if irritation develops.

INGESTION: None applicable.

FIRE FIGHTING MEASURES

Not a fire hazard.

EXTINGUISHING MEDIA:.....Dry Chemical; Carbon Dioxide; Foam; Water spray for large fires.

SPECIAL FIRE FIGHTING PROCEDURES:.....As for surrounding fire.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

HANDLING AND STORAGE

Store under ambient conditions. No special handling required.

EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION REQUIREMENTS:.....Safety glasses/goggles.

SKIN PROTECTION REQUIREMENTS:Gloves.

RESPIRATOR REQUIREMENTS:None.

VENTILATION REQUIREMENTS:.....If needed, use local exhaust ventilation to keep airborne concentrations below the TLV.

Exposure Guidelines

Exposure Limits

PEL(OSHA) : Particulates (Not Otherwise Classified) 15 mg/m³, 8 Hr. TWA, total dust 5 mg/m³, 8 Hr. TWA, respirable dust

TLV(ACGIH): None Established

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM..... Paste

SPECIFIC GRAVITY..... 1.25

PERCENT VOLATILES 23+/-2

EVAPORATION RATE..... >1

BOILING POINT..... 100 deg. C

SOLUBILITY IN WATER..... Infinitely dilutable

CARB VOC (Calculated) 1.81 Wt. %

SCAQMD VOC (US EPA Method 24)..... 23 Grams/Liter

STABILITY AND REACTIVITY

STABILITY:..... This is a stable material.

CONDITIONS TO AVOID Storage >55 deg. C

HAZARDOUS POLYMERIZATION:..... Will not occur.

INCOMPATIBILITIES:..... None special

TOXICOLOGICAL INFORMATION

Mixture not tested but based on components:

May be irritating to skin and eyes and may produce symptoms of nausea in poorly ventilated areas.

None of the components are listed as carcinogens.

ECOLOGICAL INFORMATION

No data.

DISPOSAL CONSIDERATIONS

Waste Disposal:
Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

TRANSPORTATION INFORMATION

DOT – not regulated.

REGULATORY INFORMATION

U.S. Federal Regulations
TSCA Inventory Status : Reported/Included.
Section 313 Supplier Notifications.
This product contains no toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372

OTHER INFORMATION

NPCA-HMIS Rating

Health : 1
Flammability : 0
Reactivity : 0

Personal Protection rating to be supplied by user depending on use conditions.

STATE RIGHT-TO-KNOW LAWS

No substances on the state hazardous substances list, for the states indicated below, are used in the manufacture of products on this Material Safety Data Sheet, with the exceptions indicated. While we do not specifically analyze these products, or the raw materials used in their manufacture, for substances on various state hazardous substances lists, to the best of our knowledge the products on this Material Safety Data Sheet contain no such substances except for those specifically listed below:

SUBSTANCES ON THE NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE LIST PRESENT AT A CONCENTRATION OF 1% OR MORE (0.1% FOR SUBSTANCES IDENTIFIED AS CARCINOGENS, MUTAGENS OR TERATOGENS): Alumina, Titanium Dioxide.

WARNING: SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER:
None Known..

WARNING: SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM: None known.

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the data compiled. However, no representation, warranty, or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information.

Responsibility for MSDS :

Specified Technologies Inc.
210 Evans Way
Somerville, NJ 08876



Material Safety Data Sheet

20-JUNE-2012

SPECSEAL® SMOKE 'N' SOUND SEALANT

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

PRODUCT NAME.....Smoke 'N' Sound Acoustical Sealant

CHEMICAL FAMILY.....Mixture

Company Identification

MANUFACTURER/DISTRIBUTOR

Specified Technologies Inc.
210 Evans Way
Somerville, NJ 08876

PHONE NUMBERS

Product Information: 1-908-526-8000
Emergency: 1-800-255-3924

HAZARDS IDENTIFICATION

*****EMERGENCY OVERVIEW*****

* Possible skin and eye irritant. Paste. *

Potential Health Effects:

EYE: Contact may cause irritation.

SKIN: Contact may cause irritation.

INGESTION: Relatively non-toxic.

INHALATION: Irritation of the nose, throat, and lungs may result from over-exposure to vapors or mist.

CHRONIC (CANCER) INFORMATION: Not classified as carcinogenic.

LONG TERM TOXIC EFFECTS: None known.

COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME

ACRYLIC POLYMER

CALCIUM CARBONATE

DIETHYLENE GLYCOL DIBENZOATE AND MONOBENZOATE

TITANIUM DIOXIDE

CAS NUMBER

NA

1317-65-3

120-55-8

20587-61-5

13463-67-5

FIRST AID MEASURES

First Aid

INHALATION: Remove to fresh air.

SKIN CONTACT: Wash thoroughly.

EYE CONTACT: Irrigate eyes with running water for at least 15 minutes. Get medical attention if irritation develops.

INGESTION: None applicable.

FIRE FIGHTING MEASURES

Not a fire hazard.

EXTINGUISHING MEDIA.....Dry Chemical; Carbon Dioxide; Foam; Water spray for large fires.

SPECIAL FIRE FIGHTING PROCEDURES:.....As for surrounding fire.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

HANDLING AND STORAGE

Store under ambient conditions. No special handling required. No special handling required. Avoid excessive heat and freezing.

EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION REQUIREMENTS:..... Safety glasses/goggles.

SKIN PROTECTION REQUIREMENTS:.....Gloves.

RESPIRATOR REQUIREMENTS:.....None.

VENTILATION REQUIREMENTS:.....If needed, use local exhaust ventilation to keep airborne concentrations below the TLV.

Exposure Guidelines

Exposure Limits

PEL (OSHA) : Particulates (Not Otherwise Classified) 15 mg/m³, 8 Hr. TWA, total dust 5 mg/m³, 8 Hr. TWA, respirable dust

TLV (ACGIH): None Established

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORMSmooth paste, slight ammonia odor.

SPECIFIC GRAVITY1.7 g/ml

PERCENT VOLATILES17%

EVAPORATION RATE (ether = 1)slower

BOILING POINT100-105 deg. C

SOLUBILITY IN WATER.....Dissolves wet, insoluble when cured.

pH.....7.5 to 8.1

CARD VOC (Calculated)0.16 Wt. %

SCAQMD VOC (US EPA Method 24).....20 Grams/Liter

STABILITY AND REACTIVITY

STABILITY: This is a stable material.

CONDITIONS TO AVOIDExcessive heat and freezing

HAZARDOUS POLYMERIZATION:..... Will not occur.

INCOMPATIBILITIES:.....None special.

TOXICOLOGICAL INFORMATION

Mixture not tested but based on components:
May be irritating to skin and eyes and may aggravate existing skin and eye conditions.
None of the components are listed as carcinogens.

ECOLOGICAL INFORMATION

No data.

DISPOSAL CONSIDERATIONS

Waste Disposal:
Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

TRANSPORTATION INFORMATION

DOT – not regulated.

REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status: Reported/Included

Section 313 Supplier Notifications.

This product contains no toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372

OTHER INFORMATION

NPCA-HMIS Rating

Health : 1

Flammability : 0

Reactivity : 0

Personal Protection rating to be supplied by user depending on use conditions.

STATE RIGHT-TO-KNOW LAWS

No substances on the state hazardous substances list, for the states indicated below, are used in the manufacture of products on this Material Safety Data Sheet, with the exceptions indicated. While we do not specifically analyze these products, or the raw materials used in their manufacture, for substances on various state hazardous substances lists, to the best of our knowledge the products on this Material Safety Data Sheet contain no such substances except for those specifically listed below:

SUBSTANCES ON THE NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE LIST PRESENT AT A CONCENTRATION OF 1% OR MORE (0.1% FOR SUBSTANCES IDENTIFIED AS CARCINOGENS, MUTAGENS OR TERATOGENS): Titanium dioxide

WARNING: SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER: Possible traces of formaldehyde, ethyl acrylate, ,acetaldehyde, and acrylonitrile.

WARNING: SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM: None known.

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the data compiled. However, no representation, warranty, or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information.

Responsibility for MSDS:

Specified Technologies Inc.
210 Evans Way
Somerville, NJ 08876



Material Safety Data Sheet

20-JUNE-2012

Smoke 'N' Sound Acoustical Spray - White & Yellow

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

PRODUCT NAME.....Smoke 'N' Sound Acoustical Spray

CHEMICAL FAMILY.....Mixture

Company Identification

MANUFACTURER/DISTRIBUTOR

Specified Technologies Inc.
210 Evans Way
Somerville, NJ 08876

PHONE NUMBERS

Product Information : 1-908-526-8000
Emergency : 1-800-255-3924

HAZARDS IDENTIFICATION

*****EMERGENCY OVERVIEW*****

* Possible skin and eye irritant. Paste. *

Potential Health Effects:

EYE: Contact may cause irritation.

SKIN: Contact may cause irritation.

INGESTION: Relatively non-toxic.

INHALATION: Irritation of the nose, throat, and lungs may result from over-exposure to vapors or mist.

CHRONIC (CANCER) INFORMATION: Not classified as carcinogenic.

LONG TERM TOXIC EFFECTS: None known.

COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS NUMBER
ACRYLIC POLYMER	Non Hazardous
CALCIUM CARBONATE	1317-65-3
TITANIUM DIOXIDE	13463-67-5

FIRST AID MEASURES

INHALATION: Remove to fresh air.

SKIN CONTACT: Wash thoroughly.

EYE CONTACT: Irrigate eyes with running water for at least 15 minutes. Get medical attention if irritation develops.

INGESTION: None applicable.

FIRE FIGHTING MEASURES

Not a fire hazard.

EXTINGUISHING MEDIA..... Dry Chemical; Carbon Dioxide; Foam; Water spray for large fires.

SPECIAL FIRE FIGHTING PROCEDURES:..... As for surrounding fire.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

HANDLING AND STORAGE

Store under ambient conditions. No special handling required.

EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION REQUIREMENTS:..... Safety glasses/goggles.

SKIN PROTECTION REQUIREMENTS:..... Gloves.

RESPIRATOR REQUIREMENTS:..... None.

VENTILATION REQUIREMENTS:..... If needed, use local exhaust ventilation to keep airborne concentrations below the TLV.

Exposure Guidelines

Exposure Limits

PEL(OSHA) : Particulates (Not Otherwise Classified) 15 mg/m³, 8 Hr. TWA, total dust 5 mg/m³, 8 Hr. TWA, respirable dust

TLV (ACGIH): None Established

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM..... Smooth paste, slight ammonia odor.

SPECIFIC GRAVITY..... 1.3 g/ml

PERCENT VOLATILES..... 24%

EVAPORATION RATE (ether = 1)..... slower

BOILING POINT..... 100-105 deg. C

SOLUBILITY IN WATER..... Dissolves wet, insoluble when cured.

pH..... 7.5 to 8.5

CARD VOC (Calculated) 0.28 Wt. %

SCAQMD VOC (US EPA Method 24)..... 19 Grams/Liter

STABILITY AND REACTIVITY

STABILITY: This is a stable material.

CONDITIONS TO AVOID Excessive heat and freezing

HAZARDOUS POLYMERIZATION:..... Will not occur.

INCOMPATIBILITIES:..... None special.

TOXICOLOGICAL INFORMATION

Mixture not tested but based on components:

May be irritating to skin and eyes and may aggravate existing skin and eye conditions.

None of the components are listed as carcinogens.

ECOLOGICAL INFORMATION

No data.

DISPOSAL CONSIDERATIONS

Waste Disposal:

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

TRANSPORTATION INFORMATION

DOT – not regulated.

REGULATORY INFORMATION

U.S. Federal Regulations TSCA Inventory Status: Reported/Included
Section 313 Supplier Notifications.
This product contains no toxic chemicals subject to the reporting requirements of Section 313 of the
Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

OTHER INFORMATION

Additional Information
NA = Not Applicable
NE = Not Established
= Indicates updated section
NPCA-HMIS Rating

Health : 1
Flammability : 0
Reactivity : 0
Personal Protection rating to be supplied by user depending on use conditions.

STATE RIGHT-TO-KNOW LAWS

No substances on the state hazardous substances list, for the states indicated below, are used in the manufacture of products on this Material Safety Data Sheet, with the exceptions indicated. While we do not specifically analyze these products, or the raw materials used in their manufacture, for substances on various state hazardous substances lists, to the best of our knowledge the products on this Material Safety Data Sheet contain no such substances except for those specifically listed below:

SUBSTANCES ON THE NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE LIST PRESENT AT A CONCENTRATION OF 1% OR MORE (0.1% FOR SUBSTANCES IDENTIFIED AS CARCINOGENS, MUTAGENS OR TERATOGENS):
NJTSRN-LC150

WARNING: SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER: Possible traces of formaldehyde, ethyl acrylate, acetaldehyde, acrylamide and acrylonitrile.

WARNING: SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM: None known.

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the data compiled. However, no representation, warranty, or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information.

Responsibility for MSDS :

Specified Technologies Inc.
210 Evans Way
Somerville, NJ 08876

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* **1 Identification of the substance/mixture and of the company/undertaking****Product identifier**Trade name: MK-6 HY

MSDS ID Number: Z-01815

Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

W.R. Grace & Co. -Conn.
62 Whittemore Avenue
Cambridge, MA 02140 USA

Grace Canada, Inc.
294 Clements Road W.
Ajax, Ontario L1S 3C6 Canada

Other Country Contact Information:

For products distributed beyond the country Manufacturer/Supplier identified above
Consult Section 16 for additional emergency contact information.

Information department:

Environmental Health & Safety
USA: +1-617-876-1400 (24 hours)
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts
In Canada: +1-905-683-8561

Transport Emergency: Chemtrec +1-800-424-9300 (24 hours)* **2 Composition/information on ingredients****Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions.**Hazardous components:**

7778-18-9	Calcium sulfate, natural	50-100%
1317-65-3	Calcium carbonate	1.0-10.0%
14808-60-7	Quartz (SiO ₂)	1.0-2.0%

* **3 Hazards identification****Classification of the substance or mixture**

This product contains less than 5 % quartz which is part of a natural material.
Prolonged exposure may cause risk of lung disease (i.e. silicosis and/or lung cancer).

Information concerning hazards for human and environment:

Harmful by inhalation.

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Irritating to eyes, respiratory system and skin.

Safety phrases:

Keep container in a well-ventilated place.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing and gloves.

Hazard description:

Caution!

Harmful

Inhalation:

Causes respiratory tract irritation.

Prolonged exposure may cause risk of lung disease (i.e. silicosis and/or lung cancer).

Eye Contact: Causes eye irritation.**Skin Contact:**

Irritant to skin and mucuous membranes.

Product may develop heat upon hardening causing injury.

Skin Absorption: Not expected to be harmful if absorbed through the skin.**NFPA ratings (scale 0 - 4)**

Health = 1

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = *1

Flammability = 0

Reactivity = 0

4 First aid measures**After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Immediately wash contaminated skin with soap or mild detergent and water. If this chemical soaks clothing, immediately remove clothing and wash skin.

If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for several minutes under running water.

Seek immediate medical advice.

After swallowing: Do not induce vomiting; immediately call for medical help.

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5 Firefighting measures**Special hazards arising from the substance or mixture** No further relevant information available.**Additional information** Collect contaminated fire fighting water separately. It must not enter the sewage system.**6 Accidental release measures****Personal precautions, protective equipment and emergency procedures**Wear protective equipment. Keep unprotected persons away.
Avoid formation of dust.**Methods and material for containment and cleaning up:**Sweep up spilled product into receptacles.
Avoid formation of dust.
Vacuuming or wet sweeping may be used to avoid dust dispersal.

Dispose contaminated material as waste according to section 13 of the MSDS.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage**Handling:****Precautions for safe handling**

Open and handle receptacle with care.

Prior to welding or cutting, Monokote must be removed from steel surfaces likely to be exposed to excessive heating.

Fit dust covers to mixers.

Do not breathe dust.

Danger of wet slippery surfaces.

Storage:**Information about storage in one common storage facility:** No special measures required.**Further information about storage conditions:** Keep receptacle tightly sealed.**Specific end use(s)** No further relevant information available.

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Trade name: **MK-6 HY**

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8 Exposure controls/personal protection**Additional information about design of technical systems:** No further data; see item 7.**Components with limit values that require monitoring at the workplace:****7778-18-9 Calcium sulfate, natural**

PEL	15* 5** mg/m ³ *total dust **respirable fraction
REL	10* 5** mg/m ³ *total dust **respirable fraction
TLV	10* mg/m ³ *as inhalable fraction

1317-65-3 Calcium carbonate

TWA	Short-term value: 10 mg/m ³ , mg/m ³ ppm Long-term value: 10 mg/m ³ , mg/m ³ ppm (Particulate matter no asbestos)
-----	---

14808-60-7 Quartz (SiO₂)

PEL	see Quartz listing
REL	0.05* mg/m ³ *respirable dust; See Pocket Guide App. A
TLV	0.025* mg/m ³ *as respirable fraction

Additional Occupational Exposure Limit Values for possible hazards during processing:

In addition to the exposure limits referenced above, the following non-specific limits for dust apply to this product; OSHA, 15 mg/m³-TWA for Total Dust and 5 mg/m³-TWA as Respirable Dust, ACGIH, 10 mg/m³-TWA as Total Dust and 3 mg/m³-TWA as Respirable Dust.

Additional information: The lists that were valid during the creation were used as basis.

Work/Hygienic Practices: The usual precautionary measures for handling chemicals should be followed.

Personal protective equipment:**General protective and hygienic measures:**

Avoid contact with the eyes and skin.

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

Wear NIOSH-approved respiratory protection (generally a N-95 dust/mist respirator is appropriate) to prevent employee exposures from exceeding the limits specified in this section.

In case of brief exposure or low pollution use respiratory filter device.

Protection of hands:

Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

Eye protection:

Safety glasses with side shield protection.

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Body protection: Protective work clothing**9 Physical and chemical properties****General Information****Appearance:**

Form: Powder
Color: According to product specification
Odor: Odorless
Odour threshold: Not determined.

pH-value: Not applicable.**Change in condition**

Melting point/Melting range: Undetermined.
Flash point: Not applicable.

Flammability (solid, gaseous): Not determined.

Decomposition temperature: Not determined.
Auto igniting: Product is not selfigniting.
Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower: Not determined.
Upper: Not determined.
VOC Content (max): Not determined.

Vapor pressure: Not applicable.
Density at 20°C (68 °F): ~14 PCF3
Vapour density Not applicable.
Evaporation rate Not applicable.
Solubility in / Miscibility with
Water: Not miscible or difficult to mix.

Segregation coefficient (n-octanol/water): Not determined.**Viscosity:**

Dynamic: Not applicable.
Kinematic: Not applicable.

Other information

No further relevant information available.

10 Stability and reactivity**Thermal decomposition:** No decomposition if used according to specifications.**Incompatible materials:** No further relevant information available.

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Hazardous decomposition products:

Carbon monoxide and carbon dioxide
 Hydrocarbons
 Cutting or welding may generate Sulfur dioxide.

Additional information: See section 7 for information on handling, storage and conditions to be avoided.

11 Toxicological information**Acute toxicity:****Primary irritant effect:**

on the skin: Irritating to skin.

on the eye: Irritating to eyes.

inhalation: Irritating to respiratory system.

Additional toxicological information:

May cause respiratory irritation.

Exposure to high dust concentrations over a long period may produce silicosis and other lung disease.
 Prolonged exposure may cause risk of lung disease (i.e. silicosis and/or lung cancer).

12 Ecological information

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Additional ecological information:

General notes: Slightly hazardous for water

13 Disposal considerations

Waste treatment methods Comply with Federal, State and local regulations.

Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**14 Transport information****UN-Number**

DOT, ADR, ADN, IMDG, IATA

Not applicable.

UN proper shipping name

DOT, ADR, ADN, IMDG, IATA

Not applicable.

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA

Class

Not applicable.

Packing group

DOT, ADR, IMDG, IATA

Not applicable.

Environmental hazards:**Marine pollutant:**

No

Special precautions for user

Not applicable.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Transport/Additional information:**DOT****Remarks:**

Not Regulated.

15 Regulatory information**SARA (Superfund Amendments and Reauthorization Act)****Section 302/304 (extremely hazardous substances):**

None of the ingredients is listed.

Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

None of the ingredients is listed.

SARA Section 312/Tier I & II Hazardard Catagories:

Health Immediate (acute)	Yes
Health Delayed (chronic)	Yes
Flammable	No
Reactive	No
Pressure	No

North America Chemical Inventory Status**TSCA (Toxic Substances Control Act - United States):**

All ingredients are listed or exempt from listing unless otherwise noted below.

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CEPA (Canadian DSL):

All ingredients are listed or exempt from listing unless otherwise noted below.

California Proposition 65**Chemicals known to cause cancer:**14808-60-7 | Quartz (SiO₂)**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

WHMIS Classification(s):

D2A - Very toxic material causing other toxic effects

**Carcinogenicity Categories****EPA (Environmental Protection Agency)**

None of the ingredients is listed.

IARC (International Agency for Research on Cancer) Human Carcinogenicity:**Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable**14808-60-7 | Quartz (SiO₂)

1

NTP (National Toxicology Program)**K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic**14808-60-7 | Quartz (SiO₂)

K

TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)**Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable**14808-60-7 | Quartz (SiO₂)

A2

NIOSH-Cancer (National Institute for Occupational Safety and Health)14808-60-7 | Quartz (SiO₂)**OSHA-Cancer (Occupational Safety & Health Administration)**

None of the ingredients is listed.

Volatile Organic Compounds (VOC) reported per the Emission Standards for Architectural Coatings:

If no g/L value is provided this product is not subject to above standard.

International Chemical Inventory Status**European EINECS**

All ingredients are listed.

Philippines Inventory of Chemicals and Chemical Substances PICCS

All ingredients are listed.

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Inventory of Existing Chemical Substances manufactured or imported in China IECSC

All ingredients are listed.

Australian Inventory of Chemical Substances AICS

All ingredients are listed.

Japan Existing and New Chemical Substance List ENCS

All ingredients are listed.

Korean Existing Chemical Inventory

All ingredients are listed.

Non-hazardous Ingredients

65996-61-4 Cellulosic Fiber

9003-53-6 Expanded Polystyrene

16 Other information

"The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection."

Contact:**Contact:**

W.R. Grace & Co. -Conn.

62 Whittemore Avenue

Cambridge, MA 02140 USA

USA: +1-617-876-1400 (24 hours)

+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts

USA

ADHESIVES, CLEANERS AND LUBRICANTS

1. SPRAY ADHESIVES

- a. Trim Tex – 847 Spray Adhesive**
- b. 3M – Hi-Strength Spray Adhesive 90**

2. TUBE ADHESIVES

- a. Loctite – PL Premium Adhesive**
- b. OSI – QB 300 Construction Adhesive**
- c. OSI – F-38 Drywall Adhesive**
- d. Franklin – Titebond GREENchoice Drywall Adhesive**

3. CLEANER

- a. GO – Goof Off Professional Strength Cleaner**

4. LUBRICANTS

- a. WD-40 – WD-40 Aerosol**
- b. Hilti – Spray Lubricant**

TRIM-TEX, INC.

3700 W. PRATT AVENUE; LINCOLNWOOD, IL 60712

847-679-3000

24 Hour Emergency Phone: 800-424-9300

MATERIAL SAFETY DATA SHEET

SECTION I – CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Name: Trim-Tex 847 Adhesive VOC
Identification #: FPATRIMTXVOC
Product Use / Class:

Supplier: Trim-Tex, Inc.
3700 W. Pratt Avenue
Lincolnwood, IL 60712

Preparer: Trim-Tex, Inc.

SECTION II – COMPOSITION / INFORMATION ON INGREDIENTS

Item	CHEMICAL NAME:	CAS Number	WT/WT%
			Less Than
01	Acetone	67-64-1	25.0%
02	Propane	74-98-6	20.0%
03	Hexane	110-54-3	20.0%
04	Dimethyl Ether	115-10-6	15.0%
05	Toluene	108-88-3	5.0%
06	C12-C14 Isoalkanes	68551-19-9	5.0%

EXPOSURE LIMITS						
Item	ACGIH		OSHA		Company	
	TLV-TWA	TLV-STEL	PEL-TWA	PEL-Ceiling	TLV-TWA	Skin
01	500 ppm	750 ppm	1000 ppm	N.E.	N.E.	No
02	2500 ppm	N.E.	1000 ppm	N.E.	N.E.	No
03	50 ppm	N.E.	500 ppm	N.E.	N.E.	No
04	N.E.	N.E.	N.E.	N.E.	1000 ppm	No
05	20 ppm	N.E.	200 ppm	300 ppm	N.E.	Yes
06	N.E.	N.E.	N.E.	N.E.	400 ppm	No

(See Section XVI for abbreviation legend.)

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MATERIAL SAFETY DATA SHEET

SECTION III – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW ***

Keep from reach of children. Do not puncture, incinerate, or place aerosol product containers in compactors. Containers of this material may be hazardous when emptied since containers retain product residues (vapor, liquid, and/or solid). All hazard precautions given must be observed. Do not flame cut, braze or use a welding torch. Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal.

EFFECTS OF OVEREXPOSURE:

- **Eye Contact:** Can cause severe irritation, redness, tearing, and blurred vision.
- **Skin Contact:** Prolonged or repeated contact can cause moderate irritation defatting, and dermatitis.
- **Inhalation:** Excessive inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness, and even asphyxiation. Overexposure may cause damage to the nervous system.
- **Ingestion:** No Information
- **Chronic Hazards:** Overexposure to this material (or its components) has apparently been found to cause the following effects in laboratory animals: kidney damage, eye damage, liver damage, lung damage, hearing loss, nasal damage, nervous system damage and testis damage. Overexposure to this material (or its components) has apparently been found to cause the following effects in humans: liver damage, kidney damage, brain damage, visual impairment, and central nervous system effects.
- **Primary Route(s) of Entry:** Skin contact, skin absorption, inhalation and eye contact.

SECTION IV – FIRST AID MEASURES

- **Eye Contact:** Flush with large amounts of water, lifting upper and lower lids occasionally and get medical attention.
- **Skin Contact:** Thoroughly wash exposed area with soap and water. Remove contaminated clothing. Launder contaminated clothing before re-use. Get medical attention if irritation persists. Mineral oil, baby oil, make-up remover, mineral spirits or other similar mild solvent may be used to remove the sticky resin residue left by the adhesive.

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MATERIAL SAFETY DATA SHEET

SECTION IV – FIRST AID MEASURES (CONTINUED)

- **Inhalation:** Remove individual to fresh air. If breathing is difficult, administer oxygen. Give artificial respiration if breathing has stopped. Keep person warm and quiet. Get medical attention.
- **Ingestion:** Do not induce vomiting. Give two glasses of water if conscious. Never give anything by mouth to an unconscious person. Get immediate medical attention.

SECTION V – FIRE FIGHTING MEASURES

Flash Point: -156°F (Pensky-Martens C.C.)
Lower Explosive Limit: 1.0%
Upper Explosive Limit: 18.0%
Auto-Ignition Temperature: N.D.
Extinguishing Media: CO₂, Dry Chemical, Foam, Water Fog

- **Unusual Fire and Explosion Hazards:** Vapors are heavier than air and travel along the ground or may be moved by ventilation and ignited by ignition sources at locations distant from material handling point. For aerosol products – exposure to temperatures over 130°F may cause containers to burst releasing highly flammable gas.
- **Special Firefighting Procedures:** Wear self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode when fighting fires. Keep fire exposed containers cool with water fog.

SECTION VI – ACCIDENTAL RELEASE MEASURES

- **Steps to be taken in case material is released or spilled:** Eliminate sources of ignition & ventilate area. Persons not properly equipped should be excluded from area. Stop spill at source – prevent spreading. Avoid inhalation of vapors. Avoid skin contact with liquid. Soak up on absorbent material and place into proper container for disposal. Use non-sparking scoops for flammable materials. Clean walking surfaces thoroughly to reduce slipping hazard.

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MATERIAL SAFETY DATA SHEET

SECTION VII – HANDLING & STORAGE

- **Handling:** Containers of this material may be hazardous when emptied, since containers retain product residues (vapor, liquid and/or solid). All hazard precautions given must be observed. Do not flame cut, braze or use welding torch on containers. Intentional misuse by deliberately concentrating and inhaling the vapors from this product may be harmful or fatal.
- **Storage:** Do not store above 120°F. Do not store in direct sunlight. Keep away from heat sources, open flame, pilot lights, sparks and other sources of ignition.

SECTION VIII – EXPOSURE CONTROLS / PERSONAL PROTECTION

- **Engineering Controls:** Provide sufficient mechanical ventilation (general and/or local exhaust) to maintain exposure below TLV(s).
- **Respiratory Protection:** If workplace exposure limits of product or any component is exceeded, use a NIOSH/MSHA approved respirator. Consult your safety equipment supplier for recommendations.
- **Skin Protection:** Wear impervious gloves if method of use involves skin contact with product. Consult your safety supply vendor for glove recommendations.
- **Eye Protection:** Wear safety glasses at minimum, more extensive protection may be necessary depending on how the product is to be used.
- **Other Protective Equipment:** Wear impervious clothing if bodily exposure is anticipated. Consult your safety supply vendor for recommendations.
- **Hygienic Practices:** Wash hands before eating or smoking. Smoke in designated areas only. Remove and launder clothing if contaminated.

SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

Boiling Range:	-44°F to 472°F	Vapor Density:	Is heavier than air
Odor:	Mint when wet	Odor Threshold:	N.D.
Appearance:	Pink liquid	Evaporation Rate:	Is faster than Butyl
Solubility in H ₂ O:	Negligible		Acetate
Freeze Point:	N.D.	Specific Gravity:	0.7200
Vapor Pressure:	N.D.	pH @ 0.0%:	N.D.
Physical State:	Liquid	Viscosity:	N.D.
Coefficient of Water/Oil Distribution:	N.D.		

(See Section 16 for abbreviation legend.)

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MATERIAL SAFETY DATA SHEET

SECTION X – STABILITY AND REACTIVITY

- **Conditions to Avoid:** Heat, sparks, welding arcs, open flame, pilot lights, static electricity or other source of ignition.
- **Incompatibility:** Oxidizing agents, acids, reducing agents and strong oxidizers.
- **Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide and various hydrocarbons.
- **Hazardous Polymerization:** Will not occur under normal conditions.
- **Stability:** This product is stable under normal storage conditions.

SECTION XI – TOXICOLOGICAL PROPERTIES

- No product or component toxicological information is available.

SECTION XII – ECOLOGICAL INFORMATION

- **Ecological Information:** No Information

SECTION XIII – DISPOSAL CONSIDERATIONS

- **Disposal Method:** Dispose of in accordance with all local, state and federal regulations.

SECTION XIV – TRANSPORTATION INFORMATION

D.O.T. Proper Shipping Name: Aerosols
D.O.T. Technical Name:
D.O.T. Hazard Class: 2.1 **Hazard Subclass:** None
D.O.T UN/NA Number: UN1950 **Packing Group:** None
RESP. Guide Page: 126

Additional Information: For domestic ground and air shipment this product may be shipped as a Consumer Commodity ORM-D or as Limited Quantity. Outer cartons must have the ORM-D designation or Limited Quantity diamond. DOT is transitioning from Consumer Commodity ORM-D marking to the new Limited Quantity diamond, which affords many of the same benefits as Consumer Commodity ORM-D. (Our original cartons are preprinted with the ORM-D designation for ground shipment, but we are transitioning to the ground version of the Limited Quantity diamond the second quarter of 2012.)

TRIM-TEX, INC.

3700 W. PRATT AVENUE; LINCOLNWOOD, IL 60712

847-679-3000

24 Hour Emergency Phone: 800-424-9300

MATERIAL SAFETY DATA SHEET

SECTION XV – REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS AS FOLLOWS:

- **OSHA:** Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)
- **CERCLA – SARA Hazard Category:** This product has been reviewed according to the EPA ‘Hazard Categories’ promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD
FIRE HAZARD

CHRONIC HEALTH HAZARD
PRESSURIZED GAS HAZARD

- **SARA Section 313:** This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME:	CAS NUMBER	WT/WT% IS LESS THAN
Hexane	110-54-3	20.0%
Toluene	108-88-3	5.0%

- **Toxic Substances Control Act:** This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

CHEMICAL NAME:	CAS NUMBER
No information is available.	

U.S. STATE REGULATIONS AS FOLLOWS:

- **California Proposition 65:** WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer, birth defects or other reproductive harm:

CHEMICAL NAME:	CAS NUMBER	WT/WT% IS LESS THAN
Toluene	108-88-3	5.0%
Benzene	71-43-2	29 PPM
Acetaldehyde	75-07-0	5 PPM
Formaldehyde	50-00-0	5 PPM

TRIM-TEX, INC.

3700 W. PRATT AVENUE; LINCOLNWOOD, IL 60712

847-679-3000

24 Hour Emergency Phone: 800-424-9300

MATERIAL SAFETY DATA SHEET

SECTION XV – REGULATORY INFORMATION (CONTINUED)

INTERNATIONAL REGULATIONS AS FOLLOWS:

- Canadian WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.
- Canadian WHMIS Class: No information available.
- TSCA Inventory: All components of this product are on the US TSCA inventory.

Hexane is a mixture of n-hexane and other compounds all falling under the general chemical name light hydrotreated distillate CAS-68410-97-9. The n-hexane content of our hexane is 60 to 70 percent. On June 30, 1993, the OSHA Z-1-A table was revoked and OSHA reverted back to their prior exposure limits. The values on this MSDS reflect the roll back to the prior values. Some states may continue to enforce the 1993 limits. On June 16, 1995, EPA announced in a final rule that acetone would no longer be considered a VOC for air attainment standards (it is now an exempt compound). The VOC calculations on this MSDS are based on acetone being an exempt compound. The June 16, 1995 rule also removed acetone from the list of SARA 313 reportable chemicals.

SECTION XVI – OTHER INFORMATION

HMIS Ratings – Health:	2	Flammability:	4	Reactivity:	1
Previous MSDS Revision Date:	08/02/11				
Reason for revision:	Scheduled Update				
Volatile by Weight:	75.5%				
Volatile by Volume:	82.9%				
VOC Content:	51.0% by weight, 366 grams/liter total product, 472 grams/liter less water and exempt, 0.52 lbs/can.				
Legend:	N.A. – Not Applicable N.D. – Not Determined N.E. – Not Established				

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations. The environmental information and hazardous materials identification system have been included by Trim-Tex, Inc. in order to provide additional health and hazard classification information. The ratings recommended are based upon the criteria supplied by the developers of these rating systems, together with Trim-Tex, Inc.'s interpretation of the available data. Proper personal protective equipment varies widely with conditions of use and anticipated exposure. We recommend that a supervisor, or other qualified person, determine proper PPE for intended use.



Safety Data Sheet

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Document Group:	16-4935-9	Version Number:	9.00
Issue Date:	09/09/14	Supersedes Date:	04/04/12

SECTION 1: Identification

1.1. Product identifier

3M™ Hi-Strength Spray Adhesive 90 (aerosol)

Product Identification Numbers

62-4942-4730-7, 62-4942-4920-4, 62-4942-4921-2, 62-4942-4925-3, 62-4942-4930-3, 62-4942-4935-2, 62-4942-4950-1, 62-4942-4955-0, 62-4942-4970-9, 62-4942-4975-8, CS-0406-7111-0

1.2. Recommended use and restrictions on use

Recommended use

aerosol adhesive, hi-strength aerosol adhesive

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Flammable Aerosol: Category 1.

Serious Eye Damage/Irritation: Category 2B.

Simple Asphyxiant.

Specific Target Organ Toxicity (single exposure): Category 1.

Specific Target Organ Toxicity (central nervous system): Category 3.

Specific Target Organ Toxicity (respiratory irritation): Category 3.

2.2. Label elements

Signal word

Danger

Symbols

Flame | Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

Extremely flammable aerosol.

Causes eye irritation.

May cause respiratory irritation.

May cause drowsiness or dizziness.

May displace oxygen and cause rapid suffocation.

Causes damage to organs:
cardiovascular system |

Precautionary Statements

General:

Keep out of reach of children.

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Do not spray on an open flame or other ignition source.

Pressurized container: Do not pierce or burn, even after use.

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF exposed: Call a POISON CENTER or doctor/physician.

Specific treatment (see Notes to Physician on this label).

Storage:

Protect from sunlight. Do not expose to temperatures exceeding 50C/122F.

Keep container tightly closed.

Store locked up in a well-ventilated place.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

Notes to Physician:

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

2.3. Hazards not otherwise classified

None.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Dimethyl ether	115-10-6	35 - 45 Trade Secret *
Methyl acetate	79-20-9	25 - 35 Trade Secret *
Nonvolatile components (N.J.T.S. Reg. No. 0449960-6448P)	Trade Secret*	10 - 20 Trade Secret *
Cyclohexane	110-82-7	7 - 13 Trade Secret *
Pentane	109-66-0	1 - 5 Trade Secret *
1,1-Difluoroethane	75-37-6	1 - 5 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. Get medical attention.

Skin Contact:

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Irritant Vapors or Gases	During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. Close cylinder. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Keep out of reach of children. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 50C/122F. Store away from heat. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Pentane	109-66-0	ACGIH	TWA:1000 ppm	
Pentane	109-66-0	OSHA	TWA:2950 mg/m3(1000 ppm)	
Cyclohexane	110-82-7	ACGIH	TWA:100 ppm	
Cyclohexane	110-82-7	OSHA	TWA:1050 mg/m3(300 ppm)	
Dimethyl ether	115-10-6	AIHA	TWA:1880 mg/m3(1000 ppm)	
Dimethyl ether	115-10-6	CMRG	TWA:1000 ppm	
1,1-Difluoroethane	75-37-6	AIHA	TWA:2700 mg/m3(1000 ppm)	
1,1-Difluoroethane	75-37-6	CMRG	TWA:1000 ppm	
Methyl acetate	79-20-9	ACGIH	TWA:200 ppm;STEL:250 ppm	
Methyl acetate	79-20-9	OSHA	TWA:610 mg/m3(200 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls**8.2.1. Engineering controls**

Do not remain in area where available oxygen may be reduced. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended: Butyl Rubber
Nitrile Rubber

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece supplied-air respirator

Organic vapor respirators may have short service life.

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Gas
Specific Physical Form:	Aerosol
Odor, Color, Grade:	clear, sweet fruity odor
Odor threshold	<i>No Data Available</i>
pH	<i>No Data Available</i>
Melting point	<i>Not Applicable</i>
Boiling Point	<i>Not Applicable</i>
Flash Point	-42.00 °F [<i>Test Method:</i> Tagliabue Closed Cup]
Evaporation rate	1.90 [<i>Ref Std:</i> ETHER=1]
Flammability (solid, gas)	Flammable Aerosol: Category 1.
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Vapor Density	2.97 [<i>Ref Std:</i> AIR=1]
Density	0.726 g/ml
Specific Gravity	0.726 [<i>Ref Std:</i> WATER=1]
Solubility in Water	Nil
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>Not Applicable</i>
Viscosity	<i>Not Applicable</i>

Hazardous Air Pollutants
VOC Less H2O & Exempt Solvents

<=0 % weight [*Test Method:* Calculated]
<=55 % [*Test Method:* calculated per CARB title 2]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Intentional concentration and inhalation may be harmful or fatal.

Simple Asphyxiation: Signs/symptoms may include increased heart rate, rapid respirations, drowsiness, headache, incoordination, altered judgement, nausea, vomiting, lethargy, seizures, coma, and may be fatal.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause target organ effects after inhalation.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause target organ effects after ingestion.

Target Organ Effects:

Single exposure may cause:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Single exposure, above recommended guidelines, may cause:

Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
Dimethyl ether	Inhalation-Gas (4 hours)	Rat	LC50 164,000 ppm
Methyl acetate	Dermal	Rat	LD50 > 2,000 mg/kg
Methyl acetate	Inhalation-Vapor (4 hours)	Rat	LC50 > 49 mg/l
Methyl acetate	Ingestion	Rat	LD50 > 5,000 mg/kg
Cyclohexane	Dermal	Rat	LD50 > 2,000 mg/kg
Cyclohexane	Inhalation-Vapor (4 hours)	Rat	LC50 > 32.9 mg/l
Cyclohexane	Ingestion	Rat	LD50 6,200 mg/kg
Nonvolatile components (N.J.T.S. Reg. No. 0449960-6448P)	Ingestion	Rat	LD50 > 34,000 mg/kg
Pentane	Dermal	Rabbit	LD50 3,000 mg/kg
Pentane	Inhalation-Vapor (4 hours)	Rat	LC50 > 18 mg/l
Pentane	Ingestion	Rat	LD50 > 2,000 mg/kg
1,1-Difluoroethane	Inhalation-Gas (4 hours)	Rat	LC50 > 437,000 ppm
1,1-Difluoroethane	Ingestion	Rat	LD50 > 1,500 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Methyl acetate	Rabbit	No significant irritation
Cyclohexane	Rabbit	Mild irritant
Pentane	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Methyl acetate	Rabbit	Moderate irritant
Cyclohexane	Rabbit	Mild irritant

Pentane	Rabbit	Mild irritant
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Skin Sensitization

Name	Species	Value
Methyl acetate	Human	Not sensitizing
Pentane	Guinea pig	Not sensitizing

Respiratory Sensitization

Name	Species	Value
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Germ Cell Mutagenicity

Name	Route	Value
Dimethyl ether	In Vitro	Not mutagenic
Dimethyl ether	In vivo	Not mutagenic
Methyl acetate	In Vitro	Not mutagenic
Methyl acetate	In vivo	Not mutagenic
Cyclohexane	In Vitro	Not mutagenic
Cyclohexane	In vivo	Some positive data exist, but the data are not sufficient for classification
Pentane	In vivo	Not mutagenic
Pentane	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,1-Difluoroethane	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,1-Difluoroethane	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Dimethyl ether	Inhalation	Rat	Not carcinogenic
1,1-Difluoroethane	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
Dimethyl ether	Inhalation	Not toxic to female reproduction	Rat	NOAEL 25,000 ppm	2 years
Dimethyl ether	Inhalation	Not toxic to male reproduction	Rat	NOAEL 25,000 ppm	2 years
Dimethyl ether	Inhalation	Not toxic to development	Rat	NOAEL 40,000 ppm	during organogenesis
Cyclohexane	Inhalation	Not toxic to female reproduction	Rat	NOAEL 24 mg/l	2 generation
Cyclohexane	Inhalation	Not toxic to male reproduction	Rat	NOAEL 24 mg/l	2 generation
Cyclohexane	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 6.9 mg/l	2 generation
Pentane	Inhalation	Not toxic to female reproduction	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Inhalation	Not toxic to male reproduction	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Ingestion	Not toxic to development	Rat	NOAEL 1,000 mg/kg/day	during organogenesis
Pentane	Inhalation	Not toxic to development	Rat	NOAEL 30 mg/l	during organogenesis
1,1-Difluoroethane	Inhalation	Not toxic to female reproduction	Rat	NOAEL 25,000 ppm	2 years

1,1-Difluoroethane	Inhalation	Not toxic to male reproduction	Rat	NOAEL 25,000 ppm	2 years
1,1-Difluoroethane	Inhalation	Not toxic to development	Rat	NOAEL 50,000 ppm	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Dimethyl ether	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 10,000 ppm	30 minutes
Dimethyl ether	Inhalation	cardiac sensitization	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 100,000 ppm	5 minutes
Methyl acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Methyl acetate	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL Not available	
Methyl acetate	Inhalation	blindness	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Methyl acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
Cyclohexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Cyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Pentane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	not available
Pentane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	not available
Pentane	Inhalation	cardiac sensitization	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL Not available	not available
1,1-Difluoroethane	Inhalation	cardiac sensitization	Causes damage to organs	Human and animal	NOAEL Not available	poisoning and/or abuse
1,1-Difluoroethane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL 100,000 ppm	
1,1-Difluoroethane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	not available

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Dimethyl ether	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 25,000 ppm	2 years
Dimethyl ether	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 20,000 ppm	30 weeks
Methyl acetate	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	28 days
Methyl acetate	Inhalation	endocrine system hematopoietic system liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 6.1 mg/l	28 days

		immune system kidney and/or bladder				
Cyclohexane	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 24 mg/l	90 days
Cyclohexane	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.7 mg/l	90 days
Cyclohexane	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL 2.7 mg/l	10 weeks
Cyclohexane	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 24 mg/l	14 weeks
Cyclohexane	Inhalation	peripheral nervous system	All data are negative	Rat	NOAEL 8.6 mg/l	30 weeks
Pentane	Inhalation	peripheral nervous system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Pentane	Inhalation	heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system muscles nervous system eyes kidney and/or bladder respiratory system	All data are negative	Rat	NOAEL 20 mg/l	13 weeks
Pentane	Ingestion	kidney and/or bladder	All data are negative	Rat	NOAEL 2,000 mg/kg/day	28 days
1,1-Difluoroethane	Inhalation	hematopoietic system kidney and/or bladder respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 25,000 ppm	2 years

Aspiration Hazard

Name	Value
Cyclohexane	Aspiration hazard
Pentane	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Facility must be capable of handling aerosol cans. The facility should be equipped to handle gaseous waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Cyclohexane	110-82-7	7 - 13

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 Flammability: 4 Instability: 0 Special Hazards: None

Aerosol Storage Code: 3

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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Version Number: 9.00
Supersedes Date: 04/04/12

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3M USA SDSs are available at www.3M.com



Revision Number: 001.0

Issue date: 09/12/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite® PL® Premium Polyurethane Construction Adhesive **IDH number:** 1390595
Product type: 1-component-polyurethane adhesive **Region:** United States
Company address: Henkel Corporation, One Henkel Way, Rocky Hill, Connecticut 06067
Contact information: Telephone: 800.624.7767
 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711
 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state:	high viscosity	HEALTH:	*2
Color:	Beige	FLAMMABILITY:	1
Odor:	like vegetable oil	PHYSICAL HAZARD:	1
		Personal Protection:	See MSDS Section 8

WARNING: HARMFUL IF INHALED.
 CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION.
 MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION.

Relevant routes of exposure: Inhalation, Skin, Eyes, Ingestion

Potential Health Effects

Inhalation: As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. Chronic overexposure to isocyanates has been reported to cause lung damage. Dryness of nasal passages, sore throat, cough, tightness of chest, shortness of breath. Persons suffering from allergic reactions to isocyanates should avoid contact with the product. This product may cause sensitization by inhalation and skin contact. May cause respiratory tract irritation.

Skin contact: Contact with skin can cause irritation and allergic reaction (sensitization) in some individuals. This product may discolor the skin.

Eye contact: Contact with eyes will cause irritation.

Ingestion: Ingestion of this product may cause nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: Development of preexisting skin or lung allergy symptoms may increase. Asthma.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Talc	14807-96-6	30 - 60
Methylenebis(phenylisocyanate)	101-68-8	10 - 30
Hydrocarbon C11-25 dearomatized	64742-46-7	10 - 30
Methylene bisphenyl isocyanate	26447-40-5	1 - 5
Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	1 - 5

4. FIRST AID MEASURES

Inhalation:	If inhaled, immediately remove the affected person to fresh air. Immediate medical treatment necessary.
Skin contact:	Wash affected area immediately with soap and water. If symptoms develop and persist, get medical attention. Remove contaminated clothes.
Eye contact:	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
Ingestion:	Do not induce vomiting. Rinse the mouth. Drink plenty of water. Immediate medical advice necessary.
Notes to physician:	An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate. Treatment based on judgement of the physician in response to reactions of the patient.

5. FIRE FIGHTING MEASURES

Flash point:	> 200 °F (> 93.33 °C) no method
Autoignition temperature:	No information available.
Flammable/Explosive limits - lower:	1.6 %
Flammable/Explosive limits - upper:	10.2 %
Extinguishing media:	Water fog. Foam Carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.
Unusual fire or explosion hazards:	None known
Hazardous combustion products:	Nitrous gases Irritating fumes. Isocyanate vapors.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not empty into drains / surface water / ground water.
Clean-up methods:	Ensure adequate ventilation. Scrape up spilled material and place in a closed container for disposal. Wear suitable protective clothing, gloves and eye/face protection.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid extreme temperatures. Exposure to vapors of heated MDI can be extremely dangerous. Wash thoroughly after handling. Protect from moisture. Use only with adequate ventilation.

Storage: For safe storage, store between 18.3 °C (64.9 °F) and 40 °C (104°F) Avoid moisture. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Talc	2 mg/m3 TWA Respirable fraction.	20 MPPCF TWA 2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	50 ppm
Methylenebis(phenylisocyanate)	0.005 ppm TWA	0.02 ppm (0.2 mg/m3) Ceiling	None	None
Hydrocarbon C11-25 dearomatized	None	5 mg/m3 PEL Mist.	None	None
Methylene bisphenyl isocyanate	None	None	None	None
Isocyanic acid, polymethylenepolyphenylene ester	0.005 ppm TWA	0.02 ppm (0.2 mg/m3) Ceiling	None	None
Quartz (SiO ₂)	0.025 mg/m3 TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	None

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection: Observe OSHA regulations for respirator use (29 CFR 1910.134). Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists. Respirator with combination filter for vapor/particulate. However, due to the poor warning properties of MDI, proper fit and timely replacement of filter elements must be ensured.

Eye/face protection: Safety glasses with side-shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin protection: Suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: high viscosity
Color: Beige
Odor: like vegetable oil
Odor threshold: Not available.
pH: Neutral
Vapor pressure: Not available.
Boiling point/range: 172 - 341 °C (341.6 - 645.8 °F) no method
Melting point/ range: Not applicable

Specific gravity: 1.2600
Vapor density: Heavier than air
Flash point: > 200 °F (> 93.33 °C) no method
Flammable/Explosive limits - lower: 1.6 %
Flammable/Explosive limits - upper: 10.2 %
Autoignition temperature: No information available.
Evaporation rate: Not available.
Solubility in water: Slightly soluble
Partition coefficient (n-octanol/water): Not available.
VOC content: 3.5 %; 45 g/l

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.
Hazardous reactions: Contact with moisture, other materials that react with isocyanates, or temperatures above 350° F (177° C), may cause polymerization.
Hazardous decomposition products: Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition. nitrogen oxides Aromatic isocyanates. carbon oxides.
Incompatible materials: Oxidizing agents. Alcohols. Water.
Conditions to avoid: Avoid moisture. Keep away from open flames, hot surfaces and sources of ignition. Prolonged exposure to heat.

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Talc	No	Group 2B	No
Methylenebis(phenylisocyanate)	No	No	No
Hydrocarbon C11-25 dearomatized	No	No	No
Methylene bisphenyl isocyanate	No	No	No
Isocyanic acid, polymethylenepolyphenylene ester	No	No	No
Quartz (SiO ₂)	Known To Be Human Carcinogen.	Group 1	No

Hazardous components	Health Effects/Target Organs
Talc	Irritant, Lung, Some evidence of carcinogenicity
Methylenebis(phenylisocyanate)	Irritant, Respiratory, Allergen
Hydrocarbon C11-25 dearomatized	Irritant
Methylene bisphenyl isocyanate	Allergen, Irritant, Mutagen, Respiratory
Isocyanic acid, polymethylenepolyphenylene ester	Allergen, Irritant, Kidney, Liver, Respiratory
Quartz (SiO ₂)	Immune system, Lung, Some evidence of carcinogenicity

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal:	Dispose of according to Federal, State and local governmental regulations.
Hazardous waste number:	It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name:	Environmentally hazardous substances, solid, n.o.s.
Hazard class or division:	9
Identification number:	UN 3077
Packing group:	III
DOT Reportable quantity:	Methylene diphenyl diisocyanate

International Air Transportation (ICAO/IATA)

Proper shipping name:	Environmentally hazardous substance, solid, n.o.s.
Hazard class or division:	9
Identification number:	UN 3077
Packing group:	III

Water Transportation (IMO/IMDG)

Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard class or division:	9
Identification number:	UN 3077
Packing group:	III

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification:	None above reporting de minimis
CERCLA/SARA Section 302 EHS:	None above reporting de minimis
CERCLA/SARA Section 311/312:	Immediate Health, Delayed Health
CERCLA/SARA Section 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Methylenebis(phenylisocyanate) (CAS# 101-68-8). Isocyanic acid, polymethylenepolyphenylene ester (CAS# 9016-87-9).
California Proposition 65:	This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status:	Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.
WHMIS hazard class:	D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: This Material Safety Data Sheet contains changes from the previous version in Section(s): 1, 3, 15

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

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Revision Number: 002.2

Issue date: 10/10/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	OSI® QB-300 Multi-Purpose Construction Adhesive	IDH number:	827628
Product type:	Solvent based adhesive	Region:	United States
Restriction of Use:	None identified	Contact information:	
Company address:	Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067	Telephone:	(860) 571-5100
		MEDICAL EMERGENCY Phone:	Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711
		TRANSPORT EMERGENCY Phone:	CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887
		Internet:	www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: ABRASION COULD RELEASE RESPIRABLE PARTICLES OF SILICA QUARTZ, A CANCER HAZARD BY INHALATION. NORMAL USE OF THIS PRODUCT CAUSES NO SUCH RELEASE.

HIGHLY FLAMMABLE LIQUID AND VAPOR.
CAUSES SKIN IRRITATION.
CAUSES SERIOUS EYE IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	2
SKIN IRRITATION	2
EYE IRRITATION	2A

PICTOGRAM(S)



Precautionary Statements

Prevention: Keep away from heat, sparks, open flames, hot surfaces - no smoking. Keep container tightly closed. No release into water. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash thoroughly after handling. Wear protective gloves, eye protection, and face protection.

Response: If on skin (or hair): Take off immediately all contaminated clothing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.

Storage: Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local

governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Limestone	1317-65-3	30 - 60
Naphtha, petroleum, hydrotreated light	Proprietary	10 - 30
Pentaerythritol ester of rosin	Proprietary	10 - 30
Kaolin	1332-58-7	5 - 10
CP Styrene, butadiene, divinylbenzene	Proprietary	5 - 10
n-Hexane	110-54-3	1 - 5
Quartz (SiO ₂)	14808-60-7	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If symptoms persist, seek medical advice. If breathing is difficult, give oxygen.
Skin contact:	Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing. If skin irritation persists, call a physician.
Eye contact:	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
Ingestion:	Do not induce vomiting, seek medical advice immediately.
Symptoms:	See Section 11.
Notes to physician:	Treat symptomatically and supportively. Aspiration may cause pulmonary edema or aspiration pneumonia.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide. In case of fire, keep containers cool with water spray.
Special firefighting procedures:	Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. Wear full protective clothing.
Unusual fire or explosion hazards:	Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors are heavier than air and may travel along floor to an ignition source.

Hazardous combustion products:

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:

Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Ventilate area. Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways.

Clean-up methods:

Absorb spill with inert material. Shovel material into appropriate container for disposal. Dispose of according to Federal, State and local governmental regulations.

7. HANDLING AND STORAGE

Handling:

During use and until all vapors are gone: Keep area ventilated - do not smoke; extinguish all flames, pilot lights, and heaters; turn off stoves, electrical tools and appliances, and any other sources of ignition. Do not cut, grind, weld, or drill on or near this container. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Refer to Section 8. Keep out of the reach of children. Containers should be grounded and bonded to the receiving container.

Storage:

Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Limestone	10 mg/m ³ TWA Total dust.	5 mg/m ³ PEL Respirable fraction. 15 mg/m ³ PEL Total dust.	None	None
Naphtha, petroleum, hydrotreated light	None	None	None	None
Pentaerythritol ester of rosin	None	None	None	None
Kaolin	2 mg/m ³ TWA Respirable fraction.	15 mg/m ³ PEL Total dust. 5 mg/m ³ PEL Respirable fraction.	None	None
CP Styrene, butadiene, divinylbenzene	None	None	None	None
n-Hexane	50 ppm TWA (SKIN)	500 ppm (1,800 mg/m ³) PEL	None	None
Quartz (SiO ₂)	0.025 mg/m ³ TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m ³ TWA Respirable. 0.3 mg/m ³ TWA Total dust.	None	None

Engineering controls:

Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection:	Use a NIOSH approved supplied air respirator with an organic cartridge if the potential to exceed established exposure limits exists.
Eye/face protection:	Safety goggles or safety glasses with side shields.
Skin protection:	Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Paste
Color:	Beige
Odor:	Slightly, mineral-oil-like
Odor threshold:	Not available.
pH:	not applicable
Vapor pressure:	155 mm hg (20 °C (68°F))
Boiling point/range:	57 - 74 °C (134.6 - 165.2 °F) no method
Melting point/ range:	Not available.
Specific gravity:	1.369
Vapor density:	Heavier than air.
Flash point:	-17.80 °C (0.04 °F) no method
Flammable/Explosive limits - lower:	1 %
Flammable/Explosive limits - upper:	7 %
Autoignition temperature:	Not available.
Evaporation rate:	4.4 Greater than butyl acetate., (Butyl acetate = 1)
Solubility in water:	Insoluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	20 %; 280 g/l (calculated)
Viscosity:	280,000 - 400,000 mPa.s
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Carbon dioxide, carbon monoxide and irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.
Incompatible materials:	Strong oxidizing agents.
Reactivity:	Not available.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Inhalation, Skin contact
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Potential Health Effects/Symptoms

Inhalation: Irritates the nose, throat and respiratory system. Exposure to high doses may cause central nervous system depression. Such doses may also cause adverse effects in the liver, kidneys, and lungs. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

Eye contact: Contact with eyes can cause eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Limestone	None	Nuisance dust
Naphtha, petroleum, hydrotreated light	None	Central nervous system, Irritant, Kidney, Lung
Pentaerythritol ester of rosin	None	Irritant
Kaolin	Oral LD50 (RAT) = > 5,000 mg/kg Dermal LD50 (RAT) = > 5,000 mg/kg	Nuisance dust
CP Styrene, butadiene, divinylbenzene	None	No Records
n-Hexane	Oral LD50 (RAT) = 24 mg/kg Oral LD50 (RAT) = 43.5 mg/kg Oral LD50 (RAT) = 28,710 mg/kg Dermal LD50 (RABBIT) = > 2,000 mg/kg Inhalation LC50 (RAT, 4 h) = 73860 ppm	Developmental, Irritant, Lung, Nervous System, Reproductive
Quartz (SiO ₂)	None	Immune system, Lung, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Limestone	No	No	No
Naphtha, petroleum, hydrotreated light	No	No	No
Pentaerythritol ester of rosin	No	No	No
Kaolin	No	No	No
CP Styrene, butadiene, divinylbenzene	No	No	No
n-Hexane	No	No	No
Quartz (SiO ₂)	Known To Be Human Carcinogen.	Group 1	No

12. ECOLOGICAL INFORMATION

Ecological information: None expected.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal:	Dispose of according to Federal, State and local governmental regulations.
Hazardous waste number:	It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24. If discarded, this product is considered a RCRA ignitable waste, D001.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name:	Adhesives
Hazard class or division:	3
Identification number:	UN 1133
Packing group:	II

International Air Transportation (ICAO/IATA)

Proper shipping name:	Adhesives
Hazard class or division:	3
Identification number:	UN 1133
Packing group:	II

Water Transportation (IMO/IMDG)

Proper shipping name:	ADHESIVES
Hazard class or division:	3
Identification number:	UN 1133
Packing group:	II

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification:	None above reporting de minimis
CERCLA/SARA Section 302 EHS:	None above reporting de minimis
CERCLA/SARA Section 311/312:	Immediate Health, Delayed Health, Fire
CERCLA/SARA Section 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). n-Hexane (CAS# 110-54-3).
California Proposition 65:	This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
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16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

Issue date: 10/10/2014

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Revision Number: 001.2

Issue date: 10/10/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: OSI F-38 Drywall and Panel Adhesive **IDH number:** 1630096
Product type: Assembly adhesive, solvent
Restriction of Use: None identified **Region:** United States
Company address: **Contact information:**
 Henkel Corporation Telephone: (860) 571-5100
 One Henkel Way MEDICAL EMERGENCY Phone: Poison Control Center
 Rocky Hill, Connecticut 06067 1-877-671-4608 (toll free) or 1-303-592-1711
 TRANSPORT EMERGENCY Phone: CHEMTREC
 1-800-424-9300 (toll free) or 1-703-527-3887
 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: ABRASION COULD RELEASE RESPIRABLE PARTICLES OF SILICA QUARTZ, A CANCER HAZARD BY INHALATION. NORMAL USE OF THIS PRODUCT CAUSES NO SUCH RELEASE.

HIGHLY FLAMMABLE LIQUID AND VAPOR.
 CAUSES SKIN IRRITATION.
 CAUSES SERIOUS EYE IRRITATION.
 MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	2
SKIN IRRITATION	2
EYE IRRITATION	2A
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

PICTOGRAM(S)



Precautionary Statements

Prevention:

Keep away from heat, sparks, open flames, hot surfaces - no smoking. Keep container tightly closed. No release into water. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing vapors, mist, or spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and face protection.

Response:

If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Call a poison control center or physician if you feel unwell. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.

Storage:

Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.

Disposal:

Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Limestone	1317-65-3	30 - 60
Acetone	67-64-1	10 - 30
Kaolin	1332-58-7	10 - 30
Methyl acetate	79-20-9	1 - 5
Titanium dioxide	13463-67-7	0.1 - 1
Quartz (SiO ₂)	14808-60-7	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	If inhaled, immediately remove the affected person to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.
Skin contact:	Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing.
Eye contact:	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
Ingestion:	Do not induce vomiting, seek medical advice immediately.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Foam, dry chemical or carbon dioxide. In case of fire, keep containers cool with water spray.
Special firefighting procedures:	Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode. Wear full protective clothing.
Unusual fire or explosion hazards:	Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors are heavier than air and may travel along floor to an ignition source.

Hazardous combustion products:

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:

Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Ventilate area. Do not allow product to enter sewer or waterways.

Clean-up methods:

Use noncombustible absorbent material such as sand. Use non-sparking tools for clean-up. Absorb spill with inert material. Shovel material into appropriate container for disposal. Wear suitable protective clothing, gloves and eye/face protection.

7. HANDLING AND STORAGE

Handling:

Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers. Use only in well-ventilated areas. Keep out of the reach of children.

Storage:

Keep away from heat, spark and flame. Keep containers closed when not in use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Limestone	10 mg/m3 TWA Total dust.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust.	None	None
Acetone	750 ppm STEL 500 ppm TWA	1,000 ppm (2,400 mg/m3) PEL	None	None
Kaolin	2 mg/m3 TWA Respirable fraction.	15 mg/m3 PEL Total dust. 5 mg/m3 PEL Respirable fraction.	None	None
Methyl acetate	200 ppm TWA 250 ppm STEL	200 ppm (610 mg/m3) PEL	None	None
Titanium dioxide	10 mg/m3 TWA	15 mg/m3 PEL Total dust.	None	None
Quartz (SiO ₂)	0.025 mg/m3 TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	None

Engineering controls:

Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection:

If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.

Eye/face protection:

Safety goggles or safety glasses with side shields.

Skin protection:

Chemical resistant, impermeable gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Paste
Color:	Tan
Odor:	Strong, Solvent
Odor threshold:	Not available.
pH:	7
Vapor pressure:	Not available.
Boiling point/range:	56 - 57 °C (132.8 - 134.6 °F)
Melting point/ range:	< 0 °C (< 32°F)
Specific gravity:	1.39
Vapor density:	2.0
Flash point:	-17 °C (1.4 °F)
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Evaporation rate:	14.4
Solubility in water:	Slightly soluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	0.25 %; 7.5 g/l (by weight, calculated using CARB method; g/L less water, less exempts calculated using SCAQMD method)
Viscosity:	270,000 mPa.s
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Incompatible materials:	Strong oxidizing agents.
Reactivity:	Not available.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Inhalation, Skin contact

Potential Health Effects/Symptoms

Inhalation: Irritates the nose, throat and respiratory system. Exposure to high doses may cause central nervous system depression. Such doses may also cause adverse effects in the liver, kidneys, and lungs. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Skin contact: Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

Eye contact: Contact with eyes can cause eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Limestone	None	Nuisance dust
Acetone	Oral LD50 (RABBIT) = 5,340 mg/kg Oral LD50 (RAT) = 5,800 mg/kg Oral LD50 (RAT) = 9,800 mg/kg Dermal LD50 (RABBIT) = 20,000 mg/kg Inhalation LC50 (RAT, 8 h) = 50.1 mg/l Inhalation LC50 (RAT, 4 h) = 76 mg/l	Blood, Central nervous system, Irritant, Reproductive
Kaolin	Oral LD50 (RAT) = > 5,000 mg/kg Dermal LD50 (RAT) = > 5,000 mg/kg	Nuisance dust
Methyl acetate	Oral LD50 (RABBIT) = 3.7 g/kg	Blood, Central nervous system, Eyes, Irritant
Titanium dioxide	None	Irritant, Respiratory, Some evidence of carcinogenicity
Quartz (SiO ₂)	None	Immune system, Lung, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Limestone	No	No	No
Acetone	No	No	No
Kaolin	No	No	No
Methyl acetate	No	No	No
Titanium dioxide	No	Group 2B	No
Quartz (SiO ₂)	Known To Be Human Carcinogen.	Group 1	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Adhesives
Hazard class or division: 3
Identification number: UN 1133
Packing group: II
DOT Hazardous Substance(s): Acetone

International Air Transportation (ICAO/IATA)

Proper shipping name: Adhesives
Hazard class or division: 3
Identification number: UN 1133
Packing group: II

Water Transportation (IMO/IMDG)

Proper shipping name: ADHESIVES
Hazard class or division: 3
Identification number: UN 1133
Packing group: II

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Fire, Immediate Health, Delayed Health
CERCLA/SARA Section 313: None above reporting de minimis

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist
Issue date: 10/10/2014

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Franklin International

Material Safety Data Sheet

GREENchoice Drywall Adhesive

1. Product and company identification

CAS #	: mixture
Address	: Franklin International 2020 Bruck Street Columbus OH 43207
Contact person	: Franklin Technical Services
Telephone	: (800) 877-4583
<u>In case of emergency</u>	: Franklin Security (614) 445-1300
Reference number	: 3620
Product code	: 7272
Date of revision	: 5/10/2013.
Print date	: 5/10/2013.
Chemtrec (24 Hour)	: (800) 424 - 9300
Chemtrec International	: (703) 527 - 3887
Chemical family	: Adhesive.
Product use	: construction adhesive solvent free

2. Hazards identification

Emergency overview

Physical state	: Liquid. [Paste.]
Color	: Beige.
Hazard statements	: MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
Precautionary measures	: Avoid breathing vapor or mist. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Wash thoroughly after handling.

OSHA/HCS status	: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
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Routes of entry	: Eye contact. Inhalation. Ingestion.
------------------------	---------------------------------------

Potential acute health effects

Inhalation	: Slightly irritating to the respiratory system. Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.
Ingestion	: No known significant effects or critical hazards.
Skin	: Slightly irritating to the skin. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Eyes	: Slightly irritating to the eyes. This product may irritate eyes upon contact.

Potential chronic health effects

Chronic effects	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.

2. Hazards identification

- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : Contains material which may cause damage to the following organs: skin, eyes.
- Over-exposure signs/symptoms**
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Ingestion** : No specific data.
- Skin** : Adverse symptoms may include the following:
irritation
redness
- Eyes** : Adverse symptoms may include the following:
irritation
watering
redness
- Medical conditions aggravated by over-exposure** : None known.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
oxydipropyl dibenzoate	27138-31-4	1 - 5
propane-1,2-diol	57-55-6	1 - 5

Canada

Name	CAS number	%
oxydipropyl dibenzoate	27138-31-4	1 - 5
propane-1,2-diol	57-55-6	1 - 5

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special
propane-1,2-diol	57-55-6	Not available.	1 - 5	-	2	1	0	-
oxydipropyl dibenzoate	27138-31-4	Not available.	1 - 5	-	2	0	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

4. First aid measures

- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Small spill** : Stop leak if without risk. Move containers from spill area. Dispose of via a licensed waste disposal contractor. Absorb with an inert material.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Do not store below the following temperature: 4.4444°C (40°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
propane-1,2-diol	AIHA WEEL (United States, 10/2011). TWA: 10 mg/m ³ 8 hour(s).

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	Notations
propane-1,2-diol	ON 7/2010	-	10	-	-	-	-	-	-	-	[a]
		50	155	-	-	-	-	-	-	-	[b]
	US AIHA 10/2011	-	10	-	-	-	-	-	-	-	

Form: [a]Aerosol only. [b]Vapour and aerosol.

Mexico

Occupational exposure limits

No exposure limit value known.

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

9. Physical and chemical properties

Physical state	: Liquid. [Paste.]
Flash point	: Closed cup: >93.333°C (>200°F) [Setaflash.]
Color	: Beige.
pH	: 7
Boiling/condensation point	: 100°C (212°F)
Relative density	: 1.42
Volatility	: 26% (w/w)

9. Physical and chemical properties

Evaporation rate	: <1 (butyl acetate = 1)
VOC (less water, less exempt solvents)	: 3 g/l

10. Stability and reactivity

Chemical stability	: The product is stable.
Conditions to avoid	: No specific data.
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.
Incompatibility	: Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
propane-1,2-diol	LD50 Dermal	Rabbit	20800 mg/kg	-
	LD50 Oral	Rat	20 g/kg	-
oxydipropyl dibenzoate	LD50 Oral	Rat	3295 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
propane-1,2-diol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Child	-	96 hours 30 Percent continuous	-
	Skin - Mild irritant	Human	-	168 hours 500 milligrams	-
	Skin - Moderate irritant	Human	-	72 hours 104 milligrams Intermittent	-
	Skin - Mild irritant	Woman	-	96 hours 30 Percent	-

Conclusion/Summary

Skin	: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Eyes	: This product may irritate eyes upon contact.
Respiratory	: Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

11. Toxicological information

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
propane-1,2-diol	LD50 Dermal	Rabbit	20800 mg/kg	-
	LD50 Oral	Rat	20 g/kg	-
oxydipropyl dibenzoate	LD50 Oral	Rat	3295 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
propane-1,2-diol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Child	-	96 hours 30 Percent continuous	-
	Skin - Mild irritant	Human	-	168 hours 500 milligrams	-
	Skin - Moderate irritant	Human	-	72 hours 104 milligrams Intermittent	-
	Skin - Mild irritant	Woman	-	96 hours 30 Percent	-

Conclusion/Summary

Skin

: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Eyes

: This product may irritate eyes upon contact.

Respiratory

: Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Mexico

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
propane-1,2-diol	LD50 Dermal	Rabbit	20800 mg/kg	-
	LD50 Oral	Rat	20 g/kg	-
oxydipropyl dibenzoate	LD50 Oral	Rat	3295 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

11. Toxicological information

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
-	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Child	-	96 hours 30 Percent continuous	-
	Skin - Mild irritant	Human	-	168 hours 500 milligrams	-
	Skin - Moderate irritant	Human	-	72 hours 104 milligrams Intermittent	-
	Skin - Mild irritant	Woman	-	96 hours 30 Percent	-

Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : This product may irritate eyes upon contact.
- Respiratory** : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
propane-1,2-diol	Acute EC50 >1000 mg/L Fresh water	Daphnia - Daphnia magna - <24 hours	48 hours
	Acute LC50 1000 mg/L Marine water	Crustaceans - Chaetogammarus marinus - Young - 5 mm	48 hours
	Acute LC50 710000 ug/L Fresh water	Fish - Pimephales promelas - <=7 days	96 hours

Persistence/degradability

No known significant effects or critical hazards.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure

12. Ecological information

propane-1,2-diol	Acute EC50 >1000 mg/L Fresh water	Daphnia - Daphnia magna - <24 hours	48 hours
	Acute LC50 1000 mg/L Marine water	Crustaceans - Chaetogammarus marinus - Young - 5 mm	48 hours
	Acute LC50 710000 ug/L Fresh water	Fish - Pimephales promelas - <=7 days	96 hours

Persistence/degradability

No known significant effects or critical hazards.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
propane-1,2-diol	Acute EC50 >1000 mg/L Fresh water	Daphnia - Daphnia magna - <24 hours	48 hours
	Acute LC50 1000 mg/L Marine water	Crustaceans - Chaetogammarus marinus - Young - 5 mm	48 hours
	Acute LC50 710000 ug/L Fresh water	Fish - Pimephales promelas - <=7 days	96 hours

No known significant effects or critical hazards.

Persistence/degradability

No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal

: The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-

14. Transport information

IATA-DGR Class	Not regulated.	-	-	-	-
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PG* : Packing group

15. Regulatory information

United States

HCS Classification : Not regulated.

U.S. Federal regulations : **TSCA 4(a) final test rules:** sodium hydroxymethanesulphinate
TSCA 8(a) PAIR: Siloxanes and Silicones, di-Me, reaction products with silica
TSCA 8(a) IUR Exempt/Partial exemption: Not determined

Commerce control list precursor: 2-diethylaminoethanol

United States inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: propane-1,2-diol

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : The following components are listed: PROPYLENE GLYCOL; 1,2-PROPANEDIOL

Pennsylvania : The following components are listed: 1,2-PROPANEDIOL

Canada

WHMIS (Canada) : Not controlled under WHMIS (Canada).

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Canada inventory : At least one component is not listed in DSL but all such components are listed in NDSL.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



15. Regulatory information

International regulations

- International lists** : Australia inventory (AICS): Not determined.
 China inventory (IECSC): Not determined.
 Japan inventory: Not determined.
 Korea inventory: Not determined.
 New Zealand Inventory of Chemicals (NZIoC): Not determined.
 Philippines inventory (PICCS): Not determined.
- Chemical Weapons Convention List Schedule I Chemicals** : Not listed
- Chemical Weapons Convention List Schedule II Chemicals** : Not listed
- Chemical Weapons Convention List Schedule III Chemicals** : Not listed

16. Other information

- Label requirements** : MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
- Hazardous Material Information System (U.S.A.)** :

Health	1
Flammability	1
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

- National Fire Protection Association (U.S.A.)** :



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

- Date of printing** : 5/10/2013.
- Date of issue** : 5/10/2013.
- Date of previous issue** : 5/9/2013.
- Version** : 2.1
- ☑ Indicates information that has changed from previously issued version.

Notice to reader

16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Franklin International

Material Safety Data Sheet

GREENchoice Fast Grab FRP Adhesive

1. Product and company identification

CAS #	: Mixture
Address	: Franklin International 2020 Bruck Street Columbus OH 43207
Contact person	: Franklin Technical Services
Telephone	: (800) 877-4583
<u>In case of emergency</u>	: Franklin Security (614) 445-1300
Reference number	: 3432
Product code	: 4054
Date of revision	: 5/16/2013.
Print date	: 5/16/2013.
Chemtrec (24 Hour)	: (800) 424 - 9300
Chemtrec International	: (703) 527 - 3887
Product use	: Adhesive Solvent Free Adhesive

2. Hazards identification

Emergency overview

Physical state	: Liquid. [Paste.]
Color	: Brown. [Light]
Odor	: Characteristic. [Slight]
Signal word	: WARNING!
Hazard statements	: CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION.
Precautionary measures	: Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Wash thoroughly after handling.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Routes of entry	: Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation	: Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation. Slightly irritating to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: Harmful if swallowed.
Skin	: Slightly irritating to the skin.
Eyes	: Irritating to eyes.

Potential chronic health effects

Chronic effects	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.

2. Hazards identification

- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : May cause damage to the following organs: upper respiratory tract, skin, eyes.
Contains material which may cause damage to the following organs: eye, lens or cornea.

Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Ingestion** : No specific data.
- Skin** : Adverse symptoms may include the following:
irritation
redness
- Eyes** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Medical conditions aggravated by over-exposure** : None known.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
oxydipropyl dibenzoate	27138-31-4	1 - 5
urea	57-13-6	1 - 5

Canada

Name	CAS number	%
oxydipropyl dibenzoate	27138-31-4	1 - 5
urea	57-13-6	1 - 5
ethanediol	107-21-1	0.5 - 1

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special
urea	57-13-6	Not available.	1 - 5	-	2	0	0	-
oxydipropyl dibenzoate	27138-31-4	Not available.	1 - 5	-	2	0	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

4. First aid measures

- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Small spill** : Stop leak if without risk. Move containers from spill area. Dispose of via a licensed waste disposal contractor. Absorb with an inert material.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

7. Handling and storage

Storage : Do not store below the following temperature: 0°C (32°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
urea	AIHA WEEL (United States, 10/2011). TWA: 10 mg/m ³ 8 hour(s).

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	Notations
ethanediol	US ACGIH 3/2012	-	-	-	-	-	-	-	100	-	[a]
	AB 4/2009	-	-	-	-	-	-	-	100	-	[3] [b]
	BC 4/2012	-	-	-	-	-	-	-	100	-	[a]
		-	10	-	-	20	-	-	-	-	[c]
		-	-	-	-	-	-	50	-	-	[d]
urea	ON 7/2010	-	-	-	-	-	-	-	100	-	[b]
	QC 9/2011	-	-	-	50	127	-	-	-	-	[e]
	US AIHA 10/2011	-	10	-	-	-	-	-	-	-	

[3]Skin sensitization

Form: [a]Aerosol [b]aerosol [c]Particulate [d]Vapour [e]vapour and mist

Mexico

Occupational exposure limits

No exposure limit value known.

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

8. Exposure controls/personal protection

- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

9. Physical and chemical properties

- Physical state** : Liquid. [Paste.]
- Flash point** : Closed cup: >93.3°C (>199.9°F) [Setaflash.]
- Color** : Brown. [Light]
- Odor** : Characteristic. [Slight]
- pH** : 5
- Boiling/condensation point** : 100°C (212°F)
- Relative density** : 1.39
- Volatility** : 33% (w/w)
- Evaporation rate** : <1 (butyl acetate = 1)
- VOC (less water, less exempt solvents)** : 2.6 g/l
- Solubility** : Soluble in the following materials: cold water and hot water.

10. Stability and reactivity

- Chemical stability** : The product is stable.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.
- Incompatibility** : Reactive or incompatible with the following materials: acids and alkalis.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
urea	LD50 Oral	Rat	8471 mg/kg	-
oxydipropyl dibenzoate	LD50 Oral	Rat	3295 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
urea	Skin - Mild irritant	Human	-	72 hours 22 milligrams Intermittent	-
	Skin - Moderate irritant	Human	-	24 hours 20 Percent	-

Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

11. Toxicological information

Eyes : This product may irritate eyes upon contact.

Respiratory : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethanediol	LD50 Oral	Rat	4700 mg/kg	-
oxydipropyl dibenzoate	LD50 Oral	Rat	3295 mg/kg	-
urea	LD50 Oral	Rat	8471 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanediol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	1 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	6 hours 1440 milligrams	-
urea	Skin - Mild irritant	Rabbit	-	555 milligrams	-
	Skin - Mild irritant	Human	-	72 hours 22 milligrams Intermittent	-
	Skin - Moderate irritant	Human	-	24 hours 20 Percent	-

Conclusion/Summary

Skin : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Eyes : This product may irritate eyes upon contact.

Respiratory : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

11. Toxicological information

Mexico

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
urea	LD50 Oral	Rat	8471 mg/kg	-
oxydipropyl dibenzoate	LD50 Oral	Rat	3295 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
-	Skin - Mild irritant	Human	-	72 hours 22 milligrams Intermittent	-
-	Skin - Moderate irritant	Human	-	24 hours 20 Percent	-

Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : This product may irritate eyes upon contact.
- Respiratory** : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
urea	Acute EC50 3910000 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 1000 mg/L Marine water	Crustaceans - Chaetogammarus marinus - Young - 5 mm	48 hours
	Acute LC50 5000 ug/L Fresh water	Fish - Colisa fasciata - Fingerling	96 hours

Persistence/degradability

No known significant effects or critical hazards.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure

12. Ecological information

ethanediol	Acute LC50 100000 ug/L Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 10000000 ug/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 8050000 ug/L Fresh water	Fish - Pimephales promelas - <=7 days	96 hours
urea	Acute EC50 3910000 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 1000 mg/L Marine water	Crustaceans - Chaetogammarus marinus - Young - 5 mm	48 hours
	Acute LC50 5000 ug/L Fresh water	Fish - Colisa fasciata - Fingerling	96 hours

Persistence/degradability

No known significant effects or critical hazards.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
urea	Acute EC50 3910000 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 1000 mg/L Marine water	Crustaceans - Chaetogammarus marinus - Young - 5 mm	48 hours
	Acute LC50 5000 ug/L Fresh water	Fish - Colisa fasciata - Fingerling	96 hours

No known significant effects or critical hazards.

Persistence/degradability

No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal

: The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-	-	-
TDG Classification	Not regulated.	-	-	-	-	-
Mexico Classification	Not regulated.	-	-	-	-	-
ADR/RID Class	Not regulated.	-	-	-	-	-

14. Transport information

IMDG Class	Not regulated.	-	-	-	-	-
IATA-DGR Class	Not regulated.	-	-	-	-	-

PG* : Packing group

15. Regulatory information

United States

- HCS Classification** : Irritating material
U.S. Federal regulations : **TSCA 4(a) final test rules:** sodium hydroxymethanesulphinate; acetaldehyde
TSCA 8(a) PAIR: acetaldehyde
TSCA 8(a) IUR Exempt/Partial exemption: Not determined

Commerce control list precursor: 2-diethylaminoethanol

United States inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: No products were found.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

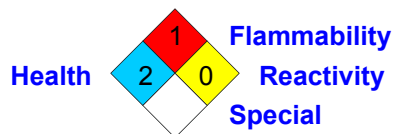
Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :

15. Regulatory information



International regulations

International lists : Australia inventory (AICS): Not determined.
 China inventory (IECSC): Not determined.
 Japan inventory: Not determined.
 Korea inventory: Not determined.
 New Zealand Inventory of Chemicals (NZIoC): Not determined.
 Philippines inventory (PICCS): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION.

Hazardous Material Information System (U.S.A.) :

Health	1
Flammability	1
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of printing : 5/16/2013.

16. Other information

Date of issue : 5/16/2013.

Date of previous issue : 2/13/2013.

Version : 2

✔ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Goof Off Professional Strength VOC Compliant	
Company Name:	W. M. Barr 2105 Channel Avenue Memphis, TN 38113	Phone Number: (901)775-0100
Web site address:	www.wmbarr.com	
Emergency Contact Information:	3E 24 Hour Emergency Contact W.M. Barr Customer Service	(800)451-8346 (800)398-3892
Product Category:	General Purpose Adhesive Remover	
Intended Use:	Mult-Purpose Remover for tar, ink, paint, adhesive, etc.	
Synonyms:	FG603, FG603BULK, FG612, FG650, FG650SK, FG651, FG651BULK, FG651BULK2, FG651BULK3, FG653, FG653B, FG653BBLK, FG654, FG654BWS, FG655B, FG655BUL, FG655BWS, FG657, FG683, FG690, FG750, 2410B.3, FG650LWS, FG650LDS	

2. HAZARDS IDENTIFICATION

Flammable Liquids, Category 2
Skin Corrosion/Irritation, Category 2
Serious Eye Damage/Eye Irritation, Category 2A
Target Organ Systemic Toxicity (single exposure), Category 3
Carcinogenicity, Category 1B



GHS Signal Word: **Danger**

GHS Hazard Phrases: H225: Highly flammable liquid and vapor.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
H350: May cause cancer.

GHS Precaution Phrases: P233: Keep container tightly closed.
P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P243: Take precautionary measures against static discharge.
P242: Use only non-sparking tools.
P264: Wash hands thoroughly after handling.
P362+364: Take off contaminated clothing and wash it before reuse.
P261: Avoid breathing gas/mist/vapours/spray.
P271: Use only outdoors or in a well-ventilated area.
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.

GHS Response Phrases: P370+378: In case of fire, use dry chemical powder to extinguish.
P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P302+352: IF ON SKIN: Wash with plenty of soap and water.
P321: Specific treatment see label.

Goof Off Professional Strength VOC Compliant

Printed: 10/28/2014

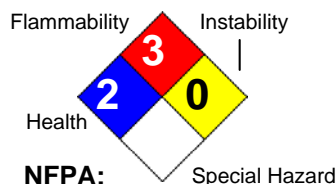
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Supersedes Revision: 08/06/2014

P332+313: If skin irritation occurs, get medical advice/attention.
 P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+313: If eye irritation persists, get medical advice/attention.
 P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P312: Call a POISON CENTER/doctor if you feel unwell.
 P308+313: IF exposed or concerned: Get medical attention/advice.
 P403+235: Store in cool/well-ventilated place.
 P501: Dispose of contents/container according to local, state and federal regulations.
 P403+233: Store container tightly closed in well-ventilated place - if product is as volatile as to generate hazardous atmosphere.
 P405: Store locked up.

GHS Storage and Disposal Phrases:**Hazard Rating System:**

HEALTH	*	2
FLAMMABILITY		3
PHYSICAL		0
PPE		X

**HMIS:****OSHA Regulatory Status:**

This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic):

This product has not been tested as a whole to determine health effects. The health effects listed below are associated with the individual ingredients listed in Section 3.

INHALATION:

High vapor concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, loss of consciousness and even death). Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal.

EYES:

High vapor concentrations may cause irritation of the eyes. Causes eye irritation.

SKIN:

Prolonged or repeated contact may cause drying, cracking, or irritation.

INGESTION:

Harmful or fatal if swallowed. Pulmonary aspiration hazard. Ingestion may cause nausea, vomiting, diarrhea and inflammation of the lungs. Irritating to the throat, mouth, and stomach. May produce central nervous system effects, which include dizziness, loss of balance and coordination, unconsciousness, coma and even death.

CHRONIC OVEREXPOSURE EFFECTS:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal. Overexposure may cause liver and kidney injury.

TARGET ORGANS: liver, kidneys, central nervous system

PRIMARY ROUTES OF ENTRY: inhalation, ingestion, absorption

Medical Conditions Generally Aggravated By Exposure:

The following diseases or disorders may be aggravated by exposure to this product: skin, eye, liver, kidney, nervous system, respiratory system

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration	RTECS #
67-64-1	Acetone {2-Propanone}	83.0 %	AL3150000
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	13.6 %	ZE2100000
100-41-4	Ethylbenzene {Ethylbenzol; Phenylethane}	3.4 %	DA0700000

4. FIRST AID MEASURES

Emergency and First Aid Procedures:

Skin:
 Immediately begin washing the skin thoroughly with large amounts of water and mild soap, if available, while removing contaminated clothing. Seek medical attention if irritation persists.

Eyes:
 Immediately begin to flush eyes with water, remove any contact lens. Continue to flush the eyes for at least 15 minutes, then seek immediate medical attention.

Inhalation:
 Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

Ingestion:
 If swallowed, do NOT induce vomiting. Seek immediate medical attention. Call a physician, hospital emergency room, or poison control center immediately. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than hips to prevent aspiration.

Signs and Symptoms Of Exposure:

See Potential Health Effects.

Note to Physician:

Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

Flash Pt: NFPA Class IB
 -4.00 F Method Used: Setaflash Closed Cup (Rapid Setaflash)

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: No data.

Suitable Extinguishing Media: Carbon dioxide, dry chemical, foam and/or water fog.

Unsuitable Extinguishing Media: None known.

Fire Fighting Instructions: Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards: Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, sparks, flame, and other ignition sources distant from material handling point.

6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled: Vapors may cause flash fire or ignite explosively.

Clean up: Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area. Use non-sparking tools. Use proper bonding and grounding methods for all equipment and processes. Keep out of waterways and bodies of water. Be cautious of vapors collecting in small enclosed spaces, sewers, low lying areas, confined spaces, etc.

Small spills: Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills: Dike far ahead of spill for later disposal.

Waste Disposal: Dispose in accordance with applicable local, state and federal regulations.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling: Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Do not use this product near any source of heat or open flame, furnace areas, pilot lights, stoves, etc.

Do not use in small enclosed spaces, such as basements and bathrooms. Vapors can accumulate and explode if ignited.

Do not spread this product over large surface areas because fire and health safety risks will increase dramatically.

Precautions To Be Taken in Storing: Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

Other Precautions: Keep away from heat, sparks and open flame. No smoking.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
67-64-1	Acetone {2-Propanone}	PEL: 1000 ppm	TLV: 500 ppm STEL: 750 ppm	No data.
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	PEL: 100 ppm	TLV: 100 ppm STEL: 150 ppm	No data.
100-41-4	Ethylbenzene {Ethylbenzol; Phenylethane}	PEL: 100 ppm	TLV: 100 ppm STEL: 125 ppm	No data.

Respiratory Equipment (Specify Type):	If exposure cannot be controlled below applicable limits, use the appropriate NIOSH approved respirator such as an air purifying respirator with organic vapor cartridge. Consult the respirator manufacturer's literature to ensure that the respirator will provide adequate protection. Read and follow all respirator manufacturer's instructions.
Eye Protection:	Chemical goggles, also wear a face shield if a splashing hazard exists.
Protective Gloves:	Appropriate chemical resistant gloves should be worn, such as nitrile rubber. Wear gloves with as much resistance to the chemical ingredients as possible. Other glove materials may provide protection. Glove selection should be based on chemicals being used and conditions of use. Consult your glove supplier for additional information. Gloves contaminated with product should be discarded and not reused.
Other Protective Clothing:	To prevent skin contact wear protective clothing covering all exposed areas. Various application methods can dictate the use of additional protective safety equipment, such as impermeable aprons to minimize exposure.
Engineering Controls (Ventilation etc.):	Use only in well-ventilated areas. Ensure adequate ventilation, especially in confined areas. Where the product is used in a hazardous classified area, use explosion-proof electrical/ventilating/lighting/equipment.
Work/Hygienic/Maintenance Practices:	Wash hands thoroughly after use and before eating, drinking, smoking, or using the restroom. Do not eat, drink, or smoke in the work area. Discard any clothing or other protective equipment that cannot be decontaminated. Facilities storing or handling this material should be equipped with an emergency eyewash and safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States:	[] Gas [X] Liquid [] Solid
Appearance and Odor:	Water white, free and clear.
Melting Point:	No data.
Boiling Point:	150.00 F
Autoignition Pt:	No data.
Flash Pt:	-4.00 F Method Used: Setaflash Closed Cup (Rapid Setaflash)
Explosive Limits:	LEL: No data. UEL: No data.
Specific Gravity (Water = 1):	0.797 - 0.8021
Density:	6.65 LB/GL
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	> 1
Evaporation Rate:	> 1
Solubility in Water:	Slight
Viscosity:	< 5 cps
Percent Volatile:	100.0 % by weight.
VOC / Volume:	20.0000 % WT

Additional Physical Information VOC (g/L): 161 g/L max

10. STABILITY AND REACTIVITY

Stability: Unstable [] Stable [X]
Conditions To Avoid - Instability: No data available.
Incompatibility - Materials To Avoid: Strong oxidizing agents.
Hazardous Decomposition Or Byproducts: Carbon monoxide, carbon dioxide.
Possibility of Hazardous Reactions: Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions: No data available.

11. TOXICOLOGICAL INFORMATION

Toxicological Information: This product has not been tested as a whole. Information below will be for individual ingredients.

Chronic Toxicological Effects:

CAS# 67-64-1:
Standard Draize Test, Eyes, Species: Rabbit, 20.00 MG, Severe.
Result:
Behavioral: Change in motor activity (specific assay).
Behavioral: Alteration of classical conditioning.
- American Journal of Ophthalmology., Ophthalmic Pub. Co., 435 N. Michigan Ave., Suite 1415, Chicago, IL 60611, Vol/p/yr: 29,1363, 1946

CAS# 1330-20-7:
Standard Draize Test, Skin, Species: Rabbit, 100.0 %, Moderate.
Result:
Specific Developmental Abnormalities: Craniofacial (including nose and tongue).
- AMA Archives of Industrial Health., For publisher information, see AEHLAU, Chicago, IL, Vol/p/yr: 14,387, 1956

Standard Draize Test, Eyes, Species: Rabbit, 5.000 MG, 24 H, Severe.
Result:
Behavioral: General anesthetic.
Behavioral: Somnolence (general depressed activity).
Behavioral: Irritability.
- "Sbornik Vysledku Toxilogickeho Vysetreni Latek A Pripravku," , Institut Pro Vychovu Vedoucicn P, Marhold, J.V., Institut Pro Vychovu Vedoucicn, Pracovniku Chemickeho, Prumyclu Praha Czechoslovakia, Vol/p/yr: -,24, 1972

Carcinogenicity/Other Information: ACGIH A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
ACGIH A4 - Not Classifiable as a Human Carcinogen
IARC 2B - Possibly Carcinogenic to Humans
IARC 3: Not Classifiable as to Carcinogenicity in Humans.

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CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
67-64-1	Acetone {2-Propanone}	n.a.	n.a.	A4	n.a.
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	n.a.	3	A4	n.a.
100-41-4	Ethylbenzene {Ethylbenzol; Phenylethane}	n.a.	2B	A3	n.a.

12. ECOLOGICAL INFORMATION

General Ecological Information: This product has not been tested as a whole. Information below will be for individual ingredients.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of waste at an approved hazardous waste treatment/disposal facility in accordance with applicable local, provincial and federal regulations.

Do not place material in general trash.

Do not allow material to enter bodies of water or sewers.

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Paint Related Material

DOT Hazard Class: 3 FLAMMABLE LIQUID

UN/NA Number: UN1263 **Packing Group:** II



LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Paint Related Material

Additional Transport Information: The shipper/supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

15. REGULATORY INFORMATION

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

<input checked="" type="checkbox"/> Yes [] No	Acute (immediate) Health Hazard
<input checked="" type="checkbox"/> Yes [] No	Chronic (delayed) Health Hazard
<input checked="" type="checkbox"/> Yes [] No	Fire Hazard
[] Yes <input checked="" type="checkbox"/> No	Sudden Release of Pressure Hazard
[] Yes <input checked="" type="checkbox"/> No	Reactive Hazard

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
67-64-1	Acetone {2-Propanone}	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory, 4 Test; CA PROP.65: No
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	CAA HAP,ODC: HAP; CWA NPDES: Yes; TSCA: Yes - Inventory; CA PROP.65: No
100-41-4	Ethylbenzene {Ethylbenzol; Phenylethane}	CAA HAP,ODC: HAP; CWA NPDES: Yes; TSCA: Yes - Inventory, 4 Test; CA PROP.65: Yes

Regulatory Information:

Regulatory Information Statement: All components of this material are listed on the TSCA Inventory or are exempt.

16. OTHER INFORMATION

Revision Date: 10/28/2014
Preparer Name: W.M. Barr EHS Dept (901)775-0100

Additional Information About This Product: No data available.

Company Policy or Disclaimer: The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.



Material Safety Data Sheet

1 - Chemical Product and Company Identification

Manufacturer: WD-40 Company Address: 1061 Cudahy Place (92110) P.O. Box 80607 San Diego, California, USA 92138 -0607 Telephone: Emergency only: 1-888-324-7596 (PROSAR) Information: 1-888-324-7596 Chemical Spills: 1-800-424-9300 (Chemtrec) 1-703-527-3887 (International Calls)	Chemical Name: Organic Mixture Trade Name: WD-40 Aerosol NOT FOR SALE IN CALIFORNIA Product Use: Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion MSDS Date Of Preparation: 6/8/12
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2 – Hazards Identification

Emergency Overview: DANGER! Flammable aerosol. Contents under pressure. Harmful or fatal if swallowed. If swallowed, may be aspirated and cause lung damage. May cause eye irritation. Avoid eye contact. Use with adequate ventilation. Keep away from heat, sparks and all other sources of ignition. Symptoms of Overexposure: Inhalation: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal. Skin Contact: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis. Eye Contact: Contact may be irritating to eyes. May cause redness and tearing. Ingestion: This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death. Chronic Effects: None expected. Medical Conditions Aggravated by Exposure: Preexisting eye, skin and respiratory conditions may be aggravated by exposure. Suspected Cancer Agent: Yes No X
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3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent
Aliphatic Hydrocarbon	64742-47-8	45-50
Petroleum Base Oil	64742-58-1 64742-53-6 64742-56-9 64742-65-0	<25
LVP Aliphatic Hydrocarbon	64742-47-8	12-18
Carbon Dioxide	124-38-9	2-3
Non-Hazardous Ingredients	Mixture	<10

4 – First Aid Measures

Ingestion (Swallowed): Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately. Eye Contact: Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.
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Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.
Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

5 – Fire Fighting Measures

Extinguishing Media: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.
Special Fire Fighting Procedures: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.
Unusual Fire and Explosion Hazards: Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

6 – Accidental Release Measures

Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area. Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

7 – Handling and Storage

Handling: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.
Storage: Store in a cool, well-ventilated area, away from incompatible materials Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m3 TWA, 10 mg/m3 STEL ACGIH TLV 5 mg/m3 TWA OSHA PEL
LVP Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA (OSHA/ACGIH), 30,000 ppm STEL (ACGIH)
Non-Hazardous Ingredients	None Established

The Following Controls are Recommended for Normal Consumer Use of this Product

Engineering Controls: Use in a well-ventilated area.
Personal Protection:
Eye Protection: Avoid eye contact. Always spray away from your face.
Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.
Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended

Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.
Personal Protection:

Eye Protection: Safety goggles recommended where eye contact is possible.
Skin Protection: Wear chemical resistant gloves.
Respiratory Protection: None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.
Work/Hygiene Practices: Wash with soap and water after handling.

9 – Physical and Chemical Properties

Boiling Point:	361 - 369°F (183 - 187°C)	Specific Gravity:	0.8 – 0.82 @ 60°F
Solubility in Water:	Insoluble	pH:	Not Applicable
Vapor Pressure:	95-115 PSI @ 70°F	Vapor Density:	Greater than 1
Percent Volatile:	<50%	VOC:	412 grams/liter (49.5%)
Coefficient of Water/Oil Distribution:	Not Determined	Appearance/Odor	Light amber liquid/mild odor
Flash Point:	122°F (49°C) Tag Closed Cup (concentrate)	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8.0%
Pour Point:	-63°C (-81.4°F) ASTM D-97	Kinematic Viscosity:	2.79-2.96cSt @ 100°F

10 – Stability and Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur.
Conditions to Avoid: Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.
Incompatibilities: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

11 – Toxicological Information

The oral toxicity of this product is estimated to be greater than 5,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard. None of the components of this product is listed as a carcinogen or suspected carcinogen or is considered a reproductive hazard.

12 – Ecological Information

No data is currently available.

13 - Disposal Considerations

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Dispose in accordance with federal, state, and local regulations.

14 – Transportation Information

DOT Surface Shipping Description: Consumer Commodity, ORM-D
 After 1/1/2014 UN1950, Aerosols, 2.1 Ltd. Qty (Note: Shipping Papers are not required for Limited Quantities unless transported by air or vessel – each package must be marked with the Limited Quantity Mark)
 IMDG Shipping Description: UN1950, Aerosols, 2.1, LTD QTY

ICAO Shipping Description: UN1950, Aerosols, flammable, 2.1 NOTE: WD-40 does not test aerosol cans to assure that they meet the pressure and other requirements for transport by air. We do not recommend that our aerosol products be transported by air.

15 – Regulatory Information

U.S. Federal Regulations:

CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA TITLE III:

Hazard Category For Section 311/312: Acute Health, Fire Hazard, Sudden Release of Pressure

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III

Section 313 Reporting requirements: None

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not contain chemicals regulated under California Proposition 65.

VOC Regulations: This product complies with the consumer product VOC limits of CARB, the US EPA and states adopting the OTC VOC rules.

Canadian Environmental Protection Act: One of the components is listed on the NDSL. All of the other ingredients are listed on the Canadian Domestic Substances List or exempt from notification.

Canadian WHMIS Classification: Class B-5 (Flammable Aerosol)

This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

16 – Other Information:

HMIS Hazard Rating:

Health – 1 (slight hazard), Fire Hazard – 4 (severe hazard), Reactivity – 0 (minimal hazard)

Prepared by: Industrial Health and Safety Consultants, Shelton, CT

SIGNATURE: _____ *JK* _____

TITLE: Regulatory Affairs Manager

REVISION DATE: June 2012

SUPERSEDES: March 2010

**MATERIAL SAFETY DATA SHEET**

Product identifier: Spray Lubricant
Product description / use: Petroleum derivatives / Spray lubricant for cleaning Hilti powder actuated tools
Supplier: Hilti (Canada) Corporation, 2360 Meadowpine Blvd., Mississauga, Ontario L5N 6S2
Originator: Hilti, Inc., P. O. Box 21148, Tulsa, Oklahoma, USA 74121
Emergency phone number: Chem-Trec: 1 800 424 9300

INGREDIENTS INFORMATION

Ingredient	CAS Number	% (wt.)	LC ₅₀ , (rat)	LD ₅₀ (rat)	TLV	STEL
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Not a hazardous chemical as defined by the Controlled Products Regulations SOR/88-66

PHYSICAL PROPERTIES

Appearance / Physical state:	Clear liquid.	Odour:	Mild oil-like odour.
Specific gravity (at 20°C):	0.94	Odour threshold:	Not determined.
Vapour pressure (at 20°C):	Not applicable.	Vapour density:	Not applicable.
Evaporation rate:	Not determined.	Boiling point:	Not determined.
Freezing point:	Not determined.	pH:	Not determined.
Coefficient of H₂O / oil distrib:	Not determined.	Solubility in water:	Slightly soluble.

FIRE AND EXPLOSION DATA

Flash point / Method:	> 215 C / DIN 53213	Flammable limits:	Not applicable.
Conditions of flammability:	Exposure to direct flame.	Auto-ignition temperature:	Not applicable.
Means of extinction:	CO ₂ , Dry Chemical, Foam.		
Special fire fighting procedures:	None known. A NIOSH-approved self-contained breathing apparatus (SCBA) should be worn when fighting fires involving chemicals.		
Hazardous combustion products:	Normal products of combustion are expected including CO and CO ₂ .		
Sensitivity to mechanical impact / static discharge:	Not susceptible to mechanical impact or to a static discharge.		

REACTIVITY DATA

Stability:	Stable.	Conditions of reactivity:	None known.
Incompatible materials:	Strong oxidizing agents.		
Hazardous decomposition products:	None known. Thermal decomposition can yield oxides of carbon.		

TOXICOLOGICAL PROPERTIES

Routes of exposure:	<input type="checkbox"/> N/Ap <input checked="" type="checkbox"/> Skin contact <input type="checkbox"/> Skin absorption <input checked="" type="checkbox"/> Eye contact <input type="checkbox"/> Inhalation <input type="checkbox"/> Ingestion
Exposure limits:	None established. See "Ingredients" section above.
Acute effects of exposure:	Eyes - Slight irritation is possible. Corneal injury is not expected. Skin - No effects expected. Irritation is possible with some individuals. Inhalation - No effects expected. Ingestion - Not a likely route of exposure. Effects of ingestion have not been determined. Considered to have a low acute oral toxicity.
Chronic effects of exposure:	None known.
Synergistic materials:	None known.

FIRST AID MEASURES

Eyes:	Flush with plenty of water. Call a physician if symptoms occur.
Skin:	Wash with soap and water. Seek medical attention if any effects persist.
Inhalation:	No ill effects expected. Should discomfort occur, move to fresh air.
Ingestion:	Not a likely route of exposure. Do not induce vomiting unless recommended by a physician. Seek medical attention immediately.
Other:	Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure

PREVENTIVE MEASURES

Engineering controls:	General (natural or mechanically induced fresh air movements).
Eye protection:	Safety glasses with side shields are recommended.
Skin protection:	Impermeable gloves recommended.
Respiratory protection:	None normally required.
Other:	No additional measures are normally required.
Handling procedures and equipment:	For industrial use only. Do not heat can or expose to direct flame. Do not get into the eyes. Avoid prolonged or repeated contact with the skin. Practice good hygiene; i.e., wash after using and before eating or smoking.
Storage requirements:	Keep out of reach of children. Store in a cool dry place out of direct rays of the sun. Recommended storage temperature range is between 5° and 30° C.
Spill, leak or release:	Wipe away spilled material with a cloth or other absorbent material. Place in a container for proper disposal in accordance with all applicable local, state, or federal requirements. Do not allow into waterways.
Waste disposal:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, provincial, and federal safety, health and environmental regulations.
Special shipping instructions:	None known.

REGULATORY INFORMATION

WHMIS classification:	Not a controlled product according to WHMIS definitions
HMIS codes:	Health 0, Flammability 0, Reactivity 0, PPE B
TDG shipping name:	Not regulated.

PREPARATION INFORMATION / CONTACTS

Prepared by:	Hilti, Inc., Tulsa, OK USA	Date of Preparation:	Jan. 12,2011	Emergency phone number:	1 800 424 9300
Customer Service:	Hilti (Canada) Corporation, Mississauga, Ontario; 1 800 363 4458				
Health / Safety contacts:	Hilti, Inc., Tulsa, OK USA; 1 800 879 6000, Jerry Metcalf (x1003704)				
Abbreviations used:	N/E = None Established. N/Ap = Not Applicable. N/Av = Not Available. HMIS: Hazardous Materials Identification System				

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.

HILTI POWDER AND GAS FASTENERS AND LUBRICANT

- 1. HILTI – DX POWDER TOOL POWDER SHOT**
- 2. HILTI – GX120 GAS TOOL AEROSOL GAS**
- 3. HILTI – HILTI LUBRICANT**



MATERIAL SAFETY DATA SHEET

Product name: Safety Boosters
Description: 22, 25, and 27 caliber blank cartridges for powder actuated fastening tools
Supplier: Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121; phone 1800 879 8000
Emergency # (Chem-Trec.): 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

INGREDIENTS AND EXPOSURE LIMITS

Ingredients:	CAS Number:	TLV:	PEL:	STEL:
Nitroglycerin	00055-63-0	0.46 mg/m ³ (S)	NE	2 mg/m ³ (S)
Nitrocellulose	09004-70-0	NE	NE	NE
Lead styphnate	15245-44-0	0.05 mg/m ³ *	0.05 mg/m ³ *	NE
Barium nitrate	10022-31-8	0.5 mg/m ³	0.5 mg/m ³	NE
Tetracene	00109-27-3	NE	NE	NE

Abbreviations / Symbols: * exposure limit for metallic lead. **NE** = None Established. **NA** = Not Applicable. **(S)** indicates exposure should be controlled for the cutaneous routes including the mucous membranes, eyes, and skin. Airborne exposures as well as direct contact must be considered.

PHYSICAL DATA

Appearance:	Blank brass cartridges.	Odor:	None.
Vapor Density: (air = 1)	Not applicable.	Vapor Pressure:	Not applicable.
Boiling Point:	Not applicable.	VOC Content:	Not applicable.
Evaporation Rate:	Not applicable.	Solubility in Water:	Not applicable.
Specific Gravity:	Not applicable.	pH:	Not applicable.

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Not applicable.	Flammable Limits:	Not applicable.
Extinguishing Media:	Water.		
Special Fire Fighting Procedures:	Flood area with water or keep cartridges cool with water spray.		
Unusual Fire and Explosion Hazards:	Cartridges can blast if exposed to temperatures > 160°C. Mass detonation will not occur.		

REACTIVITY DATA

Hazardous Polymerization:	Will not occur.	Stability:	Stable.
Incompatibility:	Strong acids and oxidizing agents.		
Decomposition Products:	Oxides of nitrogen, oxides of carbon, acrid fumes and lead oxide.		
Conditions to Avoid:	Acids, excessive heat, crushing, and electrical currents.		

HEALTH HAZARD DATA

Known Hazards:	OSHA has established an action level of 0.03 mg/m ³ for lead. Exposures that exceed recommended limits for lead may be possible under certain conditions such as excessive firing with little air movement and/or firing in small enclosed work areas. Chronic (long-term) overexposure to lead can result in damage to blood-forming, nervous, urinary and reproductive systems.
Signs and Symptoms of Exposure:	Excessive exposure to gases might cause irritation to the eyes, skin, and respiratory system. Adverse health effects are not expected from acute exposure to fumes and gases; however, adequate ventilation, personal protective equipment, and/or good personal hygiene practices are essential to keep exposure to a minimum.
Routes of Exposure:	Dermal. Inhalation.
Carcinogenicity:	Organic lead compounds are not classified by IARC or NTP as carcinogens. Lead styphnate is converted to metallic lead and lead oxide during combustion. Metallic lead and lead oxide have not been tested adequately.
Medical Conditions Aggravated by Exposure:	None anticipated.

EMERGENCY AND FIRST AID PROCEDURES

Eyes:	If irritation occurs, flush with plenty of water. Consult a physician if symptoms persist.
Skin:	Practice good hygiene; i.e. wash with soap and water after using and before smoking/eating.
Inhalation:	Move victim to fresh air. Get medical attention if symptoms persist.
Ingestion:	Get immediate medical attention.
Other:	Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure.

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation:	General (i.e., natural or mechanically induced fresh air movements that maintain vapor concentrations below recommended exposure limits).
Eye Protection:	Suitable safety glasses with side-shields, or safety goggles.
Skin Protection:	Cleaning powder actuated tools can result in some exposure to lead compounds. Impermeable gloves are recommended. Wash hands thoroughly when finished and before eating or smoking.
Respiratory Protection:	Not normally required. Where air movement is inadequate to maintain exposure below recommended levels, wear a high efficiency particulate respirator.
Other:	Hearing protection should be worn when firing powder actuated tools

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	Store in a cool dry place. Do not crush or drop. Keep away from excessive heat, electrical current, strong acids and oxidizers. NFPA 495 requires 15 feet separation (or 1-hour firewall) from flammable liquids, flammable solids, and oxidizers. For industrial use only. Keep out of reach of children. Use with adequate ventilation. Practice good hygiene; i.e. wash after using and before eating or smoking.
Other Precautions::	Use only in powder actuated tools designed to handle these boosters. Construction industry employees must be properly trained as prescribed by OSHA regulations 29 CFR 1926.302 (e). All employees should be familiar with the safe operating procedures and requirements for powder operated tools as described in ANSI A10.3 and OSHA 29 CFR 1910.243 (d).

REGULATORY INFORMATION

Hazard Communication:	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
HMIS Codes:	Health 1, Flammability 1, Reactivity 3, PPE B (Glasses, Gloves)
DOT Shipping Name:	Limited Quantity - LQ
ICAO / IATA Shipping Name:	Cartridges. Power device, Class 1.4S, UN 0323
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product contains < 1% lead styphnate (CAS No. 15245-44-0), < 0.1% barium nitrate (CAS No. 10022-31-8), and 5 - 11% nitroglycerin (CAS No. 55-63-0) which are subject to the reporting according to Section 313 of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.
Waste Disposal Methods:	Misfires should be stored in a closed container until disposal or as otherwise required by local, state, and federal safety, health and environmental regulations. The recommended disposal method is an explosives incinerator.
EPA Waste Code(s):	D008

CONTACTS

Customer Service:	1 800 879 8000
Technical Service:	1 800 879 8000
Health / Safety:	1 800 879 6000 Jerry Metcalf (x1003704)
Emergency # (Chem-Trec):	1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

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MATERIAL SAFETY DATA SHEET

Product name: GC22
Description: Aerosol propellant for use with Hilti GX 120 fastening tool
Supplier: Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121
Emergency # (Chem-Trec.): 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 703 527 3887 (Other countries)

INGREDIENTS AND EXPOSURE LIMITS

Ingredients:	CAS Number:	TLV:	PEL:	STEL:
Isobutane	75-28-5	1000 ppm	NE	NE
Propylene	115-07-1	860 mg/m ³	NE	NE
Propane*	74-98-6	1000 ppm	1800 mg/m ³	NE

* Propane remains in the can and is not released.

Abbreviations: PEL = OSHA Permissible Exposure Limit. TLV = ACGIH Threshold Limit Value. STEL = Short Term Exposure Limit. NE = None Established. ppm = Parts per million.

PHYSICAL DATA

Appearance:	Colorless aerosol.	Odor:	Sweet petroleum odor.
Vapor Density: (air = 1)	Not determined.	Vapor Pressure:	4793 mm Hg @ 68 F.
Boiling Point:	Not determined.	VOC Content:	Not determined.
Evaporation Rate:	Not determined.	Solubility in Water:	Negligible.
Density:	1.28 g/cm ³ @ 68 F.	pH:	Not applicable.

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Not applicable.	Flammable Limits:	LEL = 1.3% UEL = 11.1%
Extinguishing Media:	Carbon Dioxide, Dry Chemical, Foam, Water		
Special Fire Fighting Procedures:	Extremely flammable aerosols. Cool with water spray to prevent ignition.		
Unusual Fire and Explosion Hazards:	Extremely flammable. Contents under pressure. Containers exposed to fire can burst or be propelled through the air.		

REACTIVITY DATA

Stability:	Stable.	Hazardous Polymerization:	Will not occur.
Incompatibility:	Strong oxidizing agents.		
Decomposition Products:	Thermal decomposition can yield CO and NO _x .		
Conditions to Avoid:	Potential ignition sources such as extremely hot surfaces, flames, sparks, static discharges, etc.		

HEALTH HAZARD DATA

Known Hazards:	Irritation. Direct contact with contents can cause irritation or frostbite.		
Signs and Symptoms of Exposure:	Contact: No effects expected from normal use. Direct contact with liquefied gas (e.g. from a leaking can) can cause irritation and possibly burns (i.e. frostbite). Inhalation: No ill effects expected from normal use. Contains asphyxiant gases. Direct inhalation of gases can cause narcotic effects. Ingestion: Not a likely route of exposure.		
Routes of Exposure:	Dermal. Inhalation.		
Carcinogenicity:	No ingredients are classified as a carcinogen by IARC, NTP or OSHA.		
Medical Conditions Aggravated by Exposure:	Eye, skin, and respiratory conditions.		

EMERGENCY AND FIRST AID PROCEDURES

Eyes:	For contact with liquefied gas, flush immediately with plenty of water and seek medical attention.
Skin:	If contact with liquefied (cold) gases occurs, rinse affected area thoroughly with warm running water. Do not use hot water. Do not rub the skin. Contact a Physician if symptoms occur.
Inhalation:	Move victim to fresh air. Call a physician if symptoms persist.
Ingestion:	Not a likely route of exposure.
Other:	Referral to a physician is recommended if there is any question about the seriousness of the injury / exposure.

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation:	General (natural or mechanically induced fresh air movements).
Eye Protection:	Safety glasses with side shields.
Skin Protection:	Leather or heavy cloth gloves are recommended.
Respiratory Protection:	None normally required. Where ventilation is inadequate to control vapors, use NIOSH-approved respirator with organic vapor cartridges.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	Store in a cool dry area preferably between 41 and 77° F. Do not store in direct sunlight. Do not store with DX cartridges (Boosters). Extremely flammable gas under pressure. Keep away from excessive heat, sparks, flames and any other potential ignition sources. Do not allow liquefied gases to come in contact with the skin. Use with adequate ventilation. For industrial use only. Keep out of reach of children. Follow label / use instructions.
Spill Procedures:	Immediately remove any ignition sources. Wear appropriate personal protective equipment. Provide adequate ventilation to disperse gases.

REGULATORY INFORMATION

Hazard Communication:	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
HMIS Codes:	Health 1, Flammability 4, Reactivity 0, PPE B
DOT –Ground Shipping Name:	Limited Quantity - LQ
IATA (air) Shipping Name:	Devices, small, hydrocarbon gas powered <i>with release device</i> , Class 2.1, UN3150
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product contains up to 20% Propylene (CAS #115-07-1) which is subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).
EPA Waste Code(s):	D001
Waste Disposal Methods:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, state, and federal safety, health and environmental regulations.

CONTACTS

Customer Service:	1 800 879 8000
Technical Service:	1 800 879 8000
Health / Safety:	1 800 879 6000 Jerry Metcalf (x1003704)
Emergency # (Chem-Trec):	1 800 424 9300 (USA, PR, Virgin Islands, Canada); 703 527 3887 (Other countries)

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**MATERIAL SAFETY DATA SHEET**

Product identifier: Spray Lubricant
Product description / use: Petroleum derivatives / Spray lubricant for cleaning Hilti powder actuated tools
Supplier: Hilti (Canada) Corporation, 2360 Meadowpine Blvd., Mississauga, Ontario L5N 6S2
Originator: Hilti, Inc., P. O. Box 21148, Tulsa, Oklahoma, USA 74121
Emergency phone number: Chem-Trec: 1 800 424 9300

INGREDIENTS INFORMATION

Ingredient	CAS Number	% (wt.)	LC ₅₀ , (rat)	LD ₅₀ (rat)	TLV	STEL
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Not a hazardous chemical as defined by the Controlled Products Regulations SOR/88-66

PHYSICAL PROPERTIES

Appearance / Physical state:	Clear liquid.	Odour:	Mild oil-like odour.
Specific gravity (at 20°C):	0.94	Odour threshold:	Not determined.
Vapour pressure (at 20°C):	Not applicable.	Vapour density:	Not applicable.
Evaporation rate:	Not determined.	Boiling point:	Not determined.
Freezing point:	Not determined.	pH:	Not determined.
Coefficient of H₂O / oil distrib:	Not determined.	Solubility in water:	Slightly soluble.

FIRE AND EXPLOSION DATA

Flash point / Method:	> 215 C / DIN 53213	Flammable limits:	Not applicable.
Conditions of flammability:	Exposure to direct flame.	Auto-ignition temperature:	Not applicable.
Means of extinction:	CO ₂ , Dry Chemical, Foam.		
Special fire fighting procedures:	None known. A NIOSH-approved self-contained breathing apparatus (SCBA) should be worn when fighting fires involving chemicals.		
Hazardous combustion products:	Normal products of combustion are expected including CO and CO ₂ .		
Sensitivity to mechanical impact / static discharge:	Not susceptible to mechanical impact or to a static discharge.		

REACTIVITY DATA

Stability:	Stable.	Conditions of reactivity:	None known.
Incompatible materials:	Strong oxidizing agents.		
Hazardous decomposition products:	None known. Thermal decomposition can yield oxides of carbon.		

TOXICOLOGICAL PROPERTIES

Routes of exposure:	<input type="checkbox"/> N/Ap <input checked="" type="checkbox"/> Skin contact <input type="checkbox"/> Skin absorption <input checked="" type="checkbox"/> Eye contact <input type="checkbox"/> Inhalation <input type="checkbox"/> Ingestion		
Exposure limits:	None established. See "Ingredients" section above.		
Acute effects of exposure:	Eyes - Slight irritation is possible. Corneal injury is not expected. Skin - No effects expected. Irritation is possible with some individuals. Inhalation - No effects expected. Ingestion - Not a likely route of exposure. Effects of ingestion have not been determined. Considered to have a low acute oral toxicity.		
Chronic effects of exposure:	None known.		
Synergistic materials:	None known.		

FIRST AID MEASURES

Eyes:	Flush with plenty of water. Call a physician if symptoms occur.
Skin:	Wash with soap and water. Seek medical attention if any effects persist.
Inhalation:	No ill effects expected. Should discomfort occur, move to fresh air.
Ingestion:	Not a likely route of exposure. Do not induce vomiting unless recommended by a physician. Seek medical attention immediately.
Other:	Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure

PREVENTIVE MEASURES

Engineering controls:	General (natural or mechanically induced fresh air movements).
Eye protection:	Safety glasses with side shields are recommended.
Skin protection:	Impermeable gloves recommended.
Respiratory protection:	None normally required.
Other:	No additional measures are normally required.
Handling procedures and equipment:	For industrial use only. Do not heat can or expose to direct flame. Do not get into the eyes. Avoid prolonged or repeated contact with the skin. Practice good hygiene; i.e., wash after using and before eating or smoking.
Storage requirements:	Keep out of reach of children. Store in a cool dry place out of direct rays of the sun. Recommended storage temperature range is between 5° and 30° C.
Spill, leak or release:	Wipe away spilled material with a cloth or other absorbent material. Place in a container for proper disposal in accordance with all applicable local, state, or federal requirements. Do not allow into waterways.
Waste disposal:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, provincial, and federal safety, health and environmental regulations.
Special shipping instructions:	None known.

REGULATORY INFORMATION

WHMIS classification:	Not a controlled product according to WHMIS definitions
HMIS codes:	Health 0, Flammability 0, Reactivity 0, PPE B
TDG shipping name:	Not regulated.

PREPARATION INFORMATION / CONTACTS

Prepared by:	Hilti, Inc., Tulsa, OK USA	Date of Preparation:	Jan. 12,2011	Emergency phone number:	1 800 424 9300
Customer Service:	Hilti (Canada) Corporation, Mississauga, Ontario; 1 800 363 4458				
Health / Safety contacts:	Hilti, Inc., Tulsa, OK USA; 1 800 879 6000, Jerry Metcalf (x1003704)				
Abbreviations used:	N/E = None Established. N/Ap = Not Applicable. N/Av = Not Available. HMIS: Hazardous Materials Identification System				

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STO EIFS

1. AIR AND MOISTURE BARRIER

- a. Sto - Gold Coat
- b. Sto - Gold Fill
- c. Sto – Redicorner Fabric Mesh
- d. Sto - StoGuard Fabric Mesh 4”
- e. Sto - StoGuard Fabric Mesh 6”
- f. Sto - StoGuard Sticky Mesh 4.25”
- g. Sto - StoGuard Sticky Mesh 9.5”

2. BASE COATS AND ADHESIVES

- a. Sto – Primer Adhesive Base (PAB)
- b. Sto – BTS Xtra
- c. Sto – BTS Fast Set
- d. Sto – RFP
- e. Sto – Dispersion Adhesive
- f. Loctite – PL Premium Tube Adhesive

3. FOAM, MESH AND FINISHES

- a. Arvron – Steer-O-Cell EPS (Foam)
- b. Wind-Lock – Foam2Foam Spray Foam
- c. Sto – Detail Mesh
- d. Sto – Intermediate (Full) Mesh
- e. Sto – Armor Mat Mesh
- f. Sto – Fine Sand Finish
- g. Sto – Medium Sand Finish
- h. Sto – Lotusan 1.0 Finish
- i. Sto – Lotusan 1.5 Finish

4. CLEANERS

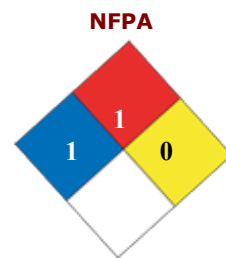
- a. Wind-Lock – Foam2Foam Gun Cleaner
- b. FOMO – Handi Cleaner Gun Cleaner
- c. GO – Goof Off Professional Cleaner



SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product Name: Sto Gold Coat
Product Code: 80265
SDS Manufacturer Number: 80265
Product Use/Restriction: Waterbased Latex Coating.
Manufacturer Name: Sto Corp.
Address: 6175 Riverside Drive, SW
 Atlanta, Georgia 30331
General Phone Number: (404) 346-3666
Emergency Phone Number: (800) 424-9300
SDS Creation Date: July 08, 2013
SDS Revision Date: July 08, 2013
(M)SDS Format:



HMIS

Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	X

SECTION 2 - HAZARD(S) IDENTIFICATION

GHS Pictograms:



GHS Class: Eye Irritant, Category 2
 Skin Irritant, Category 2

Hazard Statements: Causes eye irritation
 Causes skin irritation

Precautionary Statements: Wash hands thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.

Emergency Overview: WARNING! Irritant.

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eye:	May cause irritation.
Skin:	May cause irritation.
Inhalation:	Prolonged or excessive inhalation may cause respiratory tract irritation.
Ingestion:	Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
1,2-Propanediol	57-55-6	1 - 5 by weight	
Aluminum Silicate	1302-76-7	1 - 5 by weight	
Crystalline silica (Quartz)	14808-60-7	30 - 60 by weight	
Naphtha	64742-88-7	1 - 5 by weight	
Titanium Oxide	13463-67-7	1 - 5 by weight	
Water based dispersion of butadiene styrene copolymer	No Data	30 - 60 by weight	

SECTION 4 - FIRST AID MEASURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
Other First Aid:	First Responders should provide for their own safety prior to rendering assistance.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point:	Not determined.
Auto Ignition Temperature:	Not determined.
Lower Flammable/Explosive Limit:	Not determined.
Upper Flammable/Explosive Limit:	Not determined.

Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Extinguishing Media:	Use dry chemical or foam when fighting fires involving this material. Water mist may be used to cool closed containers.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire Hazards:	Material may spatter above 100 °C/212 °F

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry.
Methods for cleanup:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section.

SECTION 7 - HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Store away from direct heat or sunlight, sources of UV radiation, peroxides, or free radicals. Do not store in temperatures above 120 °F or below 48 °F. Keep away from direct sunlight.
Work Practices:	Handle in accordance with good industrial hygiene and safety practices.
Hygiene Practices:	Wash thoroughly after handling.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
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Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
Hand Protection Description:	Nitrile rubber or natural rubber gloves are recommended.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

PPE Pictograms:



EXPOSURE GUIDELINES

Crystalline silica (Quartz) :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ Respirable fraction (R)

Titanium Oxide :

Guideline ACGIH: TLV-TWA: 10 mg/m³

Notes : Only established PEL and TLV values for the ingredients are listed.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Liquid.
Odor:	Slight
Boiling Point:	Not determined.
Melting Point:	0°C (32°F)
Specific Gravity:	> 1
Solubility:	Miscible in water
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Percent Volatile:	Data not available.
Evaporation Rate:	Not determined.
pH:	7.5 - 10
Flash Point:	Not determined.
Auto Ignition Temperature:	Not determined.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability:	Stable under recommended handling and storage conditions.
Hazardous Polymerization:	Hazardous polymerization does not occur.
Conditions to Avoid:	Heat, flames, ignition sources, and sparks. Incompatible materials. Freezing or temperatures below 32 deg. F.
Incompatible Materials:	Water reactive materials.
Special Decomposition Products:	Thermal decomposition can lead to release irritant fumes and toxic gases.

SECTION 11 - TOXICOLOGICAL INFORMATION

1,2-Propanediol :

RTECS Number:	TY2000000
Eye:	Administration into the eye - Rabbit Standard Draize test : 100 mg [Mild] Administration into the eye - Rabbit Standard Draize test : 500 mg/24H [Mild] (RTECS)
Skin:	Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill : 20800 mg/kg [Details of toxic effects not reported other than lethal dose value] Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill : 20800 mg/kg [Behavioral - Ataxia Behavioral - Tetany Lungs, Thorax, or Respiration - Respiratory depression] (RTECS)
Inhalation:	Inhalation - Rat TCLO - Lowest published toxic concentration : 2180 mg/m ³ /6H/90D (Intermittent) [Behavioral - Food intake (animal) Endocrine - Changes in spleen weight Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - Dehydrogenases] (RTECS)
Ingestion:	Oral - Rat LD50 - Lethal dose, 50 percent kill : 20 gm/kg [Details of toxic effects not reported other than lethal dose value] Oral - Mouse LD50 - Lethal dose, 50 percent kill : 22 gm/kg [Details of toxic effects not reported other than lethal dose value] Oral - Rabbit LD50 - Lethal dose, 50 percent kill : 18500 mg/kg [Details of toxic effects not reported other than lethal dose value] Oral - Mouse LD50 - Lethal dose, 50 percent kill : 20300 mg/kg [Behavioral - Ataxia Behavioral - Tetany Lungs, Thorax, or Respiration - Respiratory depression] (RTECS)

Crystalline silica (Quartz) :

RTECS Number:	VV7330000
Inhalation:	Inhalation - Rat TCLO - Lowest published toxic concentration : 248 mg/m ³ /6H [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Other proteins Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] Inhalation - Rat TCLO - Lowest published toxic concentration : 248 mg/m ³ /6H [Lungs, Thorax, or Respiration - Changes in lung weight Immunological Including Allergic - Increase in cellular immune response Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] Inhalation - Rat TCLO - Lowest published toxic concentration : 200 mg/kg [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Other changes Nutritional and Gross Metabolic - Changes in iron] Inhalation - Mouse TCLO - Lowest published toxic concentration : 40 mg/kg [Lungs, Thorax, or Respiration - Other changes] Inhalation - Mouse TCLO - Lowest published toxic concentration : 40 mg/kg [Immunological Including Allergic - Decrease in cellular immune response] Inhalation - Rat TCLO - Lowest published toxic concentration : 1 mg/kg (RTECS)

Ingestion: Oral - Rat TDLo - Lowest published toxic dose : 120 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

Naphtha :

RTECS Number: WJ8930000

Inhalation: Inhalation - Rat TCLo - Lowest published toxic concentration : 1100 mg/m3/6H/16D (Intermittent) [Kidney/Ureter/Bladder - Other changes Kidney/Ureter/Bladder - Kidney tumors]
Inhalation - Mouse TCLo - Lowest published toxic concentration : 550 mg/m3/6H/16D (Intermittent) [Nutritional and Gross Metabolic - Weight loss or decreased weight gain] (RTECS)

Titanium Oxide :

RTECS Number: XR2275000

Inhalation: Inhalation - Rat TCLo - Lowest published toxic concentration : 1 mg/kg [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] (RTECS)

Ingestion: Oral - Rat TDLo - Lowest published toxic dose : 60 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: No environmental information found for this product.

Environmental Fate: No environmental information found for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with Local, State, Federal and Provincial regulations.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Non regulated.

DOT Hazard Class: Non regulated.

IATA Shipping Name: Non regulated.

IMDG UN Number : Non regulated.

SECTION 15 - REGULATORY INFORMATION

SARA: This product does not contain any chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III (40CFR, Part 372).

California PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the State of California to cause cancer.

Canada WHMIS: Xi - Irritant

EU Class: Irritant.
In accordance to Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures

Risk Phrases: R36/37/38 - Irritating to eyes, respiratory system and skin.

Safety Phrase: S23 - Do not breathe gas/fumes/vapour/spray.
S37 - Wear suitable gloves.

1,2-Propanediol :

TSCA Inventory Status: Listed

Canada DSL: Listed

Aluminum Silicate :

Canada DSL: Listed

Crystalline silica (Quartz) :

TSCA Inventory Status: Listed

Canada DSL: Listed

Naphtha :

TSCA Inventory Status: Listed

Canada DSL: Listed

Titanium Oxide :

TSCA Inventory Status: Listed

Canada DSL: Listed

SECTION 16 - ADDITIONAL INFORMATION

HMIS Health Hazard: 1

HMIS Fire Hazard: 1

HMIS Reactivity: 0

HMIS Personal Protection: X

SDS Creation Date: July 08, 2013

SDS Revision Date: July 08, 2013

Disclaimer: The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.

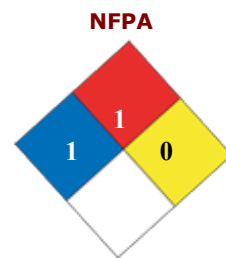
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SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product Name: Sto Gold Fill
Product Code: 80266
SDS Manufacturer Number: 80266
Product Use/Restriction: Waterbased Acrylic Coating.
Manufacturer Name: Sto Corp.
Address: 6175 Riverside Drive, SW
 Atlanta, Georgia 30331
General Phone Number: (404) 346-3666
Emergency Phone Number: (800) 424-9300
SDS Creation Date: July 08, 2013
SDS Revision Date: July 08, 2013
(M)SDS Format:



HMIS

Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	X

SECTION 2 - HAZARD(S) IDENTIFICATION

GHS Pictograms:



GHS Class: Eye Irritant, Category 2
 Skin Irritant, Category 2

Hazard Statements: Causes eye irritation
 Causes skin irritation

Precautionary Statements: Wash hands thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.

Emergency Overview: WARNING! Irritant.

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eye:	May cause irritation.
Skin:	May cause irritation.
Inhalation:	Prolonged or excessive inhalation may cause respiratory tract irritation.
Ingestion:	Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
1,2-Propanediol	57-55-6	1 - 5 by weight	
Acrylic polymer	No Data	10 - 30 by weight	
Crystalline silica (Quartz)	14808-60-7	60 - 100 by weight	
Muscovite Mica	12001-26-2	1 - 5 by weight	
Water	7732-18-5	10 - 30 by weight	

SECTION 4 - FIRST AID MEASURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
Other First Aid:	First Responders should provide for their own safety prior to rendering assistance.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point:	Not determined.
Auto Ignition Temperature:	Not determined.
Lower Flammable/Explosive Limit:	Not determined.
Upper Flammable/Explosive Limit:	Not determined.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.

Extinguishing Media:	Use dry chemical or foam when fighting fires involving this material. Water mist may be used to cool closed containers.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire Hazards:	Material may spatter above 100 °C/212 °F

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry.
Methods for cleanup:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section.

SECTION 7 - HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Store away from direct heat or sunlight, sources of UV radiation, peroxides, or free radicals. Do not store in temperatures above 120 °F or below 48 °F. Keep away from direct sunlight.
Work Practices:	Handle in accordance with good industrial hygiene and safety practices.
Hygiene Practices:	Wash thoroughly after handling.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
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Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
Hand Protection Description:	Nitrile rubber or natural rubber gloves are recommended.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.
PPE Pictograms:	



EXPOSURE GUIDELINES

Crystalline silica (Quartz) :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ Respirable fraction (R)

Muscovite Mica :

Guideline ACGIH: TLV-TWA: 3 mg/m³ Respirable fraction (R)

Guideline OSHA: PEL-TWA: 20 mppcf

Notes : Only established PEL and TLV values for the ingredients are listed.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Liquid.
Odor:	Slight
Boiling Point:	Not determined.
Melting Point:	0°C (32°F)
Specific Gravity:	> 1
Solubility:	Miscible in water
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Percent Volatile:	Data not available.
Evaporation Rate:	Not determined.
pH:	7.5 - 10
Flash Point:	Not determined.
Auto Ignition Temperature:	Not determined.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability:	Stable under recommended handling and storage conditions.
Hazardous Polymerization:	Hazardous polymerization does not occur.
Conditions to Avoid:	Heat, flames, ignition sources, and sparks. Incompatible materials. Freezing or temperatures below 32 deg. F.
Incompatible Materials:	Water reactive materials.
Special Decomposition Products:	Thermal decomposition can lead to release irritant fumes and toxic gases.

SECTION 11 - TOXICOLOGICAL INFORMATION

1,2-Propanediol :

RTECS Number:	TY2000000
Eye:	Administration into the eye - Rabbit Standard Draize test : 100 mg [Mild] Administration into the eye - Rabbit Standard Draize test : 500 mg/24H [Mild] (RTECS)
Skin:	Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill : 20800 mg/kg [Details of toxic effects not reported other than lethal dose value] Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill : 20800 mg/kg [Behavioral - Ataxia Behavioral - Tetany Lungs, Thorax, or Respiration - Respiratory depression] (RTECS)
Inhalation:	Inhalation - Rat TClO - Lowest published toxic concentration : 2180 mg/m ³ /6H/90D (Intermittent) [Behavioral - Food intake (animal) Endocrine - Changes in spleen weight Biochemical - Enzyme inhibition, induction, or change in blood or tissue levels - Dehydrogenases] (RTECS)
Ingestion:	Oral - Rat LD50 - Lethal dose, 50 percent kill : 20 gm/kg [Details of toxic effects not reported other than lethal dose value] Oral - Mouse LD50 - Lethal dose, 50 percent kill : 22 gm/kg [Details of toxic effects not reported other than lethal dose value] Oral - Rabbit LD50 - Lethal dose, 50 percent kill : 18500 mg/kg [Details of toxic effects not reported other than lethal dose value] Oral - Mouse LD50 - Lethal dose, 50 percent kill : 20300 mg/kg [Behavioral - Ataxia Behavioral - Tetany Lungs, Thorax, or Respiration - Respiratory depression] (RTECS)

Crystalline silica (Quartz) :

RTECS Number:	VV7330000
Inhalation:	Inhalation - Rat TClO - Lowest published toxic concentration : 248 mg/m ³ /6H [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Other proteins Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] Inhalation - Rat TClO - Lowest published toxic concentration : 248 mg/m ³ /6H [Lungs, Thorax, or Respiration - Changes in lung weight Immunological Including Allergic - Increase in cellular immune response Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] Inhalation - Rat TClO - Lowest published toxic concentration : 200 mg/kg [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Other changes Nutritional and Gross Metabolic - Changes in iron] Inhalation - Mouse TClO - Lowest published toxic concentration : 40 mg/kg [Lungs, Thorax, or Respiration - Other changes] Inhalation - Mouse TClO - Lowest published toxic concentration : 40 mg/kg [Immunological Including Allergic - Decrease in cellular immune response] Inhalation - Rat TClO - Lowest published toxic concentration : 1 mg/kg (RTECS)

Ingestion: Oral - Rat TDLo - Lowest published toxic dose : 120 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: No environmental information found for this product.

Environmental Fate: No environmental information found for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with Local, State, Federal and Provincial regulations.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Non regulated.

DOT Hazard Class: Non regulated.

IATA Shipping Name: Non regulated.

IMDG UN Number : Non regulated.

SECTION 15 - REGULATORY INFORMATION

SARA: This product does not contain any chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III (40CFR, Part 372).

California PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the State of California to cause cancer.

Canada WHMIS: Xi - Irritant

EU Class: Irritant.
In accordance to Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures

Risk Phrases: R36/37/38 - Irritating to eyes, respiratory system and skin.

Safety Phrase: S23 - Do not breathe gas/fumes/vapour/spray.
S37 - Wear suitable gloves.

1,2-Propanediol :

TSCA Inventory Status: Listed

Canada DSL: Listed

Crystalline silica (Quartz) :

TSCA Inventory Status: Listed

Canada DSL: Listed

Muscovite Mica :

Canada DSL: Listed

SECTION 16 - ADDITIONAL INFORMATION

HMIS Health Hazard: 1

HMIS Fire Hazard: 1

HMIS Reactivity: 0

HMIS Personal Protection: X

SDS Creation Date: July 08, 2013

SDS Revision Date: July 08, 2013

Disclaimer: The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.

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Material Safety Data Sheet

209 StoGuard RediCorner

Section I - Manufacturer's Information

Identity: **StoGuard RediCorner**

Common Name/Synonym: **Coated Polyester Fabric**

Manufacturer's Name: **Sto Corp.**
6175 Riverside Drive, SW
Atlanta, GA 30331

Information #: **(404) 346-3666**
Emergency #: **(800) 424-9300**

DOT Hazardous Class: **Not Regulated**
CAS Number: **Not Registered**

Section II - Preparation Information

Prepared By: **Sto Corp. Research and Development Department**

Date Prepared: **26-Sep-08**

Section III - Hazardous Ingredients

Component - A Ingredient	Percent w/w	CAS Number	TWA/TLV			LD50	LC50
			OSHA	ACGIH	Other		
Carbon Black	0.5-1.5	1333-86-4	3.5 mg/m3 mg/m ³	3.5 mg/m3 mg/m ³	N/E mg/m ³	N/E	N/E
Glass Oxides	60-100	65997-17-3	15 mg/m3 mg/m ³	10 mg/m3 mg/m ³	NIOSH 5 mg/m3 mg/m ³	N/E	N/E
Polyvinyl Acetate	0.5-1.5	9003-20-7	N/A mg/m ³	N/A mg/m ³	N/A mg/m ³	N/A	N/A

Section IV - Physical/Chemical Characteristics

Component - A	
Boiling Point: N/A	Vapor Density [Air=1]: N/A
Melting Point: N/A	Evaporation Rate [Ether=1]: N/A
Freezing Point: N/A	Specific Gravity: [H2O=1]: < 1
Appearance and Odor: Formed Fabric	Coefficient of Water/Oil Distribution: N/A
Vapor Pressure: N/A	pH Level: N/A
Physical State: solid	Solubility in Water: NA
Odor Threshold: N/A	

Section V - Fire and Explosion Hazard Data

Component - A	
Flammability: N/A	Flash Point: N/A
Limits LEL/UEL: N/A - N/A	Sensitivity to impact: N/A
Hazardous Decomposition Products: CO, CO2, Hydrocarbons, HCl, Acrid Smoke	Autoignition Temperature: N/A
Unusual Fire and Explosive Hazards: N/A	Sensitivity to Static Discharge: N/A
	Special Firefighting Procedures: SCBA, full protective gear
	Extinguishing Media: Water, water spray, carbon dioxide, dry chemical

Section VI - Reactivity Data

Component - A	
Hazardous Decomposition Products: CO, CO2, Hydrocarbons, HCl, Acrid Smoke	Stability: N/A
Hazardous Polymerization: Does not occur	Incompatibility (Materials to Avoid): Strong oxidizers
	Conditions to Avoid: Exposure- high heat

Section VII - Health Hazard Data

Carcinogenicity: **No** NTP: **No** IARC: **Group 3** OSHA Regulated: **No** LD50: **N/A** LC50: **N/A**

Effects and Hazards of
 Eye Contact: **May cause eye irritation when dust is generated or through direct contact.**

Effects and Hazards of
 Inhalation (Breathing): **Mechanical irritation of respiratory tract may occur if dust is inhaled.**

Effects and Hazards of
 Skin Contact: **Prolonged contact may cause mild irritation and itching.**

Effects and Hazards of
 Ingestion (Swallowing): **Ingestion may cause temporary irritation of the digestive tract. If symptoms develop consult a physician.**



Material Safety Data Sheet

209 StoGuard RediCorner

HMIS RATINGS Health: 1 Flammability: 0 Reactivity: 0 PPE: J

Section VIII - Emergency and First Aid Procedures

- Treatment for Eye
Contact: **Flush with warm running water for fifteen minutes. Do not rub. If irritation persists, consult a physician.**
- Treatment for Inhalation
(Breathing): **Fibers may cause mechanical irritation to the mouth, nose and throat. Remove person to fresh air.**
- Treatment for Skin
Contact: **Wash with mild soap and running water. Use a washcloth to help remove fibers. If irritation persists, consult a physician.**
- Treatment for Ingestion
(Swallowing): **Unlikely entry route. If symptoms develop consult a physician.**

Section IX - Precautions for Safe Handling and Use

- Steps to be taken in case material is released or spilled (Dry Stage): **Spills should be cleaned with a vacuum or by wet sweeping.**
- Steps to be taken in case material is released or spilled (Wet Stage): **N/A**
- Waste Disposal Method: **Per local, state and federal regulations.**
- Precautions To Be Taken In Handling and Storing: **Store in a cool, dry place with adequate ventilation. Use P.P.E. appropriate for your situation.**
- Other Precautions: **This material is an industrial product designed to be used by professionals familiar with the requirements of this material safety data sheet.**
- Respiratory Protection: **Where dust levels exceed TLV, use a NIOSH approved respirator and PPE against nuisance dusts.**
- Ventilation: **Mechanical ventilation recommended for process machinery where dust generation is expected.**
- Protective Gloves: **Wear protective cotton gloves and clothing to protect against nuisance dust.**
- Eye Protection: **Wear safety glasses, to minimize eye contact during cutting operations.**
- Other Protective Equipment: **HEPA filter recommended.**
- Work and Hygienic Practices: **Remove and wash contaminated clothing. As with all commercial and industrial products, always wash hands before eating or smoking.**
- California Proposition 65: **This product contains ingredients subject to proposition 65.**

The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.

Material Safety Data Sheet

80208 StoGuard Fabric 4" Wide

Section I - Manufacturer's Information

Identity: **StoGuard Fabric 4" Wide**

Common Name/Synonym: **Coated Polyester Fabric**

Manufacturer's Name: **Sto Corp.**
6175 Riverside Drive, SW
Atlanta, GA 30331

Information #: **(404) 346-3666**
Emergency #: **(800) 424-9300**

DOT Hazardous Class: **Not Regulated**
CAS Number: **Not Registered**

Section II - Preparation Information

Prepared **Sto Corp. Research and Development Department**

Date Prepared: **05-Apr-13**

Section III - Hazardous Ingredients

Component - A Ingredient	Percent ww	CAS Number	TWA/TLV		Other	LD50	LC50
			OSHA	ACGIH			
Carbon Black	0.5-1.5	1333-86-4	3.5 mg/m ³	3.5 mg/m ³	N/E mg/m ³	N/E	N/E
Glass Oxides	60-100	65997-17-3	15 mg/m ³	10 mg/m ³	NIOSH 5 mg/m ³	N/E	N/E

Section IV - Physical/Chemical Characteristics

Component - A

Boiling Point: **N/A**
Melting Point: **N/A**
Freezing: **N/A**

Vapor Density: **N/A**
Evaporation Rate: **N/A**
Specific Gravity: [H₂O=1]: **2.5**

Vapor Pressure: **< 0.1 mm Hg**
pH Level: **N/A**
Physical State: **Solid**
Solubility in Water: **N/A**
Odor Threshold: **N/A**

Appearance and Odor: **Black Polyester Fabric - No Odor**

Coefficient of Water/Oil Distribution: **N/A**

Section V - Fire and Explosion Hazard Data

Component - A

Flammability: **N/A**
Limits LEL/UEL: **N/A - N/A**

Flash Point: **N/A**
Sensitivity to impact: **N/A**

Autoignition Temperature: **N/A**
Sensitivity to Static Discharge: **Can build static charge**

Hazardous Decomposition Products: **CO, CO₂, Hydrocarbons, HCl, Acrid Smoke**
Unusual Fire and Explosive Hazards: **N/A**

Special Firefighting Procedures: **SCBA, full protective gear**
Extinguishing Media: **Water spray, foam, dry chemical**

Section VI - Reactivity Data

Component - A

Hazardous Decomposition Products: **CO, CO₂, Hydrocarbons, HCl, Acrid Smoke**

Stability: **Stable**

Incompatibility (Materials to Avoid): **Strong oxidizers and water**

Hazardous Polymerization: **Does not occur**

Conditions to Avoid: **Exposure- high heat**

Section VII - Health Hazard Data

Carcinogenicity: **No** NTP: **No** IARC: **Group 3** OSHA Regulated: **No** LD50: **N/A** LC50: **N/A**

Effects and Hazards of Eye Contact: **May cause eye irritation when dust is generated or through direct contact.**
Effects and Hazards of Inhalation (Breathing): **Mechanical irritation of respiratory tract may occur if dust is inhaled.**
Effects and Hazards of Skin Contact: **Prolonged contact may cause mild irritation and itching.**

Material Safety Data Sheet

80208 StoGuard Fabric 4" Wide

Effects and Hazards of Ingestion (Swallowing): **Ingestion may cause temporary irritation of the digestive tract. If symptoms develop, consult a physician.**

HMIS Health: 1 Flammability: 0 Reactivity: 0 PPE: J

Section VIII - Emergency and First Aid Procedures

Treatment for Eye

Contact: **Flush with warm running water for fifteen minutes. Do not rub. If irritation persists, consult a physician.**

Treatment for Inhalation (Breathing):

Fibers may cause mechanical irritation to the mouth, nose and throat. Remove person to fresh air.

Treatment for Skin

Contact: **Wash with mild soap and running water. Use a washcloth to help remove fibers. If irritation persists, consult a physician.**

Treatment for Ingestion (Swallowing):

Unlikely route of entry. If symptoms develop, consult a physician.

Section IX - Precautions for Safe Handling and Use

Steps to be taken in case material is released or spilled (Dry Stage):

Spills should be cleaned with a vacuum or by wet sweeping.

Steps to be taken in case material is released or spilled (Wet Stage):

N/A

Waste Disposal

Method: **Per local, state and federal regulations.**

Precautions To Be Taken

In Handling and Storing: **Store in a cool, dry place with adequate ventilation. Use PPE appropriate for your situation.**

Other Precautions:

This material is an industrial product designed to be used by professionals familiar with the requirements of this material safety data sheet.

Respiratory Protection:

Where dust levels exceed TLV, use a NIOSH approved respirator and PPE against nuisance dusts.

Ventilation:

Mechanical ventilation recommended for process machinery where dust generation is expected.

Protective Gloves:

Wear protective cotton gloves and clothing to protect against nuisance dust.

Eye Protection:

Wear safety glasses to minimize eye contact during cutting operations.

Other Protective

Equipment:

HEPA filter recommended.

Work and Hygienic

Practices:

Remove and wash contaminated clothing. As with all commercial and industrial products, always wash hands before eating or smoking.

California Proposition 65:

This product contains ingredients subject to Proposition 65.

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Material Safety Data Sheet

80207 StoGuard Fabric 6" Wide

Section I - Manufacturer's Information

Identity: **StoGuard Fabric 6" Wide**

Common Name/Synonym: **Coated Polyester Fabric**

Manufacturer's Name: **Sto Corp.**
6175 Riverside Drive, SW
Atlanta, GA 30331

Information #: **(404) 346-3666**
Emergency #: **(800) 424-9300**

DOT Hazardous Class: **Not Regulated**
CAS Number: **Not Registered**

Section II - Preparation Information

Prepared **Sto Corp. Research and Development Department**

Date Prepared: **05-Apr-13**

Section III - Hazardous Ingredients

Component - A	Ingredient	Percent ww	CAS Number	OSHA	TWA/TLV ACGIH	Other	LD50	LC50
	Glass Oxides	60-100	65997-17-3	15 mg/m ³	10 mg/m ³	NIOSH 5 mg/m ³	N/E	N/E
	Carbon Black	0.5-1.5	1333-86-4	3.5 mg/m ³	3.5 mg/m ³	N/E mg/m ³	N/E	N/E

Section IV - Physical/Chemical Characteristics

Component - A

Boiling Point: **N/A**
Melting Point: **N/A**
Freezing: **N/A**

Vapor Density: **N/A**
Evaporation Rate: **Negligible**
Specific Gravity: [H₂O=1]: **2.5**

Vapor Pressure: **< 0.1 mm Hg**
pH Level: **N/A**
Physical State: **Solid**
Solubility in Water: **Negligible**
Odor Threshold: **N/A**

Appearance and Odor: **Black Polyester Fabric - No Odor**

Coefficient of Water/Oil Distribution: **N/A**

Section V - Fire and Explosion Hazard Data

Component - A

Flammability: **N/A**
Limits LEL/UEL: **N/A - N/A**

Flash Point: **N/A**
Sensitivity to impact: **N/A**

Autoignition Temperature: **N/A**
Sensitivity to Static Discharge: **Can build static charge**

Hazardous Decomposition Products: **CO, CO₂, Hydrocarbons, HCl, Acrid Smoke**
Unusual Fire and Explosive Hazards: **N/A**

Special Firefighting Procedures: **SCBA, full protective gear**
Extinguishing Media: **Water spray, foam, dry chemical**

Section VI - Reactivity Data

Component - A

Hazardous Decomposition Products: **CO, CO₂, Hydrocarbons, HCl, Acrid Smoke**

Stability: **Stable**

Incompatibility (Materials to Avoid): **Strong oxidizers and water**

Hazardous Polymerization: **Does not occur**

Conditions to Avoid: **Exposure- high heat**

Section VII - Health Hazard Data

Carcinogenicity: **No** NTP: **No** IARC: **Group 3** OSHA Regulated: **No** LD50: **N/A** LC50: **N/A**

Effects and Hazards of Eye Contact: **May cause eye irritation when dust is generated or through direct contact.**
Effects and Hazards of Inhalation (Breathing): **Mechanical irritation of respiratory tract may occur if dust is inhaled.**
Effects and Hazards of Skin Contact: **Prolonged contact may cause mild irritation and itching.**

Material Safety Data Sheet

80207 StoGuard Fabric 6" Wide

Effects and Hazards of Ingestion (Swallowing): **Ingestion may cause temporary irritation of the digestive tract. If symptoms develop, consult physician.**

HMIS Health: 1 Flammability: 0 Reactivity: 0 PPE: J

Section VIII - Emergency and First Aid Procedures

Treatment for Eye

Contact: **Flush with warm running water for fifteen minutes. Do not rub. If irritation persists, consult a physician.**

Treatment for Inhalation (Breathing):

Fibers may cause mechanical irritation to the mouth, nose and throat. Remove person to fresh air.

Treatment for Skin

Contact: **Wash with mild soap and running water. Use a washcloth to help remove fibers. If irritation persists, consult a physician.**

Treatment for Ingestion (Swallowing):

Unlikely entry route. If symptoms develop, consult a physician.

Section IX - Precautions for Safe Handling and Use

Steps to be taken in case material is released or spilled (Dry Stage):

Spills should be cleaned with a vacuum or by wet sweeping.

Steps to be taken in case material is released or spilled (Wet Stage):

N/A

Waste Disposal

Method: **Per local, state and federal regulations.**

Precautions To Be Taken

In Handling and Storing: **Store in a cool, dry place with adequate ventilation. Use PPE appropriate for your situation.**

Other Precautions: **This material is an industrial product designed to be used by professionals familiar with the requirements of this material safety data sheet.**

Respiratory Protection: **Where dust levels exceed TLV, use a NIOSH approved respirator and PPE against nuisance dusts.**

Ventilation: **Mechanical ventilation recommended for process machinery where dust generation is expected.**

Protective Gloves: **Wear protective cotton gloves and clothing to protect against nuisance dust.**

Eye Protection: **Wear safety glasses to minimize eye contact during cutting operations.**

Other Protective

Equipment: **HEPA filter recommended.**

Work and Hygienic

Practices: **Remove and wash contaminated clothing. As with all commercial and industrial products, always wash hands before eating or smoking.**

California Proposition 65: **This product contains ingredients subject to Proposition 65.**

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Material Safety Data Sheet

80267 Sto Guard Mesh (4.25" Wide)

Section I - Manufacturer's Information

Identity: **Sto Guard Mesh (4.25" Wide)**

Common Name/Synonym: **Polymer Coated Glass Fiber Mesh**

Manufacturer's Name: **Sto Corp.**
6175 Riverside Drive, SW
Atlanta, GA 30331

Information #: **(404) 346-3666**
Emergency #: **(800) 424-9300**

DOT Hazardous Class: **Not Regulated**
CAS Number: **Not Registered**

Section II - Preparation Information

Prepared **Sto Corp. Research and Development Department**

Date Prepared: **05-Apr-13**

Section III - Hazardous Ingredients

Component - A	Ingredient	Percent ww	CAS Number	OSHA	TWA/TLV ACGIH	Other	LD50	LC50
	Glass Oxides	60-100	65997-17-3	15 mg/m ³	10 mg/m ³	NIOSH 5 mg/m ³	N/E	N/E

Section IV - Physical/Chemical Characteristics

Component - A

Boiling Point: **N/A** Vapor Density: **N/A** Vapor Pressure: **N/A** pH Level: **N/A**
Melting Point: **N/A** Evaporation Rate: **N/A** Physical State: **Solid** Solubility in Water: **N/A**
Freezing: **N/A** Specific Gravity: [H₂O=1]: **2.5** Odor Threshold: **N/A**
Appearance and Odor: **Woven Fiberglass Fabric - No Significant Odor** Coefficient of Water/Oil Distribution: **N/A**

Section V - Fire and Explosion Hazard Data

Component - A

Flammability: **N/A** Flash Point: **N/A** Autoignition Temperature: **Not known**
Limits LEL/UEL: **N/A - N/A** Sensitivity to impact: **None** Sensitivity to Static Discharge: **Material can build a static charge**

Hazardous Decomposition

Products: **CO, CO₂, H₂O, N_xO, HBr, Br₂**
Unusual Fire and Explosive Hazards: **None known**

Special Firefighting

Procedures: **SCBA, full protective gear**

Extinguishing Media: **Water spray, foam, dry chemical**

Section VI - Reactivity Data

Component - A

Hazardous Decomposition Products: **CO, CO₂, H₂O, N_xO, HBr, Br₂** Stability: **Stable** Incompatibility (Materials to Avoid): **None known**
Hazardous Polymerization: **Will not occur** Conditions to Avoid: **None known**

Section VII - Health Hazard Data

Carcinogenicity: **No** NTP: **No** IARC: **No** OSHA Regulated: **No** LD50: **N/A** LC50: **N/A**

Effects and Hazards of

Eye Contact: **Glass fibers can cause eye irritation or damage.**

Effects and Hazards of

Inhalation (Breathing): **Glass fibers may cause mechanical irritation to the mouth, nose and throat.**

Effects and Hazards of

Skin Contact: **Glass fibers may cause mild irritation and itching.**

Effects and Hazards of

Ingestion (Swallowing): **Temporary mechanical irritation of the digestive tract. Observe individual. If symptoms develop, consult a physician.**

HMS Health: 1 Flammability: 0 Reactivity: 0 PPE: J

Material Safety Data Sheet

80267 Sto Guard Mesh (4.25" Wide)

Section VIII - Emergency and First Aid Procedures

Treatment for Eye

Contact: **Flush with warm running water for 15 minutes. Do not rub. If irritation persists, consult a physician.**

Treatment for Inhalation

(Breathing): **Remove to fresh air.**

Treatment for Skin

Contact: **Wash with mild soap and running water. Use a wash cloth to help remove fibers, avoid scratching. If irritation persists, consult a physician.**

Treatment for Ingestion

(Swallowing): **Contact medical help immediately; untrained first aid personnel should not attempt to administer first aid.**

Section IX - Precautions for Safe Handling and Use

Steps to be taken in case material is released or spilled (Dry Stage):

Sweep and dispose of in proper receptacle.

Steps to be taken in case material is released or spilled (Wet Stage):

Scoop into proper receptacle.

Waste Disposal

Method: **Per local, state and federal regulations.**

Precautions To Be Taken

In Handling and Storing: **Store in a cool dry location, out of direct sunlight.**

Other Precautions: **This material is an industrial product designed to be used by professionals familiar with the requirements of this material safety data sheet.**

Respiratory Protection: **Respiratory protection is not required for normal use of this product. If material is cut, ground upon, or sanded, NIOSH/MSHA approved respirators for dust should be provided and worn. All workers required to use respiratory protection should be trained in their proper selection, use and care.**

Ventilation: **Recommended; local or mechanical when cutting the product.**

Protective Gloves: **Recommended; plastic or rubber.**

Eye Protection: **Recommended; chemical splash safety goggles.**

Other Protective

Equipment: **Recommended; protective clothing.**

Work and Hygienic

Practices: **Remove and wash contaminated clothing. As with all commercial and industrial products, always wash hands before eating or smoking.**

California Proposition 65: **This product does not contain any material considered a carcinogen by the State of California.**

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Material Safety Data Sheet

80268 Sto Guard Mesh (9.5" Wide)

Section I - Manufacturer's Information

Identity: **Sto Guard Mesh (9.5" Wide)**

Common Name/Synonym: **Polymer Coated Glass Fiber Mesh**

Manufacturer's Name: **Sto Corp.**
6175 Riverside Drive, SW
Atlanta, GA 30331

Information #: **(404) 346-3666**
Emergency #: **(800) 424-9300**

DOT Hazardous Class: **Not Regulated**
CAS Number: **Not Registered**

Section II - Preparation Information

Prepared **Sto Corp. Research and Development Department**

Date Prepared: **05-Apr-13**

Section III - Hazardous Ingredients

Component - A	Ingredient	Percent ww	CAS Number	OSHA	TWA/TLV ACGIH	Other	LD50	LC50
	Glass Oxides	60-100	65997-17-3	15 mg/m ³	10 mg/m ³	NIOSH 5 mg/m ³	N/E	N/E

Section IV - Physical/Chemical Characteristics

Component - A

Boiling Point: **N/A** Vapor Density: **N/A** Vapor Pressure: **N/A** pH Level: **N/A**
Melting Point: **N/A** Evaporation Rate: **N/A** Physical State: **Solid** Solubility in Water: **N/A**
Freezing: **N/A** Specific Gravity: [H₂O=1]: **2.5** Odor Threshold: **N/A**
Appearance and Odor: **Woven fiberglass fabric - No significant odor** Coefficient of Water/Oil Distribution: **N/A**

Section V - Fire and Explosion Hazard Data

Component - A

Flammability: **N/A** Flash Point: **N/A** Autoignition Temperature: **Not Known**
Limits LEL/UEL: **N/A - N/A** Sensitivity to impact: **None** Sensitivity to Static Discharge: **Material can build a static charge**

Hazardous Decomposition

Products: **CO, CO₂, H₂O, N_xO, HBr, Br₂**
Unusual Fire and Explosive Hazards: **None known**

Special Firefighting

Procedures: **SCBA, full protective gear**

Extinguishing Media: **Water spray, foam, dry chemical**

Section VI - Reactivity Data

Component - A

Hazardous Decomposition Products: **CO, CO₂, H₂O, N_xO, HBr, Br₂** Stability: **Stable** Incompatibility (Materials to Avoid): **None known**
Hazardous Polymerization: **Will not occur** Conditions to Avoid: **None known**

Section VII - Health Hazard Data

Carcinogenicity: **No** NTP: **No** IARC: **No** OSHA Regulated: **No** LD50: **N/A** LC50: **N/A**

Effects and Hazards of

Eye Contact: **Glass fibers can cause eye irritation or damage.**

Effects and Hazards of

Inhalation (Breathing): **Glass fibers may cause mechanical irritation to the mouth, nose and throat.**

Effects and Hazards of

Skin Contact: **Glass fibers may cause mild irritation and itching.**

Effects and Hazards of

Ingestion (Swallowing): **Temporary mechanical irritation of the digestive tract. Observe individual. If symptoms develop, consult a physician.**

HMS Health: 1 Flammability: 0 Reactivity: 0 PPE: J

Material Safety Data Sheet

80268 Sto Guard Mesh (9.5" Wide)

Section VIII - Emergency and First Aid Procedures

Treatment for Eye

Contact: **Flush with warm running water for 15 minutes. Do not rub. If irritation persists, consult a physician.**

Treatment for Inhalation

(Breathing): **Remove to fresh air.**

Treatment for Skin

Contact: **Wash with mild soap and running water. Use a washcloth to help remove fibers. Avoid scratching. If irritation persists, consult a physician.**

Treatment for Ingestion

(Swallowing):

Contact medical help immediately; untrained first aid personnel should not attempt to administer first aid.

Section IX - Precautions for Safe Handling and Use

Steps to be taken in case

material is released or

spilled (Dry Stage):

Sweep and dispose of in proper receptacle.

Steps to be taken in case

material is released or

spilled (Wet Stage):

Scoop into proper receptacle.

Waste Disposal

Method:

Per local, state and federal regulations.

Precautions To Be Taken

In Handling and Storing:

Store in a cool, dry location, out of direct sunlight.

Other Precautions:

This material is an industrial product designed to be used by professionals familiar with the requirements of this material safety data sheet.

Respiratory Protection:

Respiratory protection is not required for normal use of this product. If material is cut, ground upon or sanded, NIOSH/MSHA approved respirators for dust should be provided and worn. All workers required to use respiratory protection should be trained in their proper selection, use and care.

Ventilation:

Recommended; local or mechanical when cutting the product.

Protective Gloves:

Recommended; plastic or rubber.

Eye Protection:

Recommended; chemical splash safety goggles.

Other Protective

Equipment:

Recommended; protective clothing.

Work and Hygienic

Practices:

Remove and wash contaminated clothing. As with all commercial and industrial products, always wash hands before eating or smoking.

California Proposition 65:

This product does not contain any material which is considered a carcinogen by the State of California.

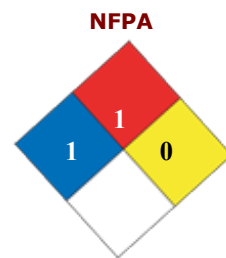
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SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product Name: Sto Primer/Adhesive-B
Product Code: 80101
SDS Manufacturer Number: 80101
Product Use/Restriction: Polymer Modified Cementitious Based Groundcoat/Adhesive
Manufacturer Name: Sto Corp.
Address: 6175 Riverside Drive, SW
Atlanta, Georgia 30331
General Phone Number: (404) 346-3666
Emergency Phone Number: (800) 424-9300
SDS Creation Date: July 08, 2013
SDS Revision Date: July 08, 2013
(M)SDS Format:



HMIS

Health Hazard	1
Fire Hazard	0
Reactivity	0
Personal Protection	1

SECTION 2 - HAZARD(S) IDENTIFICATION

GHS Pictograms:



GHS Class: Eye Damage, Category 1
 Skin Irritant, Category 2
 Acute Toxicity Oral, Category 4

Hazard Statements: Causes serious eye damage
 Causes skin irritation
 May cause an allergic skin reaction
 May cause respiratory irritation
 May cause drowsiness or dizziness

Precautionary Statements: Wash hands thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Store locked up.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Immediately call a POISON CENTER or doctor/physician.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 Call a POISON CENTER or doctor/physician if you feel unwell.

If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Contaminated work clothing should not be allowed out of the workplace.
Use only outdoors or in a well-ventilated area.
Store locked up.
Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.

Emergency Overview:	Irritant.
Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Potential Health Effects:	
Eye:	May cause irritation, burns and permanent tissue damage.
Skin:	May cause irritation, dry skin, redness, discomfort or burns.
Inhalation:	Prolonged or repeated inhalation may cause lung damage. Prolonged and repeated inhalation of respirable crystalline silica can cause silicosis, a chronic lung disease characterized by fibrosis and scarring of the lung tissue resulting in a decrease in lung function, breathlessness, wheezing, coughing and sputum production.
Ingestion:	May cause irritation. Ingesting large amounts may cause injury.
Signs/Symptoms:	Product is alkali when wet, excessive and prolonged exposure can cause severe irritation, burns and permanent tissue damage
Aggravation of Pre-Existing Conditions:	May aggravate pre-existing respiratory disorders, allergy, eczema, or skin conditions.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Calcium sulfate	7778-18-9	1 - 5 by weight	
Crystalline silica (Quartz)	14808-60-7	60 - 100 by weight	
Ethylene vinyl acetate copolymer	24937-78-8	1 - 5 by weight	
Portland cement	65997-15-1	10 - 30 by weight	

SECTION 4 - FIRST AID MEASURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

Flammable Properties:	Non Flammable.
Flash Point:	No information.
Flash Point Method:	Data not available.
Auto Ignition Temperature:	Data not available.
Lower Flammable/Explosive Limit:	Data not available.
Upper Flammable/Explosive Limit:	Data not available.
Extinguishing Media:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Hazardous Combustion Byproducts:	Oxides of carbon, oxides of nitrogen and other organic substances may be formed.

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0
NFPA Other:	

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Use proper personal protective equipment as listed in section 8. Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry.
Methods for cleanup:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section.

SECTION 7 - HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use.
Work Practices:	Use good laboratory practice when working with chemicals. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Special Handling Procedures:	Material is alkaline when mixed with water. Use precaution and proper protective equipment

Hygiene Practices: Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Otherwise, use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls including use of a biosafety cabinet / fume hood to control airborne levels below recommended exposure limits.

Eye/Face Protection: Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

Skin Protection Description: Protective laboratory coat, apron, or disposable garment recommended.

Hand Protection Description: Use impervious gloves. Nitrile gloves are recommended.

Respiratory Protection: A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Other Protective: Follow good industrial hygiene practices when handling this material.

PPE Pictograms:



EXPOSURE GUIDELINES

Calcium sulfate :

Guideline ACGIH: TLV-TWA: 10 mg/m³ Inhalable fraction (I)
Guideline OSHA: PEL-TWA: 15 mg/m³ Total particulate/dust (T)
PEL-TWA: 5 mg/m³ Respirable fraction (R)

Crystalline silica (Quartz) :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ Respirable fraction (R)

Portland cement :

Guideline ACGIH: TLV-TWA: 10 mg/m³
TLV-TWA: 1 mg/m³ Respirable fraction (R)
Guideline OSHA: PEL-TWA: 5 mg/m³ Respirable fraction (R)
PEL-TWA: 50 mppcf Total particulate/dust (T)
PEL-TWA: 15 mg/m³ Total particulate/dust (T)

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance: Solid or powder.

Color: Gray

Odor: Little to no odor.

Boiling Point: > 1832 °F (>1000 °C)

Melting Point: No Data

Specific Gravity: No Data

Solubility:	0.1 to 1.0% in water.
Vapor Density:	No Data
Vapor Pressure:	None.
Evaporation Rate:	No Data
pH:	No Data
Flash Point:	No information.
Flash Point Method:	Data not available.
Auto Ignition Temperature:	Data not available.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Avoid high temperature condition. Avoid contact with incompatible materials.
Incompatible Materials:	Not applicable.
Special Decomposition Products:	Oxides of carbon, oxides of nitrogen and other organic substances may be formed.

SECTION 11 - TOXICOLOGICAL INFORMATION

Crystalline silica (Quartz) :

RTECS Number: VV7330000

Inhalation:	<p>Inhalation - Rat TCLo - Lowest published toxic concentration : 248 mg/m³/6H [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Other proteins Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation]</p> <p>Inhalation - Rat TCLo - Lowest published toxic concentration : 248 mg/m³/6H [Lungs, Thorax, or Respiration - Changes in lung weight Immunological Including Allergic - Increase in cellular immune response Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation]</p> <p>Inhalation - Rat TCLo - Lowest published toxic concentration : 200 mg/kg [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Other changes Nutritional and Gross Metabolic - Changes in iron]</p> <p>Inhalation - Mouse TCLo - Lowest published toxic concentration : 40 mg/kg [Lungs, Thorax, or Respiration - Other changes]</p> <p>Inhalation - Mouse TCLo - Lowest published toxic concentration : 40 mg/kg [Immunological Including Allergic - Decrease in cellular immune response]</p> <p>Inhalation - Rat TCLo - Lowest published toxic concentration : 1 mg/kg (RTECS)</p>
Ingestion:	<p>Oral - Rat TDLo - Lowest published toxic dose : 120 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)</p>

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: No ecotoxicity data was found for the product.
Environmental Fate: No environmental information found for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines. Triple-rinse drum prior to offering for recycle, reconditioning or disposal. Dispose of rinsate in an environmentally acceptable manner consistent with applicable waste management.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Non regulated.
DOT Hazard Class: Non regulated.
IATA Shipping Name: Non regulated.
IMDG UN Number : Non regulated.

SECTION 15 - REGULATORY INFORMATION

SARA: This product does not contain any chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III (40CFR, Part 372).
California PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the State of California to cause cancer.

Calcium sulfate :

TSCA Inventory Status: Listed
Canada DSL: Listed

Crystalline silica (Quartz) :

TSCA Inventory Status: Listed
Canada DSL: Listed

Ethylene vinyl acetate copolymer :

TSCA Inventory Status: Listed

Canada DSL: Listed

Portland cement :

TSCA Inventory Status: Listed

Canada DSL: Listed

SECTION 16 - ADDITIONAL INFORMATION

HMIS Health Hazard: 1

HMIS Fire Hazard: 0

HMIS Reactivity: 0

HMIS Personal Protection: 1

SDS Creation Date: July 08, 2013

SDS Revision Date: July 08, 2013

Disclaimer: The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.

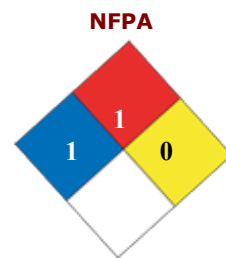
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SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product Name: Sto BTS-Xtra
Product Code: 80731
SDS Manufacturer Number: 80731
Product Use/Restriction: Polymer Modified Cementitious Based Groundcoat/Adhesive
Manufacturer Name: Sto Corp.
Address: 6175 Riverside Drive, SW
Atlanta, Georgia 30331
General Phone Number: (404) 346-3666
Emergency Phone Number: (800) 424-9300
SDS Creation Date: July 08, 2013
SDS Revision Date: July 08, 2013
(M)SDS Format:



HMIS

Health Hazard	1
Fire Hazard	0
Reactivity	0
Personal Protection	1

SECTION 2 - HAZARD(S) IDENTIFICATION

GHS Pictograms:



GHS Class: Eye Damage, Category 1
 Skin Irritant, Category 2
 Acute Toxicity Oral, Category 4

Hazard Statements: Causes serious eye damage
 Causes skin irritation
 May cause an allergic skin reaction
 May cause respiratory irritation
 May cause drowsiness or dizziness

Precautionary Statements: Wash hands thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Store locked up.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Immediately call a POISON CENTER or doctor/physician.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 Call a POISON CENTER or doctor/physician if you feel unwell.

If skin irritation occurs: Get medical advice/attention.
 Take off contaminated clothing and wash it before reuse.
 Contaminated work clothing should not be allowed out of the workplace.
 Use only outdoors or in a well-ventilated area.
 Store locked up.
 Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.

Emergency Overview: Irritant.

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eye: May cause irritation, burns and permanent tissue damage.

Skin: May cause irritation, dry skin, redness, discomfort or burns.

Inhalation: Prolonged or repeated inhalation may cause lung damage. Prolonged and repeated inhalation of respirable crystalline silica can cause silicosis, a chronic lung disease characterized by fibrosis and scarring of the lung tissue resulting in a decrease in lung function, breathlessness, wheezing, coughing and sputum production.

Ingestion: May cause irritation. Ingesting large amounts may cause injury.

Signs/Symptoms: Product is alkali when wet, excessive and prolonged exposure can cause severe irritation, burns and permanent tissue damage

Aggravation of Pre-Existing Conditions: May aggravate pre-existing respiratory disorders, allergy, eczema, or skin conditions.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Aluminum oxide	1344-28-1	1 - 5 by weight	
Aluminum Silicate	1302-76-7	1 - 5 by weight	
Calcium oxide CaO	1305-78-8	1 - 5 by weight	
Calcium sulfate	7778-18-9	1 - 5 by weight	
Crystalline silica (Quartz)	14808-60-7	30 - 60 by weight	
Ethylene vinyl acetate copolymer	24937-78-8	1 - 5 by weight	
Portland cement	65997-15-1	10 - 30 by weight	
Silicon dioxide amorphous	60676-86-0	1 - 5 by weight	

SECTION 4 - FIRST AID MEASURES

Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.

Skin Contact: Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Ingestion: If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

Flammable Properties:	Non Flammable.
Flash Point:	No information.
Flash Point Method:	Data not available.
Auto Ignition Temperature:	Data not available.
Lower Flammable/Explosive Limit:	Data not available.
Upper Flammable/Explosive Limit:	Data not available.
Extinguishing Media:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Hazardous Combustion Byproducts:	Oxides of carbon, oxides of nitrogen and other organic substances may be formed.

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0
NFPA Other:	

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Use proper personal protective equipment as listed in section 8. Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry.
Methods for cleanup:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section.

SECTION 7 - HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use.

Work Practices:	Use good laboratory practice when working with chemicals. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Special Handling Procedures:	Material is alkaline when mixed with water. Use precaution and proper protective equipment
Hygiene Practices:	Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Good general ventilation should be sufficient to control airborne levels. Otherwise, use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls including use of a biosafety cabinet / fume hood to control airborne levels below recommended exposure limits.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Protective laboratory coat, apron, or disposable garment recommended.
Hand Protection Description:	Use impervious gloves. Nitrile gloves are recommended.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Follow good industrial hygiene practices when handling this material.
PPE Pictograms:	



EXPOSURE GUIDELINES

Aluminum oxide :

Guideline ACGIH:	TLV-TWA: 10 mg/m ³
Guideline OSHA:	PEL-TWA: 5 mg/m ³ Respirable fraction (R) PEL-TWA: 15 mg/m ³ Total particulate/dust (T)

Calcium oxide CaO :

Guideline ACGIH:	TLV-TWA: 2 mg/m ³
Guideline OSHA:	PEL-TWA: 5 mg/m ³

Calcium sulfate :

Guideline ACGIH:	TLV-TWA: 10 mg/m ³ Inhalable fraction (I)
Guideline OSHA:	PEL-TWA: 15 mg/m ³ Total particulate/dust (T) PEL-TWA: 5 mg/m ³ Respirable fraction (R)

Crystalline silica (Quartz) :

Guideline ACGIH:	TLV-TWA: 0.025 mg/m ³ Respirable fraction (R)
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Portland cement :

Guideline ACGIH:	TLV-TWA: 10 mg/m ³ TLV-TWA: 1 mg/m ³ Respirable fraction (R)
Guideline OSHA:	PEL-TWA: 5 mg/m ³ Respirable fraction (R) PEL-TWA: 50 mppcf Total particulate/dust (T) PEL-TWA: 15 mg/m ³ Total particulate/dust (T)

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Solid or powder.
Color:	Gray
Odor:	Little to no odor.
Boiling Point:	> 1832 °F (>1000 °C)
Melting Point:	No Data
Specific Gravity:	No Data
Solubility:	0.1 to 1.0% in water.
Vapor Density:	No Data
Vapor Pressure:	None.
Evaporation Rate:	No Data
pH:	No Data
Flash Point:	No information.
Flash Point Method:	Data not available.
Auto Ignition Temperature:	Data not available.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Avoid high temperature condition. Avoid contact with incompatible materials.
Incompatible Materials:	Not applicable.
Special Decomposition Products:	Oxides of carbon, oxides of nitrogen and other organic substances may be formed.

SECTION 11 - TOXICOLOGICAL INFORMATION

Aluminum oxide :

RTECS Number:	BD1200000
Inhalation:	Inhalation - Rabbit TCl ₀ - Lowest published toxic concentration : 200 mg/m ³ /5H/28W (Intermittent) [Lungs, Thorax, or Respiration - Structural or functional change in trachea or bronchi Lungs, Thorax, or Respiration - Chronic pulmonary edema Related to Chronic Data - death] Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 200 mg/m ³ /5H/28W (Intermittent) [Lungs, Thorax, or Respiration - Structural or functional change in trachea or bronchi Lungs, Thorax, or Respiration - Chronic pulmonary edema Related to Chronic Data - death] (RTECS)

Calcium oxide CaO :

RTECS Number: EW3100000

Crystalline silica (Quartz) :

RTECS Number: VV7330000

Inhalation: Inhalation - Rat TCLO - Lowest published toxic concentration : 248 mg/m³/6H [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Other proteins Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation]
Inhalation - Rat TCLO - Lowest published toxic concentration : 248 mg/m³/6H [Lungs, Thorax, or Respiration - Changes in lung weight Immunological Including Allergic - Increase in cellular immune response Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation]
Inhalation - Rat TCLO - Lowest published toxic concentration : 200 mg/kg [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Other changes Nutritional and Gross Metabolic - Changes in iron]
Inhalation - Mouse TCLO - Lowest published toxic concentration : 40 mg/kg [Lungs, Thorax, or Respiration - Other changes]
Inhalation - Mouse TCLO - Lowest published toxic concentration : 40 mg/kg [Immunological Including Allergic - Decrease in cellular immune response]
Inhalation - Rat TCLO - Lowest published toxic concentration : 1 mg/kg (RTECS)

Ingestion: Oral - Rat TDLo - Lowest published toxic dose : 120 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

Silicon dioxide amorphous :

RTECS Number: VV7328000

Inhalation: Inhalation - Rat TCLO - Lowest published toxic concentration : 197 mg/m³/6H/26W (Intermittent) [Lungs, Thorax, or Respiration - Changes in lung weight] (RTECS)

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: No ecotoxicity data was found for the product.

Environmental Fate: No environmental information found for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines. Triple-rinse drum prior to offering for recycle, reconditioning or disposal. Dispose of rinsate in an environmentally acceptable manner consistent with applicable waste management.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Non regulated.

DOT Hazard Class: Non regulated.

IATA Shipping Name: Non regulated.

IMDG UN Number : Non regulated.

SECTION 15 - REGULATORY INFORMATION

SARA: This product contains chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III (40CFR, Part 372).

California PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the State of California to cause cancer.

Aluminum oxide :

TSCA Inventory Status: Listed

Canada DSL: Listed

Aluminum Silicate :

Canada DSL: Listed

Calcium oxide CaO :

TSCA Inventory Status: Listed

Canada DSL: Listed

Calcium sulfate :

TSCA Inventory Status: Listed

Canada DSL: Listed

Crystalline silica (Quartz) :

TSCA Inventory Status: Listed

Canada DSL: Listed

Ethylene vinyl acetate copolymer :

TSCA Inventory Status: Listed

Canada DSL: Listed

Portland cement :

TSCA Inventory Status: Listed

Canada DSL: Listed

Silicon dioxide amorphous :

TSCA Inventory Status: Listed

Canada DSL: Listed

SECTION 16 - ADDITIONAL INFORMATION

HMIS Health Hazard: 1
HMIS Fire Hazard: 0
HMIS Reactivity: 0
HMIS Personal Protection: 1
SDS Creation Date: July 08, 2013
SDS Revision Date: July 08, 2013

Disclaimer: The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.

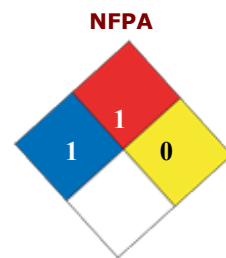
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SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product Name: Sto BTS Fast Set
Product Code: 80728
SDS Manufacturer Number: 80728
Product Use/Restriction: Polymer Modified Cementitious Based Groundcoat/Adhesive
Manufacturer Name: Sto Corp.
Address: 6175 Riverside Drive, SW
Atlanta, Georgia 30331
General Phone Number: (404) 346-3666
Emergency Phone Number: (800) 424-9300
SDS Creation Date: July 08, 2013
SDS Revision Date: July 08, 2013
(M)SDS Format:



HMIS

Health Hazard	1
Fire Hazard	0
Reactivity	0
Personal Protection	1

SECTION 2 - HAZARD(S) IDENTIFICATION

GHS Pictograms:



GHS Class: Eye Damage, Category 1
 Skin Irritant, Category 2
 Acute Toxicity Oral, Category 4

Hazard Statements: Causes serious eye damage
 Causes skin irritation
 May cause an allergic skin reaction
 May cause respiratory irritation
 May cause drowsiness or dizziness

Precautionary Statements: Wash hands thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Store locked up.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Immediately call a POISON CENTER or doctor/physician.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 Call a POISON CENTER or doctor/physician if you feel unwell.

If skin irritation occurs: Get medical advice/attention.
 Take off contaminated clothing and wash it before reuse.
 Contaminated work clothing should not be allowed out of the workplace.
 Use only outdoors or in a well-ventilated area.
 Store locked up.
 Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.

Emergency Overview: Irritant.

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eye: May cause irritation, burns and permanent tissue damage.

Skin: May cause irritation, dry skin, redness, discomfort or burns.

Inhalation: Prolonged or repeated inhalation may cause lung damage. Prolonged and repeated inhalation of respirable crystalline silica can cause silicosis, a chronic lung disease characterized by fibrosis and scarring of the lung tissue resulting in a decrease in lung function, breathlessness, wheezing, coughing and sputum production.

Ingestion: May cause irritation. Ingesting large amounts may cause injury.

Signs/Symptoms: Product is alkali when wet, excessive and prolonged exposure can cause severe irritation, burns and permanent tissue damage

Aggravation of Pre-Existing Conditions: May aggravate pre-existing respiratory disorders, allergy, eczema, or skin conditions.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Aluminum Silicate	1302-76-7	1 - 5 by weight	
Calcium Hydroxide	1305-62-0	1 - 5 by weight	
Calcium sulfate	7778-18-9	1 - 5 by weight	
Crystalline silica (Quartz)	14808-60-7	30 - 60 by weight	
Ethylene vinyl acetate copolymer	24937-78-8	1 - 5 by weight	
Fused calcium aluminate	12042-68-1	1 - 5 by weight	
Magnesium hydroxide	1309-42-8	1 - 5 by weight	
Portland cement	65997-15-1	10 - 30 by weight	

SECTION 4 - FIRST AID MEASURES

Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.

Skin Contact: Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Ingestion: If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

Flammable Properties:	Non Flammable.
Flash Point:	No information.
Flash Point Method:	Data not available.
Auto Ignition Temperature:	Data not available.
Lower Flammable/Explosive Limit:	Data not available.
Upper Flammable/Explosive Limit:	Data not available.
Extinguishing Media:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Hazardous Combustion Byproducts:	Oxides of carbon, oxides of nitrogen and other organic substances may be formed.

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0
NFPA Other:	

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Use proper personal protective equipment as listed in section 8. Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry.
Methods for cleanup:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section.

SECTION 7 - HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use.

Work Practices:	Use good laboratory practice when working with chemicals. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Special Handling Procedures:	Material is alkaline when mixed with water. Use precaution and proper protective equipment
Hygiene Practices:	Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Good general ventilation should be sufficient to control airborne levels. Otherwise, use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls including use of a biosafety cabinet / fume hood to control airborne levels below recommended exposure limits.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Protective laboratory coat, apron, or disposable garment recommended.
Hand Protection Description:	Use impervious gloves. Nitrile gloves are recommended.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Follow good industrial hygiene practices when handling this material.
PPE Pictograms:	



EXPOSURE GUIDELINES

Calcium Hydroxide :

Guideline ACGIH:	TLV-TWA: 5 mg/m ³
Guideline OSHA:	PEL-TWA: 5 mg/m ³ Respirable fraction (R) PEL-TWA: 15 mg/m ³ Total particulate/dust (T)

Calcium sulfate :

Guideline ACGIH:	TLV-TWA: 10 mg/m ³ Inhalable fraction (I)
Guideline OSHA:	PEL-TWA: 15 mg/m ³ Total particulate/dust (T) PEL-TWA: 5 mg/m ³ Respirable fraction (R)

Crystalline silica (Quartz) :

Guideline ACGIH:	TLV-TWA: 0.025 mg/m ³ Respirable fraction (R)
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Portland cement :

Guideline ACGIH:	TLV-TWA: 10 mg/m ³ TLV-TWA: 1 mg/m ³ Respirable fraction (R)
Guideline OSHA:	PEL-TWA: 5 mg/m ³ Respirable fraction (R) PEL-TWA: 50 mppcf Total particulate/dust (T) PEL-TWA: 15 mg/m ³ Total particulate/dust (T)

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Solid or powder.
Color:	Gray
Odor:	Little to no odor.
Boiling Point:	> 1832 °F (>1000 °C)
Melting Point:	No Data
Specific Gravity:	No Data
Solubility:	0.1 to 1.0% in water.
Vapor Density:	No Data
Vapor Pressure:	None.
Evaporation Rate:	No Data
pH:	No Data
Flash Point:	No information.
Flash Point Method:	Data not available.
Auto Ignition Temperature:	Data not available.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Avoid high temperature condition. Avoid contact with incompatible materials.
Incompatible Materials:	Not applicable.
Special Decomposition Products:	Oxides of carbon, oxides of nitrogen and other organic substances may be formed.

SECTION 11 - TOXICOLOGICAL INFORMATION

Calcium Hydroxide :

RTECS Number:	EW2800000
Eye:	Administration into the eye - Rabbit Standard Draize test : 10 mg [Severe] (RTECS)
Ingestion:	Oral - Rat LD50 - Lethal dose, 50 percent kill : 7340 mg/kg [Details of toxic effects not reported other than lethal dose value] Oral - Mouse LD50 - Lethal dose, 50 percent kill : 7300 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Crystalline silica (Quartz) :

RTECS Number:	VV7330000
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Inhalation: Inhalation - Rat TCl₀ - Lowest published toxic concentration : 248 mg/m³/6H [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Other proteins Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation]
Inhalation - Rat TCl₀ - Lowest published toxic concentration : 248 mg/m³/6H [Lungs, Thorax, or Respiration - Changes in lung weight Immunological Including Allergic - Increase in cellular immune response Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation]
Inhalation - Rat TCl₀ - Lowest published toxic concentration : 200 mg/kg [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Other changes Nutritional and Gross Metabolic - Changes in iron]
Inhalation - Mouse TCl₀ - Lowest published toxic concentration : 40 mg/kg [Lungs, Thorax, or Respiration - Other changes]
Inhalation - Mouse TCl₀ - Lowest published toxic concentration : 40 mg/kg [Immunological Including Allergic - Decrease in cellular immune response]
Inhalation - Rat TCl₀ - Lowest published toxic concentration : 1 mg/kg (RTECS)

Ingestion: Oral - Rat TDLo - Lowest published toxic dose : 120 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

Magnesium hydroxide :

RTECS Number: OM3570000

Ingestion: Oral - Rat LD50 - Lethal dose, 50 percent kill : 8500 mg/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Mouse LD50 - Lethal dose, 50 percent kill : 8500 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: No ecotoxicity data was found for the product.

Environmental Fate: No environmental information found for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines. Triple-rinse drum prior to offering for recycle, reconditioning or disposal. Dispose of rinsate in an environmentally acceptable manner consistent with applicable waste management.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Non regulated.

DOT Hazard Class: Non regulated.

IATA Shipping Name: Non regulated.

IMDG UN Number : Non regulated.

SECTION 15 - REGULATORY INFORMATION

SARA: This product does not contain any chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III (40CFR, Part 372).

California PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the State of California to cause cancer.

Aluminum Silicate :

Canada DSL: Listed

Calcium Hydroxide :

TSCA Inventory Status: Listed

Canada DSL: Listed

Calcium sulfate :

TSCA Inventory Status: Listed

Canada DSL: Listed

Crystalline silica (Quartz) :

TSCA Inventory Status: Listed

Canada DSL: Listed

Ethylene vinyl acetate copolymer :

TSCA Inventory Status: Listed

Canada DSL: Listed

Fused calcium aluminate :

TSCA Inventory Status: Listed

Canada DSL: Listed

Magnesium hydroxide :

TSCA Inventory Status: Listed

Canada DSL: Listed

Portland cement :

TSCA Inventory Status: Listed

Canada DSL: Listed

SECTION 16 - ADDITIONAL INFORMATION

HMIS Health Hazard: 1

HMIS Fire Hazard: 0
HMIS Reactivity: 0
HMIS Personal Protection: 1
SDS Creation Date: July 08, 2013
SDS Revision Date: July 08, 2013

Disclaimer: The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.

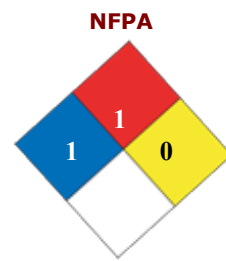
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SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product Name: Sto RFP
Product Code: 80225
SDS Manufacturer Number: 80225
Product Use/Restriction: Waterbased Acrylic Coating.
Manufacturer Name: Sto Corp.
Address: 6175 Riverside Drive, SW
 Atlanta, Georgia 30331
General Phone Number: (404) 346-3666
Emergency Phone Number: (800) 424-9300
SDS Creation Date: July 08, 2013
SDS Revision Date: July 08, 2013
(M)SDS Format:



HMIS

Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	X

SECTION 2 - HAZARD(S) IDENTIFICATION

GHS Pictograms:



GHS Class: Eye Irritant, Category 2
 Skin Irritant, Category 2

Hazard Statements: Causes eye irritation
 Causes skin irritation

Precautionary Statements: Wash hands thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.

Emergency Overview: WARNING! Irritant.

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eye:	May cause irritation.
Skin:	May cause irritation.
Inhalation:	Prolonged or excessive inhalation may cause respiratory tract irritation.
Ingestion:	Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Acrylic polymer	No Data	5 - 10 by weight	
Calcium carbonate	1317-65-3	30 - 60 by weight	
Crystalline silica (Quartz)	14808-60-7	5 - 10 by weight	
Muscovite Mica	12001-26-2	1 - 5 by weight	
Titanium Oxide	13463-67-7	0.1 - 1.0 by weight	
Undisclosed/Non-hazardous	No Data	1 - 5 by weight	
Water	7732-18-5	10 - 30 by weight	

SECTION 4 - FIRST AID MEASURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
Other First Aid:	First Responders should provide for their own safety prior to rendering assistance.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point:	Not determined.
Auto Ignition Temperature:	Not determined.
Lower Flammable/Explosive Limit:	Not determined.
Upper Flammable/Explosive Limit:	Not determined.

Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Extinguishing Media:	Use dry chemical or foam when fighting fires involving this material. Water mist may be used to cool closed containers.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire Hazards:	Material may spatter above 100 °C/212 °F

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry.
Methods for cleanup:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section.

SECTION 7 - HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Store away from direct heat or sunlight, sources of UV radiation, peroxides, or free radicals. Do not store in temperatures above 120 °F or below 48 °F. Keep away from direct sunlight.
Work Practices:	Handle in accordance with good industrial hygiene and safety practices.
Hygiene Practices:	Wash thoroughly after handling.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
------------------------------	--

Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
Hand Protection Description:	Nitrile rubber or natural rubber gloves are recommended.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

PPE Pictograms:



EXPOSURE GUIDELINES

Crystalline silica (Quartz) :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ Respirable fraction (R)

Muscovite Mica :

Guideline ACGIH: TLV-TWA: 3 mg/m³ Respirable fraction (R)

Guideline OSHA: PEL-TWA: 20 mppcf

Titanium Oxide :

Guideline ACGIH: TLV-TWA: 10 mg/m³

Notes : Only established PEL and TLV values for the ingredients are listed.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Liquid.
Odor:	Slight
Boiling Point:	Not determined.
Melting Point:	0°C (32°F)
Specific Gravity:	> 1
Solubility:	Miscible in water
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Percent Volatile:	Data not available.
Evaporation Rate:	Not determined.
pH:	7.5 - 10
Flash Point:	Not determined.
Auto Ignition Temperature:	Not determined.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability:	Stable under recommended handling and storage conditions.
Hazardous Polymerization:	Hazardous polymerization does not occur.
Conditions to Avoid:	Heat, flames, ignition sources, and sparks. Incompatible materials. Freezing or temperatures below 32 deg. F.
Incompatible Materials:	Water reactive materials.
Special Decomposition Products:	Thermal decomposition can lead to release irritant fumes and toxic gases.

SECTION 11 - TOXICOLOGICAL INFORMATION

Calcium carbonate :

RTECS Number:	EV9580000
Inhalation:	Inhalation - Rat TCl _o - Lowest published toxic concentration : 250 mg/m ³ /2H/24W (Intermittent) [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis)] Inhalation - Rat TCl _o - Lowest published toxic concentration : 84 mg/m ³ /4H/40W (Intermittent) [Lungs, Thorax, or Respiration - Fibrosis (interstitial) Liver - Other changes Kidney/Ureter/Bladder - Other changes] (RTECS)

Crystalline silica (Quartz) :

RTECS Number:	VV7330000
Inhalation:	Inhalation - Rat TCl _o - Lowest published toxic concentration : 248 mg/m ³ /6H [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Other proteins Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] Inhalation - Rat TCl _o - Lowest published toxic concentration : 248 mg/m ³ /6H [Lungs, Thorax, or Respiration - Changes in lung weight Immunological Including Allergic - Increase in cellular immune response Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] Inhalation - Rat TCl _o - Lowest published toxic concentration : 200 mg/kg [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Other changes Nutritional and Gross Metabolic - Changes in iron] Inhalation - Mouse TCl _o - Lowest published toxic concentration : 40 mg/kg [Lungs, Thorax, or Respiration - Other changes] Inhalation - Mouse TCl _o - Lowest published toxic concentration : 40 mg/kg [Immunological Including Allergic - Decrease in cellular immune response] Inhalation - Rat TCl _o - Lowest published toxic concentration : 1 mg/kg (RTECS)
Ingestion:	Oral - Rat TDLo - Lowest published toxic dose : 120 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

Titanium Oxide :

RTECS Number:	XR2275000
Inhalation:	Inhalation - Rat TCl _o - Lowest published toxic concentration : 1 mg/kg [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] (RTECS)

Ingestion: Oral - Rat TDLo - Lowest published toxic dose : 60 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: No environmental information found for this product.

Environmental Fate: No environmental information found for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with Local, State, Federal and Provincial regulations.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Non regulated.

DOT Hazard Class: Non regulated.

IATA Shipping Name: Non regulated.

IMDG UN Number : Non regulated.

SECTION 15 - REGULATORY INFORMATION

SARA: This product does not contain any chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III (40CFR, Part 372).

California PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the State of California to cause cancer.

Canada WHMIS: Xi - Irritant

EU Class: Irritant.
In accordance to Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures

Risk Phrases: R36/37/38 - Irritating to eyes, respiratory system and skin.

Safety Phrase: S23 - Do not breathe gas/fumes/vapour/spray.
S37 - Wear suitable gloves.

Calcium carbonate :

TSCA Inventory Status: Listed

Crystalline silica (Quartz) :

TSCA Inventory Status: Listed

Canada DSL: Listed

Muscovite Mica :

Canada DSL: Listed

Titanium Oxide :

TSCA Inventory Status: Listed

Canada DSL: Listed

SECTION 16 - ADDITIONAL INFORMATION

HMIS Health Hazard: 1

HMIS Fire Hazard: 1

HMIS Reactivity: 0

HMIS Personal Protection: X

SDS Creation Date: July 08, 2013

SDS Revision Date: July 08, 2013

Disclaimer: The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.

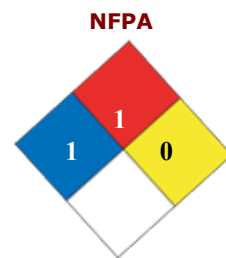
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SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product Name: Sto Dispersion Adhesive
Product Code: 80829
SDS Manufacturer Number: 80829
Product Use/Restriction: Waterbased Acrylic Adhesive
Manufacturer Name: Sto Corp.
Address: 6175 Riverside Drive, SW
 Atlanta, Georgia 30331
General Phone Number: (404) 346-3666
Emergency Phone Number: (800) 424-9300
SDS Creation Date: August 16, 2013
SDS Revision Date: August 16, 2013
(M)SDS Format:



HMIS

Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	X

SECTION 2 - HAZARD(S) IDENTIFICATION

GHS Pictograms:



GHS Class: Eye Irritant, Category 2
 Skin Irritant, Category 2

Hazard Statements: Causes eye irritation
 Causes skin irritation

Precautionary Statements: Wash hands thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.

Emergency Overview: WARNING! Irritant.

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eye:	May cause irritation.
Skin:	May cause irritation.
Inhalation:	Prolonged or excessive inhalation may cause respiratory tract irritation. Normal application procedures for this product pose no hazard as to the release of respirable titanium dioxide dust, but grinding or sanding dried films of this product may yield some respirable titanium dioxide.
Ingestion:	Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Crystalline silica (Quartz)	14808-60-7	60 - 100 by weight	
Water	7732-18-5	10 - 30 by weight	
Acrylic polymer	No Data	10 - 30 by weight	

SECTION 4 - FIRST AID MEASURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
Other First Aid:	First Responders should provide for their own safety prior to rendering assistance.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point:	Not determined.
Auto Ignition Temperature:	Not determined.
Lower Flammable/Explosive Limit:	Not determined.
Upper Flammable/Explosive Limit:	Not determined.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.

Extinguishing Media:	Use dry chemical or foam when fighting fires involving this material. Water mist may be used to cool closed containers.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire Hazards:	Material may spatter above 100 °C/212 °F

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry.
Methods for cleanup:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section.

SECTION 7 - HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Store away from direct heat or sunlight, sources of UV radiation, peroxides, or free radicals. Do not store in temperatures above 120 °F or below 48 °F. Keep away from direct sunlight.
Work Practices:	Handle in accordance with good industrial hygiene and safety practices.
Hygiene Practices:	Wash thoroughly after handling.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
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Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
Hand Protection Description:	Nitrile rubber or natural rubber gloves are recommended.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.
PPE Pictograms:	



EXPOSURE GUIDELINES

Crystalline silica (Quartz) :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ Respirable fraction (R)

Notes : Only established PEL and TLV values for the ingredients are listed.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Liquid.
Odor:	Slight
Boiling Point:	Not determined.
Melting Point:	0°C (32°F)
Specific Gravity:	> 1
Solubility:	Miscible in water
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Percent Volatile:	Data not available.
Evaporation Rate:	Not determined.
pH:	7.5 - 10
Flash Point:	Not determined.
Auto Ignition Temperature:	Not determined.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability:	Stable under recommended handling and storage conditions.
Hazardous Polymerization:	Hazardous polymerization does not occur.

Conditions to Avoid:	Heat, flames, ignition sources, and sparks. Incompatible materials. Freezing or temperatures below 32 deg. F.
Incompatible Materials:	Water reactive materials.
Special Decomposition Products:	Thermal decomposition can lead to release irritant fumes and toxic gases.

SECTION 11 - TOXICOLOGICAL INFORMATION

Crystalline silica (Quartz) :

RTECS Number:	VV7330000
Inhalation:	<p>Inhalation - Rat TCLo - Lowest published toxic concentration : 248 mg/m3/6H [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Other proteins Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation]</p> <p>Inhalation - Rat TCLo - Lowest published toxic concentration : 248 mg/m3/6H [Lungs, Thorax, or Respiration - Changes in lung weight Immunological Including Allergic - Increase in cellular immune response Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation]</p> <p>Inhalation - Rat TCLo - Lowest published toxic concentration : 200 mg/kg [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Other changes Nutritional and Gross Metabolic - Changes in iron]</p> <p>Inhalation - Mouse TCLo - Lowest published toxic concentration : 40 mg/kg [Lungs, Thorax, or Respiration - Other changes]</p> <p>Inhalation - Mouse TCLo - Lowest published toxic concentration : 40 mg/kg [Immunological Including Allergic - Decrease in cellular immune response]</p> <p>Inhalation - Rat TCLo - Lowest published toxic concentration : 1 mg/kg (RTECS)</p>
Ingestion:	<p>Oral - Rat TDLo - Lowest published toxic dose : 120 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)</p>
Chronic Effects:	Prolonged and repeated inhalation of respirable crystalline silica can cause silicosis, a chronic lung disease characterized by fibrosis and scarring of the lung tissue resulting in a decrease in lung function, breathlessness, wheezing, coughing and sputum production.
Carcinogenicity:	IARC: Group 1: Carcinogenic to humans.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:	No ecotoxicity data was found for the product.
Environmental Fate:	No environmental information found for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal:

Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines. Triple-rinse drum prior to offering for recycle, reconditioning or disposal. Dispose of rinsate in an environmentally acceptable manner consistent with applicable waste management.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Non regulated.

DOT Hazard Class: Non regulated.

IATA Shipping Name: Non regulated.

IMDG UN Number : Non regulated.

SECTION 15 - REGULATORY INFORMATION

SARA: This product does not contain any chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III (40CFR, Part 372).

California PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the State of California to cause cancer.

Canada WHMIS: Xi - Irritant

EU Class: Irritant.
In accordance to Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures

Risk Phrases: R36/37/38 - Irritating to eyes, respiratory system and skin.

Safety Phrase: S23 - Do not breathe gas/fumes/vapour/spray.
S37 - Wear suitable gloves.

Crystalline silica (Quartz) :

TSCA Inventory Status: Listed

Canada DSL: Listed

SECTION 16 - ADDITIONAL INFORMATION

HMIS Health Hazard: 1

HMIS Fire Hazard: 1

HMIS Reactivity: 0

HMIS Personal Protection: X

SDS Creation Date: August 16, 2013

SDS Revision Date: August 16, 2013

Disclaimer: The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.

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Revision Number: 001.0

Issue date: 09/12/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite® PL® Premium Polyurethane Construction Adhesive **IDH number:** 1390595
Product type: 1-component-polyurethane adhesive **Region:** United States
Company address: Henkel Corporation, One Henkel Way, Rocky Hill, Connecticut 06067
Contact information: Telephone: 800.624.7767
 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711
 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state:	high viscosity	HEALTH:	*2
Color:	Beige	FLAMMABILITY:	1
Odor:	like vegetable oil	PHYSICAL HAZARD:	1
		Personal Protection:	See MSDS Section 8

WARNING: HARMFUL IF INHALED.
 CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION.
 MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION.

Relevant routes of exposure: Inhalation, Skin, Eyes, Ingestion

Potential Health Effects

Inhalation: As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. Chronic overexposure to isocyanates has been reported to cause lung damage. Dryness of nasal passages, sore throat, cough, tightness of chest, shortness of breath. Persons suffering from allergic reactions to isocyanates should avoid contact with the product. This product may cause sensitization by inhalation and skin contact. May cause respiratory tract irritation.

Skin contact: Contact with skin can cause irritation and allergic reaction (sensitization) in some individuals. This product may discolor the skin.

Eye contact: Contact with eyes will cause irritation.

Ingestion: Ingestion of this product may cause nausea, vomiting and diarrhea.

Existing conditions aggravated by exposure: Development of preexisting skin or lung allergy symptoms may increase. Asthma.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Talc	14807-96-6	30 - 60
Methylenebis(phenylisocyanate)	101-68-8	10 - 30
Hydrocarbon C11-25 dearomatized	64742-46-7	10 - 30
Methylene bisphenyl isocyanate	26447-40-5	1 - 5
Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	1 - 5

4. FIRST AID MEASURES

Inhalation:	If inhaled, immediately remove the affected person to fresh air. Immediate medical treatment necessary.
Skin contact:	Wash affected area immediately with soap and water. If symptoms develop and persist, get medical attention. Remove contaminated clothes.
Eye contact:	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
Ingestion:	Do not induce vomiting. Rinse the mouth. Drink plenty of water. Immediate medical advice necessary.
Notes to physician:	An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate. Treatment based on judgement of the physician in response to reactions of the patient.

5. FIRE FIGHTING MEASURES

Flash point:	> 200 °F (> 93.33 °C) no method
Autoignition temperature:	No information available.
Flammable/Explosive limits - lower:	1.6 %
Flammable/Explosive limits - upper:	10.2 %
Extinguishing media:	Water fog. Foam Carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.
Unusual fire or explosion hazards:	None known
Hazardous combustion products:	Nitrous gases Irritating fumes. Isocyanate vapors.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not empty into drains / surface water / ground water.
Clean-up methods:	Ensure adequate ventilation. Scrape up spilled material and place in a closed container for disposal. Wear suitable protective clothing, gloves and eye/face protection.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid extreme temperatures. Exposure to vapors of heated MDI can be extremely dangerous. Wash thoroughly after handling. Protect from moisture. Use only with adequate ventilation.

Storage: For safe storage, store between 18.3 °C (64.9 °F) and 40 °C (104°F) Avoid moisture. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Talc	2 mg/m ³ TWA Respirable fraction.	20 MPPCF TWA 2.4 MPPCF TWA Respirable. 0.1 mg/m ³ TWA Respirable. 0.3 mg/m ³ TWA Total dust.	None	50 ppm
Methylenebis(phenylisocyanate)	0.005 ppm TWA	0.02 ppm (0.2 mg/m ³) Ceiling	None	None
Hydrocarbon C11-25 dearomatized	None	5 mg/m ³ PEL Mist.	None	None
Methylene bisphenyl isocyanate	None	None	None	None
Isocyanic acid, polymethylenepolyphenylene ester	0.005 ppm TWA	0.02 ppm (0.2 mg/m ³) Ceiling	None	None
Quartz (SiO ₂)	0.025 mg/m ³ TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m ³ TWA Respirable. 0.3 mg/m ³ TWA Total dust.	None	None

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection: Observe OSHA regulations for respirator use (29 CFR 1910.134). Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists. Respirator with combination filter for vapor/particulate. However, due to the poor warning properties of MDI, proper fit and timely replacement of filter elements must be ensured.

Eye/face protection: Safety glasses with side-shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin protection: Suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: high viscosity
Color: Beige
Odor: like vegetable oil
Odor threshold: Not available.
pH: Neutral
Vapor pressure: Not available.
Boiling point/range: 172 - 341 °C (341.6 - 645.8 °F) no method
Melting point/ range: Not applicable

Specific gravity: 1.2600
Vapor density: Heavier than air
Flash point: > 200 °F (> 93.33 °C) no method
Flammable/Explosive limits - lower: 1.6 %
Flammable/Explosive limits - upper: 10.2 %
Autoignition temperature: No information available.
Evaporation rate: Not available.
Solubility in water: Slightly soluble
Partition coefficient (n-octanol/water): Not available.
VOC content: 3.5 %; 45 g/l

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.
Hazardous reactions: Contact with moisture, other materials that react with isocyanates, or temperatures above 350° F (177° C), may cause polymerization.
Hazardous decomposition products: Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition. nitrogen oxides Aromatic isocyanates. carbon oxides.
Incompatible materials: Oxidizing agents. Alcohols. Water.
Conditions to avoid: Avoid moisture. Keep away from open flames, hot surfaces and sources of ignition. Prolonged exposure to heat.

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Talc	No	Group 2B	No
Methylenebis(phenylisocyanate)	No	No	No
Hydrocarbon C11-25 dearomatized	No	No	No
Methylene bisphenyl isocyanate	No	No	No
Isocyanic acid, polymethylenepolyphenylene ester	No	No	No
Quartz (SiO ₂)	Known To Be Human Carcinogen.	Group 1	No

Hazardous components	Health Effects/Target Organs
Talc	Irritant, Lung, Some evidence of carcinogenicity
Methylenebis(phenylisocyanate)	Irritant, Respiratory, Allergen
Hydrocarbon C11-25 dearomatized	Irritant
Methylene bisphenyl isocyanate	Allergen, Irritant, Mutagen, Respiratory
Isocyanic acid, polymethylenepolyphenylene ester	Allergen, Irritant, Kidney, Liver, Respiratory
Quartz (SiO ₂)	Immune system, Lung, Some evidence of carcinogenicity

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal:	Dispose of according to Federal, State and local governmental regulations.
Hazardous waste number:	It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name:	Environmentally hazardous substances, solid, n.o.s.
Hazard class or division:	9
Identification number:	UN 3077
Packing group:	III
DOT Reportable quantity:	Methylene diphenyl diisocyanate

International Air Transportation (ICAO/IATA)

Proper shipping name:	Environmentally hazardous substance, solid, n.o.s.
Hazard class or division:	9
Identification number:	UN 3077
Packing group:	III

Water Transportation (IMO/IMDG)

Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard class or division:	9
Identification number:	UN 3077
Packing group:	III

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification:	None above reporting de minimis
CERCLA/SARA Section 302 EHS:	None above reporting de minimis
CERCLA/SARA Section 311/312:	Immediate Health, Delayed Health
CERCLA/SARA Section 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Methylenebis(phenylisocyanate) (CAS# 101-68-8). Isocyanic acid, polymethylenepolyphenylene ester (CAS# 9016-87-9).
California Proposition 65:	This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status:	Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.
WHMIS hazard class:	D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: This Material Safety Data Sheet contains changes from the previous version in Section(s): 1, 3, 15

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

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ARVRON, INC. STEER-O-CELL®

MATERIAL SAFETY DATA SHEET

I-PRODUCT INFORMATION

PRODUCT: ARVRON, INC.
STEER-O-CELL® MODIFIED

SYNONYMS: EPS, Expanded Polystyrene

PRODUCT GRADES: Type I, VIII, II and IX

CHEMICAL FAMILY: Polystyrene Thermoplastic Polymer

CAS REGISTRY NO: 9003-53-6

CAS NAME: Benzene, Ethenyl-Homopolymer

FORMULA: (C₈H₈)_x

TSCA INVENTORY STATUS: Listed

HAZARD RATING: 2 = Moderate		HEALTH	0
0 = Minimal	3 = Serious	FIRE	2
1 = Slight	4 = Severe	REACTIVITY	0

CONTACT: ARVRON, INC.
4720 Clay S.W.
Grand Rapids, MI 49548
(616) 530-1888

II-INGREDIENTS

HAZARDOUS COMPONENTS:	CAS REGISTRY NO:	APPROX. WEIGHT PERCENTAGE
Pentane	109-66-0	Less Than 2%

NON-HAZARDOUS COMPONENTS	CAS REGISTRY NO:	APPROX. WEIGHT PERCENTAGE
Polystyrene	9003-53-6	98% Min.

III-PHYSICAL DATA

FORM: Rigid Cellular Foam Blocks, Boards & Shapes

COLOR: White

ODOR: Very Slight Hydrocarbon Odor

BOILING POINT: N/A

Melting Point: Softens at 175° to 220°

SPECIFIC GRAVITY: [Water = 1]: Density 0.6PCF to 2.0PCF

VAPOR PRESSURE: N/A

VOLATILES BY VOLUME: Less than 4% Pentane & Water

VAPOR DENSITY: (AIR = 1): N/A

EVAPORATION RATE: None

SOLUBILITY IN WATER: Insoluble

IV-FIRE & EXPLOSION DATA

FLASH POINT, AND METHOD USED: 610°F Min. [ASTMD 1929]

SPECIAL FIRE FIGHTING INSTRUCTIONS: Use approved self-contained breathing apparatus respirator and approved Personal Protective Clothing.

EXTINGUISHING MEDIA: Water Fog, Carbon Dioxide, Foam and Dry Chemical

AUTOIGNITION TEMPERATURE: 850°F. Min.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

May produce dense black smoke. Smoke consists of Carbon [soot] Carbon Monoxide Carbon Dioxide and Water. Dust generated by fabrication i.e., Sanding, Sawing, Etc. will increase fire hazard and should be handled accordingly.

V-REACTIVITY DATA

STABILITY [CONDITIONS TO AVOID]: Stable. Avoid Fire and High Temperatures.

INCOMPATIBILITY [MATERIALS TO AVOID]: Will dissolve in most organic solvents, and some insecticides, Aldehydes and Amines.

HAZARDOUS DECOMPOSITION: Carbon Monoxide Carbon Dioxide, Carbon, Water, Hydrogen Halide

HAZARDOUS POLYMERIZATION: None

MATERIAL SAFETY DATA SHEET

2 of 2

VI-HEALTH HAZARDS & FIRST AID

PRINCIPAL HEALTH HAZARDS & SIGNS & SYMPTOMS SKIN CONTACT: None

OF EXPOSURE:

INGESTION: Biologically inert. May act as an obstruction if swallowed.

EYE CONTACT: Dust or particles may cause mechanical eye irritation and/or injury.

CARCINOGENICITY: None

INHALATION: Dust from mechanical fabrication may cause upper respiratory irritation. Fumes from hot wire cutting can also cause upper respiratory irritation.

SAFETY PRECAUTIONS: Use positive ventilation. Mechanical Fabrication, Sanding, Etc. requires the use of safety glasses or goggles and dust mask.

FIRST AID

SKIN: Not expected to present skin hazard. wash exposed areas with mild soap and water. Consult physician if irritation persists.

EYES: Rinse with clean water. Remove foreign particles with clean, lint free cloth. Obtain medical attention if pain, blinking, tears or redness persist.

INGESTION: Not expected to present significant ingestion hazard. Consult physician if swallowed.

INHALATION: If overcome by exposure, remove to fresh air. Provide oxygen and artificial respiration. Get medical attention.

VII-EMPLOYEE PROTECTION

PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION: Use approved safety glasses / goggles when sawing or sanding.

RESPIRATORY PROTECTION: Use approved dust mask when sawing or sanding.

GENERAL CONTROL MEASURES: Use positive ventilation. wear safety glasses / goggles and dust mask if mechanical fabrication is to take place.

SKIN PROTECTION: None required. Wear gloves and /or sleeves, if sensitivity noted.

VIII-ENVIRONMENTAL HAZARDS & PROTECTION

ENVIRONMENTAL HAZARDS: Sewer / Water Way Obstruction; fish may eat beads and obstruct their digestive tract.

REPORTABLE QUANTITY: None

SPILL, LEAK, OR RELEASE PROCEDURES: Normal good housekeeping should be observed.

DISPOSAL METHOD: Recycle, incinerate [WTE] or landfill per local and state regulations.

Material can be swept or picked up and placed into a suitable container for disposal.

IX-SPECIAL PRECAUTIONS

STORAGE AND HANDLING: Expanded Polystyrene, although it contains a fire retardant additive, is considered to be combustible and adequate protection from sources of ignition should be taken.




TRANSPORTATION REQUIREMENTS: Not a D.O.T. "HAZARDOUS MATERIAL"

ADDITIONAL INFORMATION

The information contained herein is provided for general reference purposes only. By providing the information contained herein, ARVRON, INC. makes no guaranty or warranty, and does not assume any liability, with respect to the accuracy or completeness of such information, or the product results in any specific instance, and hereby expressly disclaims any implied warranties of merchantability or fitness for a particular purpose, or any other warranties or representations whatsoever, expressed or implied.

ARVRON, INC.
STEER-O-CELL ®

Material Safety Data Sheet

NFPA 	HMS <table border="1"><tr><td>Health Hazard</td><td>2*</td></tr><tr><td>Fire Hazard</td><td>4</td></tr><tr><td>Reactivity</td><td>1</td></tr></table>	Health Hazard	2*	Fire Hazard	4	Reactivity	1	PPE 	Transport Symbol 
Health Hazard	2*								
Fire Hazard	4								
Reactivity	1								

IssuingDate 27-Feb-2007

RevisionDate 07-March-2013

RevisionNumber 5

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Wind-lock Foam 2 Foam

Recommended Use Insulation

Supplier Address Wind-lock Corp
81055 Leiscz's Bridge Rd
Leesport, PA 19533
USA TEL: (800) 872-5625

Emergency Telephone Number Chemtel 1-800-255-3924
(813) 248-0585 outside US

2. HAZARD IDENTIFICATION

WARNING!

Emergency Overview

Flammable gas. May cause flash fire.
Contents under pressure. Avoid temperatures above (120°F)
Irritating to eyes, respiratory system and skin. May cause an allergic skin or respiratory reaction.
Vapor reduces oxygen available for breathing. Lower oxygen levels may cause anesthetic effects.
May cause drowsiness and dizziness. Keep up wind of spill. Stay out of low areas.

Appearance Orange

Physical State Liquid Aerosol

Odor Faint hydrocarbon

Potential Health Effects

Principle Routes of Exposure

Inhalation, Skin contact, Eye contact.

Acute Toxicity

Eyes
Skin

Irritating to eyes. May cause slight temporary corneal injury due to adhesive character. Prolonged skin contact may cause moderate skin irritation with local redness. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Will bond to skin causing irritation upon removal.

Skin Absorption

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Inhalation

Excessive exposure may cause irritation to upper respiratory tract. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Inhalation of vapors in high concentration may cause shortness of breath (lung edema).

Respiratory Sensitization:

May cause allergy or asthma symptoms or breathing difficulties if inhaled. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest.

Ingestion	Maybe harmful if swallowed. May cause additional effects as listed under "Inhalation". Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Product may cure in the gastrointestinal tract and form an obstruction. May cause adverse cardiac effects, blood disturbances, and metabolic acidosis.
Chronic Effects	Tissue injury in the upper respiratory tract and lung has been observed in laboratory animals after repeated excessive exposures to MDI / Polymeric MDI aerosols. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Chronic hydrocarbon abuse has been associated with irregular heart rhythms and potential cardiac arrest. Repeated or prolonged contact causes sensitization, asthma and eczemas.
Birth /Developmental Effects:	In laboratory animals, MDI/Polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses that were toxic to the mother.
Aggravated Medical Conditions	Allergies. Skin disorders. Respiratory disorders. Central nervous system. Preexisting eye disorders. Kidney disorders. Liver disorders.
Interactions with Other Chemicals	Irritants. Sensitizers. Epoxies. Use of alcoholic beverages may enhance toxic effects.

3.COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight%
Flame Retardant	Proprietary	5-10
Polymethylene polyphenylene isocyanate	9016-87-9	10-30
Methylene bisphenyl isocyanate (MDI)	101-68-8	10-30
Polyol blend	Proprietary	10-30
Isobutane	75-28-5	5-10
Methylene diphenyl diisocyanate	26447-40-5	1-5
Propane	74-98-6	1-5
Dimethyl ether	115-10-6	5-10

4.FIRST AID MEASURES

General Advice	If emergency warrants call 911 or emergency medical service. Remove and wash soiled clothing before reuse.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Obtain medical attention, preferably from an ophthalmologist.
Skin Contact	Remove wet material from skin immediately with corn oil or nail polish that contains acetone. If irritation symptoms persist, call a physician. Remove contaminated clothing; wash before reuse. Foam will stick to skin; studies demonstrate that cleaning very soon after exposure is most effective. If foam dries on skin, apply generous amounts of petroleum jelly or lanolin, put on plastic gloves and wait 1 hour. With a clean cloth, firmly wipe off petroleum jelly and repeat process if necessary. Do not attempt to remove dried foam with solvents.
Inhalation	Move victim to fresh air. Apply artificial respiration if victim is not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Call physician or transport to medical facility.
Ingestion	Call physician or Poison Control Center immediately. May produce an allergic reaction. Do not induce vomiting unless directed to do so by medical personnel. Drink plenty of water. Never give anything by mouth to an unconscious person.

Notes to Physician Maintain adequate ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. May cause respiratory sensitization or asthma-like symptoms. Respiratory symptoms, including pulmonary edema, may be delayed. Exposure may increase "myocardial irritability". If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. No specific antidote. Treatment of exposures should be directed at the control of symptoms and the clinical condition of the patient.

Protection of First-Aiders Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIRE-FIGHTING MEASURES

Flammable Properties Aerosol can be exposed to fire and rupture and spread fire to other areas. Vapors are heavier than air and may travel along distance and accumulate in low lying areas.

Flash Point -104°C / -155°F (based on propellant.)

Suitable Extinguishing Media Isolate fire and deny unnecessary entry. Use an extinguishing agent suitable for type of fire. Dry chemical, CO₂, water spray, fog or regular foam. Stay upwind. Keep out of low areas where gas fumes can accumulate. Fire damaged cylinders should be handled with extreme caution and only by authorized personnel.

Explosion Data

Sensitivity to mechanical impact None
Sensitivity to static discharge Yes.

Specific Hazards Arising from the Chemical

Propellant is flammable and will burn. Eliminate ignition sources. Ruptured cylinders may rocket. Chemicals other than propellant may burn but none ignite readily. Flashback possible over considerable distance. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Protective Equipment and Precautions for Firefighters

Wear self-contained breathing apparatus and protective suit.

NEPA	Health Hazard 2	Flammability 4	Stability 1	Physical and Chemical Hazards-
HMIS	Health Hazard 2*	Flammability 4	Stability 1	Personal Precautions-B

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Do not touch or walk through spilled material. Use appropriate safety equipment. Evacuate area. Keep personnel out of low areas and confined or poorly ventilated areas. Keep upwind of spill. Ensure adequate ventilation. Remove all sources of ignition. No smoking in area. Only trained and properly protected personnel must be involved in clean-up operations.

Methods for Containment If possible, turn leaking containers so that gas escapes rather than liquid. Allow substance to evaporate. Contain spilled material if possible without risk. Absorb with material such as: Sawdust, Dirt, Vermiculite. Collect in suitable and properly labeled open containers. Do not place in sealed containers. Curing foam gives off CO₂. Wash what is left of the spill site with large quantities of water.

Methods for Cleaning Up Attempt to neutralize the spilled material by adding suitable decontaminant solution: Formulation 1: Sodium carbonate 5- 10%; liquid detergent 0.2- 2%; water to makeup to 100%. OR Formulation 2: concentrated ammonia solution 3- 8%; liquid detergent 0.2-2%; water to makeup to 100%. If ammonia formulation is used, use good ventilation to prevent vapor exposure. Sweep up and shovel into suitable containers for disposal.

Other Information Ventilate the area. Curing foam gives off CO₂. Do not put curing foam in a sealed drum.

7. HANDLING AND STORAGE

Handling	Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Ensure adequate ventilation. Take necessary action to avoid static electricity discharge (which might cause ignition of organic propellant vapors). Keep away from open flames, hot surfaces and sources of ignition. Do not smoke. Avoid breathing vapors or mists. Contents under pressure. Do not puncture or incinerate cans. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Do not stick pin or any other sharp object into opening on top of can.
Storage	Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Keep in an area equipped with sprinklers. Keep out of the reach of children. Ideal storage temperature is 16-32°C / 60-90°F. Storage above 32°C / 90°F will reduce its shelf-life. Never keep at temperatures above 48.8°C / 120°F.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methylene bisphenylisocyanate (MDI)	TWA: 0.005 ppm	Ceiling: 0.02 ppm Ceiling: 0.2 mg/m ³	75 mg/m ³
Isobutane	TWA: 1000 ppm	N/A	N/A
Propane	TWA: 2,500 ppm STEL 1,000 ppm, 3,500 mg/m ³	8Hr TWA: 1000 ppm 1,800.0 mg/m ³	2100 ppm

NIOSH IDLH: Immediately Dangerous to Life or Health

Engineering Measures	Showers Eyewash stations Ventilation systems
Personal Protective Equipment	
Eye/Face Protection	Safety glasses with side-shields.
Skin and Body Protection	Impervious gloves. Lightweight protective clothing.
Respiratory Protection	Atmospheric levels of PMDI should be maintained below the exposure guidelines. If exposure limits are exceeded or irritation is experienced, use a NIOSH/MSHA approved air-purifying respirator equipped with an organic vapor absorbent and a particle filter. For situations where the atmospheric levels exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplied respirator. Respiratory protection must be provided in accordance with current local regulations.
Hygiene Measures	When using, do not eat, drink or smoke. Maintain regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Pale Amber	Odor	Fainthydrocarbon
Odor Threshold	No informationavailable	PhysicalState	LiquidAerosol
pH	No informationavailable		
FlashPoint	-104°C /-1w55°F(basedon propellant.)	AutoignitionTemperature	Not applicable
Decompositiontemperature	No dataavailable	BoilingPoint/Range	-42°C /-44°F
MeltingPoint/Range	No dataavailable	Viscosity	No informationavailable
FlammabilityLimits inAir	No dataavailable	ExplosionLimits	No dataavailable
SpecificGravity	1.05	Water Solubility	NotCompatible
Solubility	Compatible.	EvaporationRate	No dataavailable
Vapor Pressure	No dataavailable	Vapor Density	No dataavailable
		VOC	1.29(lbs/gal) 155(g/l)

10. STABILITY AND REACTIVITY

Stability	Stableunder recommendedstorageconditions
ConditionstoAvoid	Keep awayfromopenflames,hotsurfacesandsourcesof ignition. Temperaturesabove48.8°C /120°F.Exposureto elevated temperaturescancauseproducttodecompose.
IncompatibleProducts	Water.Alcohols.Strongbases.Strongoxidizing agents.Finely powderedmetals.
HazardousDecompositionProducts	Carbonmonoxide(CO),Carbon dioxide(CO ₂),Nitrogen oxides (NO _x),Hydrogen cyanide.
HazardousPolymerization	Hazardouspolymerizationdoes notoccur.

11. TOXICOLOGICAL INFORMATION**Acute Toxicity**

Sensitization - Skin	Skincontactmaycausean allergic skinreaction. Animalstudieshaves shown thatskincontact withisocyanatesmayplayarole inrespiratorysensitization.
Sensitization –Respiratory	Maycauseallergicrespiratoryresponse. MDI concentrationsbelowtheexposure guidelines maycauseallergicrespiratoryreactions inindividualsalready sensitized. Asthma-like symptomsmay includecoughing,difficultbreathingandafeeling oftightnessin thechest. Occasionally, breathingdifficultiesmaybelife threatening.

ChemicalName	LD50 Oral	LD50 Dermal	LC50 Inhalation
Flame Retardant	>2000mg/kg(Rat)	>2000mg/kg(Rat) 23700mg/kg(Rabbit)	>5.22mg/L(Rat) 4 h
Polymethylenepolyphenylene isocyanate	49 g/kg(Rat)	9400mg/kg(Rabbit)	490mg/m ³ (Rat)4 h
Methylene bisphenylisocyanate (MDI)	9200mg/kg(Rat)	5000mg/kg(Rat)	
Polyolblend	64mL/kg(Rat)	20mL/kg(Rabbit)	
Isobutane			658mg/L(Rat) 4h

ChemicalName	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methylenediphenyldiisocyanate		6200mg/kg(Rabbit)	0.369mg/L(Rat)4 h
Propane		658mg/kg(Rat)	
Dimethylether			308.5 g/m ³ (Rat) 4 h

Chronic Toxicity	Repeated or prolonged exposure may cause central nervous system damage. Tissue injury in the upper respiratory tract and lung has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Chronic hydrocarbon abuse has been associated with irregular heart rhythms and potential cardiac arrest. Repeated or prolonged contact causes sensitization, asthma and eczemas.
Carcinogenicity	There are no known carcinogenic chemicals in this product.
Mutagenicity	Contains no known mutagenic chemicals.
Reproductive Toxicity	This product does not contain any known or suspected reproductive hazards
Target Organ Effects	Contains component(s) that have been reported to cause effects on the following organs in animals: Kidney, Liver, Bone marrow.
Endocrine Disruptor Information	This product does not contain any known or suspected endocrine disruptors

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Fate

Movement & Partitioning: In the aquatic and terrestrial environment, PMDI movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Persistence and Degradability: In the aquatic and terrestrial environment, PMDI reacts with water forming predominantly insoluble polyureas that appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

Ecotoxicity effects:

ChemicalName	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Flame Retardant	EC50 4.6mg/L72			LC50 3.8-5.5mg/L48 h
Methylenediphenyl diisocyanate	EC50 =3230mg/L96 h			EC50 >1000mg/L24 h
Dimethylether		LC50 (goldfish) 3677mg/L, 96 h		LC50 1852mg/L,96 h

ChemicalName	LogPow
Isobutane	2.88
Propane	2.3
Dimethylether	-0.18

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method	Should not be released into the environment. Dispose of in accordance with local regulations. Allow foam to cure before disposal.
Contaminated Packaging	Dispose of in accordance with local regulations.
US EPA Waste Number	

14. TRANSPORT INFORMATION**DOT**

UN-No	UN1950
Proper ShippingName	UN1950,Aerosols,flammable,2.1, LTD QTY
Hazard Class	2.1
ERGCode	Guide127

TDG

UN-No	UN1950
Proper ShippingName	Aerosols
Hazard Class	2.1
Description	UN1950,Aerosols,2.1

MEXI

UN-No	UN1950
Proper ShippingName	Aerosols
Hazard Class	2.1
Description	UN1950,Aerosols,2.1

CAOI

UN-No	UN1950
Proper ShippingName	Aerosols
Hazard Class	2.1
Description	UN1950,Aerosols

ATA

UN-No	UN1950
Proper ShippingName	Aerosols,flammable
Hazard Class	2.1
ERGCode	10L
Description	UN1950,Aerosols,flammable,2.1, LTD QTY

IMDG/IMO

UN-No	UN1950
Proper ShippingName	Aerosols
Hazard Class	2.1
EmS No.	F-D, S-U
Description	UN1950,Aerosols,Flammable, 2.1,LTD QTY

RID

UN-No	UN1950
Proper ShippingName	Aerosols
Hazard Class	2
ClassificationCode	5A
Description	UN1950,Aerosols,2,RID
ADR/RID-Labels	2

ADR

UN-No	UN1950
Proper ShippingName	Aerosols
Hazard Class	2
ClassificationCode	5A
ADR/RID-Labels	2

ADN

UN-No	UN1950
Proper ShippingName	Aerosols
Hazard Class	2
ClassificationCode	5A
SpecialProvisions	63, 190,191,277,913
Description	UN1950,Aerosols,2
Hazard Labels	2
LimitedQuantity	SeeSP277

15.REGULATORYINFORMATION**InternationalInventories**

TSCA	Complies
DSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
CHINA	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

U.S.FederalRegulations

OSHA Hazard Communication Standard **This product isa“HazardousChemical”asdefinedbytheOSHAHazard CommunicationStandard,29CFR 1910.1200.**

SARA313

Section313 of Title III oftheSuperfundAmendmentsandReauthorizationActof1986(SARA).This productcontainsachemicalor chemicals that aresubjecttothereportingrequirements oftheActand Title40 oftheCode ofFederalRegulations,Part372

ChemicalName	CAS-No	Weight %	SARA313- Threshold Values
Polymethylenepolyphenyleneisocyanate	9016-87-9	10-30	1.0
Methylene bisphenylisocyanate(MDI)	101-68-8	10-30	1.0
Methylenediphenyldiisocyanate	26447-40-5	1-5	1.0

SARA311/312Hazard Categories

Acute Health Hazard	Yes
ChronicHealthHazard	Yes
FireHazard	Yes
SuddenRelease of PressureHazard	Yes
ReactiveHazard	No

CleanWater Act This productdoesnotcontainanysubstancesregulatedaspollutants pursuantto theCleanWater Act(40CFR 122)
CERCLA This material,assupplied,contains one ormoresubstancesregulatedasa hazardous substanceundertheComprehensive EnvironmentalResponseCompensation andLiabilityAct(CERCLA) (40CFR 302).

ChemicalName	HazardousSubstances RQs	ExtremelyHazardousSubstances RQs
Methylene bisphenylisocyanate(MDI)	5000 lb	

U.S.StateRegulations

CaliforniaProposition 65

This productcontainsnolisteds substancesknown to theState ofCaliforniatocausecancer, birthdefects orotherreproductiveharm,at levelswhichwouldrequireawarningunder thestatute.

U.S.StateRight-to-KnowRegulations

ChemicalName	Massachusetts	NewJersey	Pennsylvania	Illinois	Rhodelsland
Dimethylether	X	X	X		X
Propane	X	X	X		X
Isobutane	X	X	X		
Methylene bisphenyl isocyanate(MDI)	X	X	X	X	X

InternationalRegulations

Mexico- Grade

Seriousrisk,Grade3

The exposure limitsvaluesfor101-68-8are listed under two synonyms:

Diphenylmethanediisocyanate- 0.02ppmTWA;0.2mg/m³TWA

Methylenebisphenylisocyanate- 0.005ppmTWA; 0.051mg/m³TWA

ChemicalName	CarcinogenStatus	ExposureLimits
Methylene bisphenylisocyanate(MDI)		Mexico:TWA=0.2mg/m ³ Mexico:TWA=0.02 ppm
Diphenylmethanediisocyanate		Mexico:TWA=0.005 ppm Mexico:TWA=0.051mg/m ³

Canada

This product has been classifiedinaccordancewiththehazardcriteriaoftheControlledProductsRegulations(CPR) andthe MSDS containsalltheinformationrequiredbytheCPR.

WHMIShazard Class A

Compressedgases B5

Flammableaerosol

D2BToxic material



ChemicalName	NPRI
Methylene bisphenylisocyanate(MDI)	X

Legend:

NPRI- National PollutantReleaseInventory
 WHMIS–WorkplaceHazardousMaterials InformationSystem
 TSCA –ToxicSubstanceControlAct
 DSL–DomesticSubstanceList
 EINECS –EuropeanInventoryofExistingCommercialChemicalSubstances
 ENCS –Japan,Existing andNewChemicalSubstances
 KECL- KoreanExistingChemicalList
 PICS –PhilippineInventoryofChemicalsandChemicalSubstances
 AICS –AustralianInventoryofChemicalSubstances
 TDG–TransportationofDangerousGoodsAct
 ICAO–InternationalCivilAviationOrganization
 IATA –InternationalMaritimeDangerousGoodsCode
 IMDG –InternationalMaritimeDangerousGoodsCode

16. OTHER INFORMATION

IssuingDate 27-Feb-2007
RevisionDate 07-March-2013
RevisionNote Revised section one

Disclaimer

Theinformationprovidedonthis MSDSisincorrect tothebest of our knowledge,informationandbeliefat thedateof its publication.Theinformationgivenisdesignedonlyasa guidefor safe handling,use,processing, storage,transportation, disposal andreleaseandisnot to beconsideredasawarrantyor qualityspecification. The informationrelatesonlytothe specific materialdesignatedandmaynotbevalidfor such materialusedin combinationwith anyother materialor in any process,unlesspecifiedinthetext.

End of MSDS

Material Safety Data Sheet

80919 Sto Detail Mesh

Section I - Manufacturer's Information

Identity: **Sto Detail Mesh**

Common Name/Synonym: **Polymer Coated Glass Fiber Mesh**

Manufacturer's Name: **Sto Corp.**
6175 Riverside Drive, SW
Atlanta, GA 30331

Information #: **(404) 346-3666**
Emergency #: **(800) 424-9300**

DOT Hazardous Class: **Not Regulated**
CAS Number: **Not Registered**

Section II - Preparation Information

Prepared **Sto Corp. Research and Development Department**

Date Prepared: **05-Apr-13**

Section III - Hazardous Ingredients

Component - A	Ingredient	Percent ww	CAS Number	OSHA	TWA/TLV ACGIH	Other	LD50	LC50
	Glass Oxides	60-100	65997-17-3	15 mg/m ³	10 mg/m ³	NIOSH 5 mg/m ³	N/E	N/E

Section IV - Physical/Chemical Characteristics

Component - A

Boiling Point: **N/A** Vapor Density: **N/A** Vapor Pressure: **N/A** pH Level: **N/A**
Melting Point: **N/A** Evaporation Rate: **N/A** Physical State: **Solid** Solubility in Water: **N/A**
Freezing: **N/A** Specific Gravity: [H₂O=1]: **> 1.0** Odor Threshold: **N/A**
Appearance and Odor: **Polymer Coated Glass Mesh - No Odor** Coefficient of Water/Oil Distribution: **N/A**

Section V - Fire and Explosion Hazard Data

Component - A

Flammability: **N/E** Flash Point: **N/E** Autoignition Temperature: **N/A**
Limits LEL/UEL: **N/E - N/E** Sensitivity to impact: **N/A** Sensitivity to Static Discharge: **N/A**
Hazardous Decomposition Products: **COx, NOx, Hydrocarbons** Special Firefighting Procedures: **SCBA, full protective gear**
Unusual Fire and Explosive Hazards: **Other decomposition products may include Cu, HCl, and NH₄.** Extinguishing Media: **Water spray, foam, dry chemical**

Section VI - Reactivity Data

Component - A

Hazardous Decomposition Products: **N/A** Stability: **Stable** Incompatibility (Materials to Avoid): **N/A**
Hazardous Polymerization: **N/A** Conditions to Avoid: **N/A**

Section VII - Health Hazard Data

Carcinogenicity: **No** NTP: **No** IARC: **No** OSHA Regulated: **No** LD50: **N/A** LC50: **N/A**

Effects and Hazards of

Eye Contact: **Direct contact with material may cause irritation.**

Effects and Hazards of

Inhalation (Breathing): **Mechanical irritation of the mouth, nose and throat.**

Effects and Hazards of

Skin Contact: **Contact with skin may cause reddening or a slight rash in individuals with sensitive skin.**

Effects and Hazards of

Ingestion (Swallowing): **May cause some stomach distress.**

HMIS Health: 1 Flammability: 0 Reactivity: 0 PPE:

Material Safety Data Sheet

80919 Sto Detail Mesh

Section VIII - Emergency and First Aid Procedures

Treatment for Eye

Contact: **As with any foreign material in the eyes, they should be flushed for fifteen minutes with running water while holding the eyes open. This will assist in flushing material from the eye. If irritation continues, seek medical attention.**

Treatment for Inhalation
(Breathing):

If respiratory irritation occurs, go to fresh air. Flood work area with fresh air and if irritation continues, seek medical attention

Treatment for Skin

Contact: **Wash with mild soap and water. Hand creams should be used to prevent dry skin. If skin irritation, reddening or a rash occur, seek medical attention.**

Treatment for Ingestion
(Swallowing):

Contact medical help immediately; untrained first aid personnel should not attempt to administer first aid.

Section IX - Precautions for Safe Handling and Use

Steps to be taken in case
material is released or
spilled (Dry Stage):

Sweep and dispose of in proper receptacle.

Steps to be taken in case
material is released or
spilled (Wet Stage):

Scoop into proper receptacle and allow to harden.

Waste Disposal
Method:

Per local, state and federal regulations.

Precautions To Be Taken
In Handling and Storing:

Store in a cool dry location, out of direct sunlight.

Other Precautions:

This material is an industrial product designed to be used by professionals familiar with the requirements of this material safety data sheet.

Respiratory Protection:

Respiratory protection is not required for normal use of this product. If material is cut, ground upon, or sanded, NIOSH/MSHA approved respirators for dust should be provided and worn. All workers required to use respiratory protection should be trained in their proper selection, use and care.

Ventilation:

Recommended; local or mechanical when mixing, applying or sanding the product in the dry state.

Protective Gloves:

Recommended; plastic or rubber.

Eye Protection:

Recommended; chemical splash safety goggles.

Other Protective

Equipment:

Recommended; splash bib and protective clothing.

Work and Hygienic

Practices:

Remove and wash contaminated clothing. As with all commercial and industrial products, always wash hands before eating or smoking.

California Proposition 65:

This product does not contain any material considered a carcinogen by the State of California.

The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.

Material Safety Data Sheet

80918 Sto Intermediate Mesh

Section I - Manufacturer's Information

Identity: **Sto Intermediate Mesh**

Common Name/Synonym: **Polymer Coated Glass Fiber Mesh**

Manufacturer's Name: **Sto Corp.**
6175 Riverside Drive, SW
Atlanta, GA 30331

Information #: **(404) 346-3666**
Emergency #: **(800) 424-9300**

DOT Hazardous Class: **Not Regulated**
CAS Number: **Not Registered**

Section II - Preparation Information

Prepared **Sto Corp. Research and Development Department**

Date Prepared: **05-Apr-13**

Section III - Hazardous Ingredients

Component - A	Ingredient	Percent ww	CAS Number	OSHA	TWA/TLV ACGIH	Other	LD50	LC50
	Glass Oxides	60-100	65997-17-3	15 mg/m ³	10 mg/m ³	NIOSH 5 mg/m ³	N/E	N/E

Section IV - Physical/Chemical Characteristics

Component - A

Boiling Point: **N/A** Vapor Density: **N/A** Vapor Pressure: **N/A** pH Level: **N/A**
Melting Point: **N/A** Evaporation Rate: **N/A** Physical State: **Solid** Solubility in Water: **N/A**
Freezing: **N/A** Specific Gravity: [H₂O=1]: **> 1.0** Odor Threshold: **N/A**
Appearance and Odor: **Polymer Coated Glass Mesh - No Odor** Coefficient of Water/Oil Distribution: **N/A**

Section V - Fire and Explosion Hazard Data

Component - A

Flammability: **N/E** Flash Point: **N/E** Autoignition Temperature: **N/A**
Limits LEL/UEL: **N/E - N/E** Sensitivity to impact: **N/A** Sensitivity to Static Discharge: **N/A**
Hazardous Decomposition Products: **COx, NOx, Hydrocarbons** Special Firefighting Procedures: **SCBA, full protective gear**
Unusual Fire and Explosive Hazards: **Other decomposition products may include Cu, HCl, and NH4** Extinguishing Media: **Water spray, foam, dry chemical**

Section VI - Reactivity Data

Component - A

Hazardous Decomposition Products: **None** Stability: **Stable** Incompatibility (Materials to Avoid): **None**
Hazardous Polymerization: **None** Conditions to Avoid: **None**

Section VII - Health Hazard Data

Carcinogenicity: **No** NTP: **No** IARC: **No** OSHA Regulated: **No** LD50: **N/A** LC50: **N/A**

Effects and Hazards of

Eye Contact: **Direct contact with material may cause irritation.**

Effects and Hazards of

Inhalation (Breathing): **Mechanical irritation of the mouth, nose and throat.**

Effects and Hazards of

Skin Contact: **Contact with skin may cause reddening or a slight rash in individuals with sensitive skin.**

Effects and Hazards of

Ingestion (Swallowing): **May cause some stomach distress.**

HMIS Health: **1** Flammability: **0** Reactivity: **0** PPE:

Material Safety Data Sheet

80918 Sto Intermediate Mesh

Section VIII - Emergency and First Aid Procedures

Treatment for Eye

Contact: **As with any foreign material in the eyes, they should be flushed for fifteen minutes with running water while holding the eyes open. This will assist in flushing material from the eye. If irritation continues, seek medical attention.**

Treatment for Inhalation

(Breathing): **If respiratory irritation occurs, go to fresh air. Flood work area with fresh air and if irritation continues, seek medical attention**

Treatment for Skin

Contact: **Wash with mild soap and water. Hand creams should be used to prevent dry skin. If skin irritation, reddening or a rash occur, seek medical attention.**

Treatment for Ingestion

(Swallowing): **Contact medical help immediately; untrained first aid personnel should not attempt to administer first aid.**

Section IX - Precautions for Safe Handling and Use

Steps to be taken in case

material is released or spilled (Dry Stage): **Sweep and dispose of in proper receptacle.**

Steps to be taken in case

material is released or spilled (Wet Stage): **Scoop into proper receptacle and allow to harden.**

Waste Disposal

Method: **Per local, state and federal regulations.**

Precautions To Be Taken

In Handling and Storing: **Store in a cool dry location, out of direct sunlight.**

Other Precautions:

This material is an industrial product designed to be used by professionals familiar with the requirements of this material safety data sheet.

Respiratory Protection:

Respiratory protection is not required for normal use of this product. If material is cut, ground upon, or sanded, NIOSH/MSHA approved respirators for dust should be provided and worn. All workers required to use respiratory protection should be trained in their proper selection, use and care.

Ventilation:

Recommended; local or mechanical when cutting the product.

Protective Gloves:

Recommended; plastic or rubber.

Eye Protection:

Recommended; safety goggles.

Other Protective

Equipment:

Recommended; protective clothing.

Work and Hygienic

Practices:

Remove and wash contaminated clothing. As with all commercial and industrial products, always wash hands before eating or smoking.

California Proposition 65:

This product does not contain any material which is considered a carcinogen by the State of California.

The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.



Material Safety Data Sheet

80922 Sto Armor Mat XX

Section I - Manufacturer's Information

Identity: **Sto Armor Mat XX** Common Name/Synonym: **Polymer Coated Glass Fiber Mesh**

Manufacturer's Name: **Sto Corp. 6175 Riverside Drive, SW Atlanta, GA 30331** Information #: **(404) 346-3666** DOT Hazardous Class: **Not Regulated**

Emergency #: **(800) 424-9300** CAS Number: **Not Registered**

Section II - Preparation Information

Prepared By: **Sto Corp. Research and Development Department** Date Prepared: **23-Feb-10**

Section III - Hazardous Ingredients

Component - A Ingredient	Percent w/w	CAS Number	TWA/TLV			LD50	LC50
			OSHA	ACGIH	Other		
Glass Oxides	60-100	65997-17-3	15 mg/m3 mg/m ³	10 mg/m3 mg/m ³	NIOSH 5 mg/m3 mg/m ³	N/E	N/E

Section IV - Physical/Chemical Characteristics

Component - A

Boiling Point: **N/A** Vapor Density [Air=1]: **N/A** Vapor Pressure: **N/A** pH Level: **N/A**

Melting Point: **N/A** Evaporation Rate [Ether=1]: **N/A** Physical State: **Solid** Solubility in Water: **N/A**

Freezing Point: **N/A** Specific Gravity: [H2O=1]: **> 1.0** Odor Threshold: **N/A**

Appearance and Odor: **Polymer Coated Glass Mesh- No Odor** Coefficient of Water/Oil Distribution: **N/A**

Section V - Fire and Explosion Hazard Data

Component - A

Flammability: **N/E** Flash Point: **N/E** Autoignition Temperature: **N/A**

Limits LEL/UEL: **N/E - N/E** Sensitivity to impact: **N/A** Sensitivity to Static Discharge: **N/A**

Hazardous Decomposition Products: **COx, NOx, Hydrocarbons** Special Firefighting Procedures: **SCBA, full protective gear**

Unusual Fire and Explosive Hazards: **Other decomposition products may include Cu, HCl, and NH4** Extinguishing Media: **Water spray, foam, dry chemical**

Section VI - Reactivity Data

Component - A

Hazardous Decomposition Products: **None** Stability: **Stable** Incompatibility (Materials to Avoid): **None**

Hazardous Polymerization: **None** Conditions to Avoid: **None**

Section VII - Health Hazard Data

Carcinogenicity: **No** NTP: **No** IARC: **No** OSHA Regulated: **No** LD50: **N/A** LC50: **N/A**

Effects and Hazards of Eye Contact: **Direct contact with material may cause irritation.**

Effects and Hazards of Inhalation (Breathing): **Prolonged exposure to respirable dust may cause delayed (chronic) lung injury.**

Effects and Hazards of Skin Contact: **Contact with skin may cause reddening or a slight rash in individuals with sensitive skin.**

Effects and Hazards of Ingestion (Swallowing): **May cause some stomach distress.**

HMIS RATINGS Health: **1** Flammability: **0** Reactivity: **0** PPE:



Material Safety Data Sheet

80922 Sto Armor Mat XX

Section VIII - Emergency and First Aid Procedures

- Treatment for Eye
Contact: **As with any foreign material in the eyes, they should be flushed for fifteen minutes with running water while holding the eyes open. This will assist in flushing material from the eye. If irritation continues, seek medical attention.**
- Treatment for Inhalation
(Breathing): **If respiratory irritation occurs, go to fresh air. Flood work area with fresh air and if irritation continues, seek medical attention.**
- Treatment for Skin
Contact: **Wash with mild soap and water. Hand creams should be used to prevent dry skin. If skin irritation, reddening or a rash occur, seek medical attention.**
- Treatment for Ingestion
(Swallowing): **Contact medical help immediately; untrained first aid personnel should not attempt to administer first aid.**

Section IX - Precautions for Safe Handling and Use

- Steps to be taken in case material is released or spilled (Dry Stage): **Sweep and dispose of in proper receptacle.**
- Steps to be taken in case material is released or spilled (Wet Stage): **Scoop into proper receptacle and allow to harden.**
- Waste Disposal Method: **Per local, state and federal regulations.**
- Precautions To Be Taken In Handling and Storing: **Store in a cool dry location, out of direct sunlight.**
- Other Precautions: **This material is an industrial product designed to be used by professionals familiar with the requirements of this material safety data sheet.**
- Respiratory Protection: **Respiratory protection is not required for normal use of this product. If material is cut, ground upon, or sanded, NIOSH/MSHA approved respirators for dust should be provided and worn. All workers required to use respiratory protection should be trained in their proper selection, use and care.**
- Ventilation: **Recommended; local or mechanical when cutting the product.**
- Protective Gloves: **Recommended; plastic or rubber.**
- Eye Protection: **Recommended; chemical splash safety goggles.**
- Other Protective Equipment: **Recommended; splash bib and protective clothing.**
- Work and Hygienic Practices: **Remove and wash contaminated clothing. As with all commercial and industrial products, always wash hands before eating or smoking.**
- California Proposition 65: **This product does not contain any material considered a carcinogen by the State of California.**

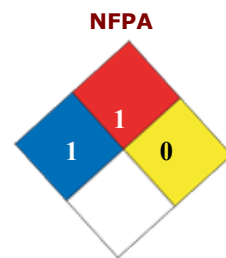
The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.



SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product Name: Sto Fine Sand
Product Code: 80310
SDS Manufacturer Number: 80310
Product Use/Restriction: Waterbased Acrylic Coating.
Manufacturer Name: Sto Corp.
Address: 6175 Riverside Drive, SW
Atlanta, Georgia 30331
General Phone Number: (404) 346-3666
Emergency Phone Number: (800) 424-9300
SDS Creation Date: July 08, 2013
SDS Revision Date: July 08, 2013
(M)SDS Format:



HMIS

Health Hazard	1*
Fire Hazard	1
Reactivity	0
Personal Protection	X

* Chronic Health Effects

SECTION 2 : HAZARD(S) IDENTIFICATION

GHS Pictograms:



Signal Word: WARNING!
GHS Class: Eye Irritant, Category 2
Skin Irritant, Category 2
Hazard Statements: Causes eye irritation
Causes skin irritation
Precautionary Statements: Wash hands thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Emergency Overview: WARNING! Irritant.

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eye: May cause irritation.

Skin: May cause irritation.

Inhalation: Prolonged or excessive inhalation may cause respiratory tract irritation.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Target Organs: Eyes. Skin. Respiratory system. Digestive system.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Titanium Oxide	13463-67-7	0.1 - 1.0 by weight	
Water	7732-18-5	10 - 30 by weight	
Diatomaceous Earth, Flux-Calcined	68855-54-9	1 - 5 by weight	
Crystalline silica (Quartz)	14808-60-7	10 - 30 by weight	
Calcium carbonate	1317-65-3	30 - 60 by weight	
Acrylic polymer	No Data	1 - 5 by weight	
Crystalline Silica (Cristobalite)	14464-46-1	1 - 5 by weight	

SECTION 4 : FIRST AID MEASURES

Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.

Skin Contact: Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Ingestion: If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Other First Aid: First Responders should provide for their own safety prior to rendering assistance.

SECTION 5 : FIRE FIGHTING MEASURES

Flash Point: Not determined.

Auto Ignition Temperature: Not determined.

Lower Flammable/Explosive Limit: Not determined.

Upper Flammable/Explosive Limit:	Not determined.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Extinguishing Media:	Use dry chemical or foam when fighting fires involving this material. Water mist may be used to cool closed containers.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire Hazards:	Material may spatter above 100 °C/212 °F

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0


SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry.
Methods for cleanup:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section.

SECTION 7 : HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Store away from direct heat or sunlight, sources of UV radiation, peroxides, or free radicals. Do not store in temperatures above 120 °F or below 48 °F. Keep away from direct sunlight.
Work Practices:	Handle in accordance with good industrial hygiene and safety practices.
Hygiene Practices:	Wash thoroughly after handling.

SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
Hand Protection Description:	Nitrile rubber or natural rubber gloves are recommended.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.
PPE Pictograms:	

EXPOSURE GUIDELINES

Titanium Oxide :

Guideline ACGIH: TLV-TWA: 10 mg/m3

Diatomaceous Earth, Flux-Calcined :

Guideline ACGIH: TLV-TWA: 0.025 mg/m3 Respirable fraction (R)

Crystalline silica (Quartz) :

Guideline ACGIH: TLV-TWA: 0.025 mg/m3 Respirable fraction (R)

Crystalline Silica (Cristobalite) :

Guideline ACGIH: TLV-TWA: 0.025 mg/m3 Respirable fraction (R)

Notes : Only established PEL and TLV values for the ingredients are listed.

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Liquid.
Odor:	Slight
Boiling Point:	Not determined.
Melting Point:	0°C (32°F)
Specific Gravity:	> 1
Solubility:	Miscible in water
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Percent Volatile:	Data not available.
Evaporation Rate:	Not determined.

pH:	7.5 - 10
Flash Point:	Not determined.
Auto Ignition Temperature:	Not determined.

SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:	Stable under recommended handling and storage conditions.
Hazardous Polymerization:	Hazardous polymerization does not occur.
Conditions to Avoid:	Heat, flames, ignition sources, and sparks. Incompatible materials. Freezing or temperatures below 32 deg. F.
Incompatible Materials:	Water reactive materials.
Special Decomposition Products:	Thermal decomposition can lead to release irritant fumes and toxic gases.

SECTION 11 : TOXICOLOGICAL INFORMATION

Titanium Oxide :

RTECS Number:	XR2275000
Inhalation:	Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 1 mg/kg [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] (RTECS)
Ingestion:	Oral - Rat TDLo - Lowest published toxic dose : 60 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

Crystalline silica (Quartz) :

RTECS Number:	VV7330000
Inhalation:	Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 248 mg/m ³ /6H [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Other proteins Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 248 mg/m ³ /6H [Lungs, Thorax, or Respiration - Changes in lung weight Immunological Including Allergic - Increase in cellular immune response Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 200 mg/kg [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Other changes Nutritional and Gross Metabolic - Changes in iron] Inhalation - Mouse TCl ₀ - Lowest published toxic concentration : 40 mg/kg [Lungs, Thorax, or Respiration - Other changes] Inhalation - Mouse TCl ₀ - Lowest published toxic concentration : 40 mg/kg [Immunological Including Allergic - Decrease in cellular immune response] Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 1 mg/kg (RTECS)
Ingestion:	Oral - Rat TDLo - Lowest published toxic dose : 120 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

Calcium carbonate :

RTECS Number: EV9580000

Inhalation: Inhalation - Rat TClO - Lowest published toxic concentration : 250 mg/m3/2H/24W (Intermittent) [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis)]
Inhalation - Rat TClO - Lowest published toxic concentration : 84 mg/m3/4H/40W (Intermittent) [Lungs, Thorax, or Respiration - Fibrosis (interstitial) Liver - Other changes Kidney/Ureter/Bladder - Other changes] (RTECS)

Crystalline Silica (Cristobalite) :

RTECS Number: VV7325000

Inhalation: Inhalation - Mouse TClO - Lowest published toxic concentration : 43 mg/m3/5H/9D (Intermittent) [Lungs, Thorax, or Respiration - Pleural effusion Lungs, Thorax, or Respiration - Other changes]
Inhalation - Mouse TClO - Lowest published toxic concentration : 70 mg/m3/5H/12D (Intermittent) [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Fibrosis (interstitial) Lungs, Thorax, or Respiration - Other changes] (RTECS)

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity: No environmental information found for this product.

Environmental Fate: No environmental information found for this product.

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with Local, State, Federal and Provincial regulations.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name: Non regulated.

DOT Hazard Class: Non regulated.

IATA Shipping Name: Non regulated.

IMDG UN Number : Non regulated.

SECTION 15 : REGULATORY INFORMATION

SARA: This product does not contain any chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III (40CFR, Part 372).

California PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the State of California to cause cancer.

Canada WHMIS: Xi - Irritant

EU Class: Irritant.
In accordance to Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures

Risk Phrases: R36/37/38 - Irritating to eyes, respiratory system and skin.

Safety Phrase: S23 - Do not breathe gas/fumes/vapour/spray.
S37 - Wear suitable gloves.

Titanium Oxide :

TSCA Inventory Status: Listed

Canada DSL: Listed

Diatomaceous Earth, Flux-Calcined :

TSCA Inventory Status: Listed

Canada DSL: Listed

Crystalline silica (Quartz) :

TSCA Inventory Status: Listed

Canada DSL: Listed

Calcium carbonate :

TSCA Inventory Status: Listed

Crystalline Silica (Cristobalite) :

TSCA Inventory Status: Listed

Canada DSL: Listed

SECTION 16 : ADDITIONAL INFORMATION

HMIS Health Hazard: 1*

HMIS Fire Hazard: 1

HMIS Reactivity: 0

HMIS Personal Protection: X

SDS Creation Date: July 08, 2013

SDS Revision Date: July 08, 2013

Disclaimer: The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.

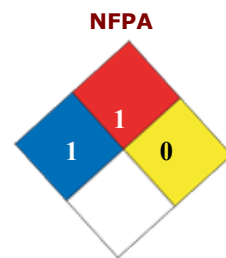
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SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product Name: Sto Medium Sand
Product Code: 80306
SDS Manufacturer Number: 80306
Product Use/Restriction: Waterbased Acrylic Coating.
Manufacturer Name: Sto Corp.
Address: 6175 Riverside Drive, SW
Atlanta, Georgia 30331
General Phone Number: (404) 346-3666
Emergency Phone Number: (800) 424-9300
SDS Creation Date: July 08, 2013
SDS Revision Date: July 08, 2013
(M)SDS Format:



HMIS

Health Hazard	1*
Fire Hazard	1
Reactivity	0
Personal Protection	X

* Chronic Health Effects

SECTION 2 : HAZARD(S) IDENTIFICATION

GHS Pictograms:



Signal Word: WARNING!
GHS Class: Eye Irritant, Category 2
Skin Irritant, Category 2
Hazard Statements: Causes eye irritation
Causes skin irritation
Precautionary Statements: Wash hands thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Emergency Overview: WARNING! Irritant.

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eye: May cause irritation.

Skin: May cause irritation.

Inhalation: Prolonged or excessive inhalation may cause respiratory tract irritation.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Target Organs: Eyes. Skin. Respiratory system. Digestive system.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Water	7732-18-5	10 - 30 by weight	
Calcium carbonate	1317-65-3	30 - 60 by weight	
Crystalline silica (Quartz)	14808-60-7	10 - 30 by weight	
Crystalline Silica (Cristobalite)	14464-46-1	1 - 5 by weight	
Acrylic polymer	No Data	1 - 5 by weight	
Diatomaceous Earth, Flux-Calcined	68855-54-9	1 - 5 by weight	
Titanium Oxide	13463-67-7	0.1 - 1.0 by weight	

SECTION 4 : FIRST AID MEASURES

Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.

Skin Contact: Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Ingestion: If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Other First Aid: First Responders should provide for their own safety prior to rendering assistance.

SECTION 5 : FIRE FIGHTING MEASURES

Flash Point: Not determined.

Auto Ignition Temperature: Not determined.

Lower Flammable/Explosive Limit: Not determined.

Upper Flammable/Explosive Limit:	Not determined.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Extinguishing Media:	Use dry chemical or foam when fighting fires involving this material. Water mist may be used to cool closed containers.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire Hazards:	Material may spatter above 100 °C/212 °F

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0


SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry.
Methods for cleanup:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section.

SECTION 7 : HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Store away from direct heat or sunlight, sources of UV radiation, peroxides, or free radicals. Do not store in temperatures above 120 °F or below 48 °F. Keep away from direct sunlight.
Work Practices:	Handle in accordance with good industrial hygiene and safety practices.
Hygiene Practices:	Wash thoroughly after handling.

SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
Hand Protection Description:	Nitrile rubber or natural rubber gloves are recommended.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.
PPE Pictograms:	

EXPOSURE GUIDELINES

Crystalline silica (Quartz) :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ Respirable fraction (R)

Crystalline Silica (Cristobalite) :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ Respirable fraction (R)

Diatomaceous Earth, Flux-Calcined :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ Respirable fraction (R)

Titanium Oxide :

Guideline ACGIH: TLV-TWA: 10 mg/m³

Notes : Only established PEL and TLV values for the ingredients are listed.

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Liquid.
Odor:	Slight
Boiling Point:	Not determined.
Melting Point:	0°C (32°F)
Specific Gravity:	> 1
Solubility:	Miscible in water
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Percent Volatile:	Data not available.
Evaporation Rate:	Not determined.

pH:	7.5 - 10
Flash Point:	Not determined.
Auto Ignition Temperature:	Not determined.

SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:	Stable under recommended handling and storage conditions.
Hazardous Polymerization:	Hazardous polymerization does not occur.
Conditions to Avoid:	Heat, flames, ignition sources, and sparks. Incompatible materials. Freezing or temperatures below 32 deg. F.
Incompatible Materials:	Water reactive materials.
Special Decomposition Products:	Thermal decomposition can lead to release irritant fumes and toxic gases.

SECTION 11 : TOXICOLOGICAL INFORMATION

Calcium carbonate :

RTECS Number:	EV9580000
Inhalation:	Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 250 mg/m ³ /2H/24W (Intermittent) [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis)] Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 84 mg/m ³ /4H/40W (Intermittent) [Lungs, Thorax, or Respiration - Fibrosis (interstitial) Liver - Other changes Kidney/Ureter/Bladder - Other changes] (RTECS)

Crystalline silica (Quartz) :

RTECS Number:	VV7330000
Inhalation:	Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 248 mg/m ³ /6H [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Other proteins Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 248 mg/m ³ /6H [Lungs, Thorax, or Respiration - Changes in lung weight Immunological Including Allergic - Increase in cellular immune response Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 200 mg/kg [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Other changes Nutritional and Gross Metabolic - Changes in iron] Inhalation - Mouse TCl ₀ - Lowest published toxic concentration : 40 mg/kg [Lungs, Thorax, or Respiration - Other changes] Inhalation - Mouse TCl ₀ - Lowest published toxic concentration : 40 mg/kg [Immunological Including Allergic - Decrease in cellular immune response] Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 1 mg/kg (RTECS)
Ingestion:	Oral - Rat TDLo - Lowest published toxic dose : 120 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

Crystalline Silica (Cristobalite) :

RTECS Number: VV7325000

Inhalation: Inhalation - Mouse TClO - Lowest published toxic concentration : 43 mg/m3/5H/9D (Intermittent) [Lungs, Thorax, or Respiration - Pleural effusion Lungs, Thorax, or Respiration - Other changes]
Inhalation - Mouse TClO - Lowest published toxic concentration : 70 mg/m3/5H/12D (Intermittent) [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Fibrosis (interstitial) Lungs, Thorax, or Respiration - Other changes] (RTECS)

Titanium Oxide :

RTECS Number: XR2275000

Inhalation: Inhalation - Rat TClO - Lowest published toxic concentration : 1 mg/kg [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] (RTECS)

Ingestion: Oral - Rat TDLo - Lowest published toxic dose : 60 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity: No environmental information found for this product.

Environmental Fate: No environmental information found for this product.

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with Local, State, Federal and Provincial regulations.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name: Non regulated.

DOT Hazard Class: Non regulated.

IATA Shipping Name: Non regulated.

IMDG UN Number : Non regulated.

SECTION 15 : REGULATORY INFORMATION

SARA: This product does not contain any chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III (40CFR, Part 372).

California PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the State of California to cause cancer.

Canada WHMIS: Xi - Irritant

EU Class: Irritant.
In accordance to Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures

Risk Phrases: R36/37/38 - Irritating to eyes, respiratory system and skin.

Safety Phrase: S23 - Do not breathe gas/fumes/vapour/spray.
S37 - Wear suitable gloves.

Calcium carbonate :

TSCA Inventory Status: Listed

Crystalline silica (Quartz) :

TSCA Inventory Status: Listed

Canada DSL: Listed

Crystalline Silica (Cristobalite) :

TSCA Inventory Status: Listed

Canada DSL: Listed

Diatomaceous Earth, Flux-Calcined :

TSCA Inventory Status: Listed

Canada DSL: Listed

Titanium Oxide :

TSCA Inventory Status: Listed

Canada DSL: Listed

SECTION 16 : ADDITIONAL INFORMATION

HMIS Health Hazard: 1*

HMIS Fire Hazard: 1

HMIS Reactivity: 0

HMIS Personal Protection: X

SDS Creation Date: July 08, 2013

SDS Revision Date: July 08, 2013

Disclaimer: The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.

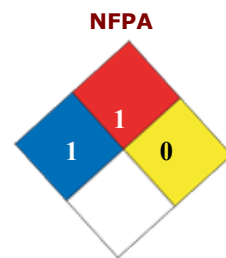
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SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product Name: **Stolit Lotusan 1.0**
Product Code: 80190
SDS Manufacturer Number: 80190
Product Use/Restriction: Waterbased Acrylic Coating.
Manufacturer Name: Sto Corp.
Address: 6175 Riverside Drive, SW
 Atlanta, Georgia 30331
General Phone Number: (404) 346-3666
Emergency Phone Number: (800) 424-9300
SDS Creation Date: July 08, 2013
SDS Revision Date: July 08, 2013
(M)SDS Format:



HMIS

Health Hazard	1*
Fire Hazard	1
Reactivity	0
Personal Protection	X

* Chronic Health Effects

SECTION 2 - HAZARD(S) IDENTIFICATION

GHS Pictograms:



GHS Class: Eye Irritant, Category 2
Skin Irritant, Category 2

Hazard Statements: Causes eye irritation
Causes skin irritation

Precautionary Statements: Wash hands thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.

Emergency Overview: WARNING! Irritant.

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eye:	May cause irritation.
Skin:	May cause irritation.
Inhalation:	Prolonged or excessive inhalation may cause respiratory tract irritation.
Ingestion:	Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Aqueous dispersion of a copolymer of styrene and n-butylacrylate	No Data	1 - 5 by weight	
Calcium carbonate	1317-65-3	30 - 60 by weight	
Crystalline silica (Quartz)	14808-60-7	10 - 30 by weight	
Crystalline Silica (Cristobalite)	14464-46-1	1 - 5 by weight	
Diatomaceous Earth, Flux-Calcined	68855-54-9	1 - 5 by weight	
Polymethylethoxysiloxane	68554-66-5	1 - 5 by weight	
Talc	14807-96-6	1 - 5 by weight	
Titanium Oxide	13463-67-7	1 - 5 by weight	
Undisclosed/Non-hazardous	No Data	5 - 10 by weight	
Water	7732-18-5	10 - 30 by weight	

SECTION 4 - FIRST AID MEASURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
Other First Aid:	First Responders should provide for their own safety prior to rendering assistance.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point:	Not determined.
Auto Ignition Temperature:	Not determined.

Lower Flammable/Explosive Limit:	Not determined.
Upper Flammable/Explosive Limit:	Not determined.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Extinguishing Media:	Use dry chemical or foam when fighting fires involving this material. Water mist may be used to cool closed containers.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire Hazards:	Material may spatter above 100 °C/212 °F

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0


SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry.
Methods for cleanup:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section.

SECTION 7 - HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Store away from direct heat or sunlight, sources of UV radiation, peroxides, or free radicals. Do not store in temperatures above 120 °F or below 48 °F. Keep away from direct sunlight.
Work Practices:	Handle in accordance with good industrial hygiene and safety practices.
Hygiene Practices:	Wash thoroughly after handling.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
Hand Protection Description:	Nitrile rubber or natural rubber gloves are recommended.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.
PPE Pictograms:	

EXPOSURE GUIDELINES

Crystalline silica (Quartz) :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ Respirable fraction (R)

Crystalline Silica (Cristobalite) :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ Respirable fraction (R)

Diatomaceous Earth, Flux-Calcined :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ Respirable fraction (R)

Talc :

Guideline ACGIH: TLV-TWA: 2 mg/m³ Respirable fraction (R)

TLV-TWA: 1 mg/m³ Respirable fraction (R)

Guideline OSHA:

PEL-TWA: 20 mppcf

Titanium Oxide :

Guideline ACGIH: TLV-TWA: 10 mg/m³

Notes : Only established PEL and TLV values for the ingredients are listed.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Liquid.
Odor:	Slight
Boiling Point:	Not determined.
Melting Point:	0°C (32°F)
Specific Gravity:	> 1
Solubility:	Miscible in water
Vapor Density:	Not determined.
Vapor Pressure:	Not determined.

Percent Volatile:	Data not available.
Evaporation Rate:	Not determined.
pH:	7.5 - 10
Flash Point:	Not determined.
Auto Ignition Temperature:	Not determined.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability:	Stable under recommended handling and storage conditions.
Hazardous Polymerization:	Hazardous polymerization does not occur.
Conditions to Avoid:	Heat, flames, ignition sources, and sparks. Incompatible materials. Freezing or temperatures below 32 deg. F.
Incompatible Materials:	Water reactive materials.
Special Decomposition Products:	Thermal decomposition can lead to release irritant fumes and toxic gases.

SECTION 11 - TOXICOLOGICAL INFORMATION

Calcium carbonate :

RTECS Number:	EV9580000
Inhalation:	Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 250 mg/m ³ /2H/24W (Intermittent) [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis)] Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 84 mg/m ³ /4H/40W (Intermittent) [Lungs, Thorax, or Respiration - Fibrosis (interstitial) Liver - Other changes Kidney/Ureter/Bladder - Other changes] (RTECS)

Crystalline silica (Quartz) :

RTECS Number:	VV7330000
Inhalation:	Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 248 mg/m ³ /6H [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Other proteins Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 248 mg/m ³ /6H [Lungs, Thorax, or Respiration - Changes in lung weight Immunological Including Allergic - Increase in cellular immune response Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 200 mg/kg [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Other changes Nutritional and Gross Metabolic - Changes in iron] Inhalation - Mouse TCl ₀ - Lowest published toxic concentration : 40 mg/kg [Lungs, Thorax, or Respiration - Other changes] Inhalation - Mouse TCl ₀ - Lowest published toxic concentration : 40 mg/kg [Immunological Including Allergic - Decrease in cellular immune response] Inhalation - Rat TCl ₀ - Lowest published toxic concentration : 1 mg/kg (RTECS)

Ingestion: Oral - Rat TDLo - Lowest published toxic dose : 120 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

Crystalline Silica (Cristobalite) :

RTECS Number: VV7325000

Inhalation: Inhalation - Mouse TCLo - Lowest published toxic concentration : 43 mg/m3/5H/9D (Intermittent) [Lungs, Thorax, or Respiration - Pleural effusion Lungs, Thorax, or Respiration - Other changes]
Inhalation - Mouse TCLo - Lowest published toxic concentration : 70 mg/m3/5H/12D (Intermittent) [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Fibrosis (interstitial) Lungs, Thorax, or Respiration - Other changes] (RTECS)

Talc :

RTECS Number: WW2710000

Inhalation: Inhalation - Rat TCLo - Lowest published toxic concentration : 17 mg/m3/6H/26D (Intermittent) [Lungs, Thorax, or Respiration - Other changes]
Inhalation - Mouse TCLo - Lowest published toxic concentration : 20400 ug/m3/6H/26D (Intermittent) [Lungs, Thorax, or Respiration - Other changes] (RTECS)

Titanium Oxide :

RTECS Number: XR2275000

Inhalation: Inhalation - Rat TCLo - Lowest published toxic concentration : 1 mg/kg [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] (RTECS)

Ingestion: Oral - Rat TDLo - Lowest published toxic dose : 60 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: No environmental information found for this product.

Environmental Fate: No environmental information found for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with Local, State, Federal and Provincial regulations.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Non regulated.

DOT Hazard Class: Non regulated.

IATA Shipping Name: Non regulated.

IMDG UN Number : Non regulated.

SECTION 15 - REGULATORY INFORMATION

SARA: This product does not contain any chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III (40CFR, Part 372).

California PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the State of California to cause cancer.

Canada WHMIS: Xi - Irritant

EU Class: Irritant.
In accordance to Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures

Risk Phrases: R36/37/38 - Irritating to eyes, respiratory system and skin.

Safety Phrase: S23 - Do not breathe gas/fumes/vapour/spray.
S37 - Wear suitable gloves.

Calcium carbonate :

TSCA Inventory Status: Listed

Crystalline silica (Quartz) :

TSCA Inventory Status: Listed

Canada DSL: Listed

Crystalline Silica (Cristobalite) :

TSCA Inventory Status: Listed

Canada DSL: Listed

Diatomaceous Earth, Flux-Calcined :

TSCA Inventory Status: Listed

Canada DSL: Listed

Polymethylethoxysiloxane :

TSCA Inventory Status: Listed

Canada DSL: Listed

Talc :

TSCA Inventory Status: Listed

Canada DSL: Listed

Titanium Oxide :

TSCA Inventory Status: Listed

Canada DSL: Listed

SECTION 16 - ADDITIONAL INFORMATION

HMIS Health Hazard: 1*
HMIS Fire Hazard: 1
HMIS Reactivity: 0
HMIS Personal Protection: X
SDS Creation Date: July 08, 2013
SDS Revision Date: July 08, 2013

Disclaimer: The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.

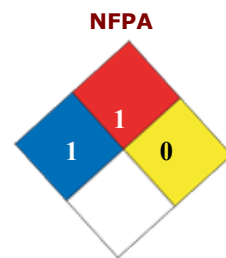
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SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product Name: **Stolit Lotusan 1.5**
Product Code: 80191
SDS Manufacturer Number: 80191
Product Use/Restriction: Waterbased Acrylic Coating.
Manufacturer Name: Sto Corp.
Address: 6175 Riverside Drive, SW
 Atlanta, Georgia 30331
General Phone Number: (404) 346-3666
Emergency Phone Number: (800) 424-9300
SDS Creation Date: July 08, 2013
SDS Revision Date: July 08, 2013
(M)SDS Format:



HMIS

Health Hazard	1*
Fire Hazard	1
Reactivity	0
Personal Protection	X

* Chronic Health Effects

SECTION 2 : HAZARD(S) IDENTIFICATION

GHS Pictograms:



Signal Word: WARNING!
GHS Class: Eye Irritant, Category 2
 Skin Irritant, Category 2
Hazard Statements: Causes eye irritation
 Causes skin irritation
Precautionary Statements: Wash hands thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.
Emergency Overview: WARNING! Irritant.

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eye: May cause irritation.

Skin: May cause irritation.

Inhalation: Prolonged or excessive inhalation may cause respiratory tract irritation.

Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Target Organs: Eyes. Skin. Respiratory system. Digestive system.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Aqueous dispersion of a copolymer of styrene and n-butylacrylate	No Data	1 - 5 by weight	
Calcium carbonate	1317-65-3	30 - 60 by weight	
Crystalline silica (Quartz)	14808-60-7	10 - 30 by weight	
Crystalline Silica (Cristobalite)	14464-46-1	1 - 5 by weight	
Diatomaceous Earth, Flux-Calcined	68855-54-9	1 - 5 by weight	
Polymethylethoxysiloxane	68554-66-5	1 - 5 by weight	
Talc	14807-96-6	1 - 5 by weight	
Titanium Oxide	13463-67-7	1 - 5 by weight	
Undisclosed/Non-hazardous	No Data	5 - 10 by weight	
Water	7732-18-5	10 - 30 by weight	

SECTION 4 : FIRST AID MEASURES

Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.

Skin Contact: Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Ingestion: If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Other First Aid: First Responders should provide for their own safety prior to rendering assistance.

SECTION 5 : FIRE FIGHTING MEASURES

Flash Point: Not determined.

Auto Ignition Temperature:	Not determined.
Lower Flammable/Explosive Limit:	Not determined.
Upper Flammable/Explosive Limit:	Not determined.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Extinguishing Media:	Use dry chemical or foam when fighting fires involving this material. Water mist may be used to cool closed containers.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire Hazards:	Material may spatter above 100 °C/212 °F

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry.
Methods for cleanup:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section.

SECTION 7 : HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Store away from direct heat or sunlight, sources of UV radiation, peroxides, or free radicals. Do not store in temperatures above 120 °F or below 48 °F. Keep away from direct sunlight.
Work Practices:	Handle in accordance with good industrial hygiene and safety practices.
Hygiene Practices:	Wash thoroughly after handling.

SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
Hand Protection Description:	Nitrile rubber or natural rubber gloves are recommended.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.
PPE Pictograms:	



EXPOSURE GUIDELINES

Crystalline silica (Quartz) :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ Respirable fraction (R)

Crystalline Silica (Cristobalite) :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ Respirable fraction (R)

Diatomaceous Earth, Flux-Calcined :

Guideline ACGIH: TLV-TWA: 0.025 mg/m³ Respirable fraction (R)

Talc :

Guideline ACGIH: TLV-TWA: 2 mg/m³ Respirable fraction (R)

TLV-TWA: 1 mg/m³ Respirable fraction (R)

Guideline OSHA:

PEL-TWA: 20 mppcf

Titanium Oxide :

Guideline ACGIH: TLV-TWA: 10 mg/m³

Notes :

Only established PEL and TLV values for the ingredients are listed.

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Liquid.
Odor:	Slight
Boiling Point:	Not determined.
Melting Point:	0°C (32°F)
Specific Gravity:	> 1
Solubility:	Miscible in water

Vapor Density:	Not determined.
Vapor Pressure:	Not determined.
Percent Volatile:	Data not available.
Evaporation Rate:	Not determined.
pH:	7.5 - 10
Flash Point:	Not determined.
Auto Ignition Temperature:	Not determined.

SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:	Stable under recommended handling and storage conditions.
Hazardous Polymerization:	Hazardous polymerization does not occur.
Conditions to Avoid:	Heat, flames, ignition sources, and sparks. Incompatible materials. Freezing or temperatures below 32 deg. F.
Incompatible Materials:	Water reactive materials.
Special Decomposition Products:	Thermal decomposition can lead to release irritant fumes and toxic gases.

SECTION 11 : TOXICOLOGICAL INFORMATION

Calcium carbonate :

RTECS Number:	EV9580000
Inhalation:	Inhalation - Rat TCLo - Lowest published toxic concentration : 250 mg/m ³ /2H/24W (Intermittent) [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis)] Inhalation - Rat TCLo - Lowest published toxic concentration : 84 mg/m ³ /4H/40W (Intermittent) [Lungs, Thorax, or Respiration - Fibrosis (interstitial) Liver - Other changes Kidney/Ureter/Bladder - Other changes] (RTECS)

Crystalline silica (Quartz) :

RTECS Number:	VV7330000
Inhalation:	Inhalation - Rat TCLo - Lowest published toxic concentration : 248 mg/m ³ /6H [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Other proteins Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] Inhalation - Rat TCLo - Lowest published toxic concentration : 248 mg/m ³ /6H [Lungs, Thorax, or Respiration - Changes in lung weight Immunological Including Allergic - Increase in cellular immune response Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] Inhalation - Rat TCLo - Lowest published toxic concentration : 200 mg/kg [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Other changes Nutritional and Gross Metabolic - Changes in iron] Inhalation - Mouse TCLo - Lowest published toxic concentration : 40 mg/kg [Lungs, Thorax, or Respiration - Other changes] Inhalation - Mouse TCLo - Lowest published toxic concentration : 40 mg/kg [Immunological Including Allergic - Decrease in cellular immune response] Inhalation - Rat TCLo - Lowest published toxic concentration : 1 ma/ka

(RTECS)

Ingestion: Oral - Rat TDLo - Lowest published toxic dose : 120 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

Crystalline Silica (Cristobalite) :

RTECS Number: VV7325000

Inhalation: Inhalation - Mouse TCLo - Lowest published toxic concentration : 43 mg/m³/5H/9D (Intermittent) [Lungs, Thorax, or Respiration - Pleural effusion Lungs, Thorax, or Respiration - Other changes]
Inhalation - Mouse TCLo - Lowest published toxic concentration : 70 mg/m³/5H/12D (Intermittent) [Lungs, Thorax, or Respiration - Fibrosis, focal (pneumoconiosis) Lungs, Thorax, or Respiration - Fibrosis (interstitial) Lungs, Thorax, or Respiration - Other changes] (RTECS)

Talc :

RTECS Number: WW2710000

Inhalation: Inhalation - Rat TCLo - Lowest published toxic concentration : 17 mg/m³/6H/26D (Intermittent) [Lungs, Thorax, or Respiration - Other changes]
Inhalation - Mouse TCLo - Lowest published toxic concentration : 20400 ug/m³/6H/26D (Intermittent) [Lungs, Thorax, or Respiration - Other changes] (RTECS)

Titanium Oxide :

RTECS Number: XR2275000

Inhalation: Inhalation - Rat TCLo - Lowest published toxic concentration : 1 mg/kg [Lungs, Thorax, or Respiration - Other changes Biochemical - Metabolism (intermediary) - Effect on inflammation or mediation of inflammation] (RTECS)

Ingestion: Oral - Rat TDLo - Lowest published toxic dose : 60 gm/kg [Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes] (RTECS)

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity: No environmental information found for this product.

Environmental Fate: No environmental information found for this product.

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of in accordance with Local, State, Federal and Provincial regulations.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name: Non regulated.

DOT Hazard Class: Non regulated.

IATA Shipping Name: Non regulated.

IMDG UN Number : Non regulated.

SECTION 15 : REGULATORY INFORMATION

SARA: This product does not contain any chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III (40CFR, Part 372).

California PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the State of California to cause cancer.

Canada WHMIS: Xi - Irritant

EU Class: Irritant.
In accordance to Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures

Risk Phrases: R36/37/38 - Irritating to eyes, respiratory system and skin.

Safety Phrase: S23 - Do not breathe gas/fumes/vapour/spray.
S37 - Wear suitable gloves.

Calcium carbonate :

TSCA Inventory Status: Listed

Crystalline silica (Quartz) :

TSCA Inventory Status: Listed

Canada DSL: Listed

Crystalline Silica (Cristobalite) :

TSCA Inventory Status: Listed

Canada DSL: Listed

Diatomaceous Earth, Flux-Calcined :

TSCA Inventory Status: Listed

Canada DSL: Listed

Polymethylethoxysiloxane :

TSCA Inventory Status: Listed

Canada DSL: Listed

Talc :

TSCA Inventory Status: Listed

Canada DSL: Listed

Titanium Oxide :

TSCA Inventory Status: Listed

Canada DSL: Listed

SECTION 16 : ADDITIONAL INFORMATION

HMIS Health Hazard: 1*

HMIS Fire Hazard: 1

HMIS Reactivity: 0

HMIS Personal Protection: X

SDS Creation Date: July 08, 2013

SDS Revision Date: July 08, 2013

Disclaimer: The information and recommendations contained herein are, to the best of Sto Corp.'s knowledge and belief, accurate and reliable as of the date issued. Sto Corp. does not warrant or guarantee their accuracy or reliability, and Sto Corp. shall not be liable for any loss or damage arising out of their use thereof. The information and recommendations are offered for the users' consideration and examination, and it is the users' responsibility to satisfy itself that they are suitable and complete for its particular use.

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Material Safety Data Sheet Wind-Lock Corporation

Product Name: Foam2Foam[®] 12 oz Gun Cleaner USA

Issue Date: 02/08/2008

Print Date: 02/14/2008

The Wind-Lock[®] encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name

Foam2Foam[®] 12 oz Gun Cleaner

COMPANY IDENTIFICATION

Wind-Lock Corporation
1055 Leisch's Bridge Road
Leesport, PA 19533 USA

Customer Information Number: 800-872-5625

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: CHEMTREC[®] 800-424-9300

Local Emergency Contact: 800-872-5625

2. Hazards Identification

Emergency Overview

Color: Colorless

Physical State: Liquid

Odor: Mild

Hazards of product:

DANGER! Flammable gas - May cause flash fire. Causes eye irritation. May cause central nervous system effects; can cause death if too much is breathed. Vapor reduces oxygen available for breathing. May cause anesthetic effects. May cause central nervous system effects; may cause respiratory tract irritation. Aspiration hazard. Can enter lungs and cause damage. Vapor explosion hazard. Vapors may travel a long distance; ignition and/or flash back may occur. Evacuate area. Keep upwind of spill. Stay out of low areas. Warn public of downwind explosion hazard. Aerosol cans exposed to fire can rupture becoming flaming projectiles. Eliminate ignition sources. Contents under pressure.

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Health Effects

Eye Contact: May cause severe eye irritation. May cause slight corneal injury. Effects may be slow to heal. Vapor may cause eye irritation experienced as mild discomfort and redness.

Skin Contact: Essentially nonirritating to skin. May cause drying and flaking of the skin.

Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Inhalation: In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). May cause respiratory irritation and central nervous system depression. At air concentrations <1000 ppm, propane exerts very little physiological action; at 100,000 ppm and above it may produce dizziness or other central nervous system effects. Excessive exposure may cause headache, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects, including death.

Ingestion: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

Effects of Repeated Exposure: Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. In animals, effects have been reported on the following organs: Blood. Kidney. Liver. Development of cataracts has been reported in laboratory animals after prolonged repeated skin exposure to acetone.

Birth Defects/Developmental Effects: For the component(s) tested: Acetone. Has been toxic to the fetus in lab animals at doses toxic to the mother.

3. Composition Information

Component	CAS #	Amount
Acetone	67-64-1	>= 60.0 - <= 100.0 %
Propane	74-98-6	>= 10.0 - <= 30.0 %

4. First-aid measures

Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

Skin Contact: Wash skin with plenty of water.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

Notes to Physician: Maintain adequate ventilation and oxygenation of the patient. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Medical Conditions Aggravated by Exposure: Skin contact may aggravate preexisting dermatitis.

5. Fire Fighting Measures

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Unusual Fire and Explosion Hazards: Contains flammable propellant. Aerosol cans exposed to fire can rupture and become flaming projectiles. Propellant release may result in a fireball. Container may vent and/or rupture due to fire. Electrically ground and bond all equipment. Flammable mixtures of this product are readily ignited even by static discharge. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Flammable mixtures may exist within the vapor space of containers at room temperature. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Pump with explosion-proof equipment. If available, use foam to smother or suppress. See Section 13, Disposal Considerations, for additional information.

Personal Precautions: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Evacuate area. Refer to Section 7, Handling, for additional precautionary measures. Keep personnel out of low areas. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Only trained and properly protected personnel must be involved in clean-up operations. Confined space entry procedures must be followed before entering the area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. For large spills, warn public of downwind explosion hazard. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Vapor explosion hazard. Keep out of sewers. See Section 10 for more specific information.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling

General Handling: Keep away from heat, sparks and flame. Avoid contact with eyes. Wash thoroughly after handling. Do not swallow. Avoid breathing vapor. Use only with adequate ventilation. Keep container closed. No smoking, open flames or sources of ignition in handling and storage area. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Ignition sources can include and are not limited to pilot lights, flames, smoking, sparks, heaters, electrical equipment, and static discharges. Electrically bond and ground all containers and equipment before transfer or use of material. Never use air pressure for transferring product. Contents under pressure. Do not puncture or incinerate container. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Do not enter confined spaces unless adequately ventilated.

Keep out of reach of children. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage

Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Flammable mixtures may exist within the vapor space of containers at room temperature. See Section 10 for more specific information.

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Acetone	ACGIH	TWA	500 ppm
	ACGIH	STEL	750 ppm
	OSHA Table Z-1	PEL	2,400 mg/m3 1,000 ppm
Propane	OSHA Table Z-1	PEL	1,800 mg/m3 1,000 ppm
	ACGIH	TWA	1,000 ppm

A BEI notation following the exposure guideline refers to a guidance value for assessing biological monitoring results as an indicator of the uptake of a substance from all routes of exposures.

Personal Protection

Eye/Face Protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin Protection: Wear clean, body-covering clothing.

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Natural rubber ("latex"). Neoprene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline.

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls

Ventilation: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only in enclosed systems or with local exhaust ventilation. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. Lethal concentrations may exist in areas with poor ventilation.

9. Physical and Chemical Properties

Physical State	Liquid
Color	Colorless
Odor	Mild
Flash Point - Closed Cup	Flammable gas.
Flammable Limits In Air	Lower: 2.1 %(V) <i>Vendor</i>

Autoignition Temperature	Upper: 8.5 %(V) <i>Vendor</i> (propane) 450 °C (842 °F) <i>Estimated</i>
Vapor Pressure	4,482 hPa <i>Vendor</i>
Boiling Point (760 mmHg)	No test data available.
Vapor Density (air = 1)	greater than air
Specific Gravity (H₂O = 1)	0.87 <i>Vendor</i>
Freezing Point	No test data available
Melting Point	No test data available
Solubility in Water (by weight)	Complete
pH	No test data available

10. Stability and Reactivity

Stability/Instability

Thermally stable at typical use temperatures.

Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose. Avoid static discharge.

Incompatible Materials: Avoid contact with: Amines. Ammonia. Chlorine. Halogens. Strong acids. Strong bases. Strong oxidizers.

Hazardous Polymerization

Will not occur.

Thermal Decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials.

11. Toxicological Information

Acute Toxicity

Ingestion

Single dose oral LD50 has not been determined. Estimated LD50, Rat > 5,000 mg/kg

Skin Absorption

The dermal LD50 has not been determined. Estimated LD50, Rabbit 20,000 mg/kg

Repeated Dose Toxicity

Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. In animals, effects have been reported on the following organs: Blood. Kidney. Liver. Development of cataracts has been reported in laboratory animals after prolonged repeated skin exposure to acetone.

Developmental Toxicity

For the component(s) tested: Acetone. Has been toxic to the fetus in lab animals at doses toxic to the mother.

Genetic Toxicology

For the component(s) tested: Acetone. In vitro genetic toxicity studies were predominantly negative.

12. Ecological Information

CHEMICAL FATE

Data for Component: **Acetone**

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).

Henry's Law Constant (H): 1.38E-5 atm*m3/mole; 25 °C Estimated
Partition coefficient, n-octanol/water (log Pow): -0.24 Measured
Partition coefficient, soil organic carbon/water (Koc): 0.37 - 2.0 Estimated
Distribution in Environment: Mackay Level 1 Fugacity Model:

Air	Water.	Biota	Soil	Sediment
44.3 %	55.6 %	< 0.1 %	< 0.1 %	< 0.1 %

Persistence and Degradability

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
2.04E-13 cm3/s	52 d	Estimated

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
91 %	28 d	OECD 301B Test

Theoretical Oxygen Demand: 2.20 mg/mg

Data for Component: **Propane**

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).

Henry's Law Constant (H): 7.07E-01 atm*m3/mole; 25 °C Measured
Partition coefficient, n-octanol/water (log Pow): 2.36 Measured
Partition coefficient, soil organic carbon/water (Koc): 24 - 460 Estimated
Distribution in Environment: Mackay Level 1 Fugacity Model:

Air	Water.	Biota	Soil	Sediment
100 %	0 %	0 %	0 %	0 %

Persistence and Degradability

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.27E-12 cm3/s	8.4 d	Estimated

Theoretical Oxygen Demand: 3.64 mg/mg

ECOTOXICITY

Data for Component: **Acetone**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, rainbow trout (*Oncorhynchus mykiss*), 96 h: 5,500 - 6,100 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, water flea *Daphnia magna*, 48 h, immobilization: 6,084 mg/l

Aquatic Plant Toxicity

EC50, diatom *Skeletonema costatum*, biomass growth inhibition, 5 d: 11,800 - 14,400 mg/l

Toxicity to Micro-organisms

IC50, OECD 209 Test; activated sludge, respiration inhibition, 3 h: > 1,000 mg/l

Data for Component: **Propane**

No relevant information found.

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. WIND-LOCK CORPORATION HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES

OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS

14. Transport Information

DOT Non-Bulk

Proper Shipping Name: AEROSOLS

Hazard Class: 2.1 **ID Number:** UN1950
LIMITED QUANTITY

DOT Bulk

NOT AVAILABLE IN BULK CONTAINERS

IMDG

Proper Shipping Name: AEROSOLS

Hazard Class: 2.1 **ID Number:** UN1950

EMS Number: F-D,S-U

LIMITED QUANTITY

ICAO/IATA

Proper Shipping Name: AEROSOLS, FLAMMABLE

Hazard Class: 2.1 **ID Number:** UN1950

LIMITED QUANTITY

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	Yes
Reactive Hazard	No
Sudden Release of Pressure Hazard	Yes

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Acetone	67-64-1	>= 60.0 - <= 100.0 %
Propane	74-98-6	>= 10.0 - <= 30.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

16. Other Information

Recommended Uses and Restrictions

Cleaner. Wind-Lock[®] recommends that you use this product in a manner consistent with the listed use. If your intended use is not consistent with Wind-Lock's stated use, please contact Wind-Lock's Customer Information Group.

Revision

Identification Number: 64097 / 1001 / Issue Date 11/28/2007 / Version: 2.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

Wind-Lock[®] urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

POLYURETHANE FOAM CLEANER

(Foam Cleaner)

MSDS # A16304

Issue Date: March 2005 Last Rev: October 22, 2010

M A T E R I A L S A F E T Y D A T A S H E E T

1. PRODUCT & COMPANY IDENTIFICATION

Chemical Product

Polyurethane Foam Cleaner

Manufacturer

FOMO PRODUCTS, INC.
P. O. Box 1078
Norton, Ohio 44203

Emergency Overview

Product Information: 1-800-321-5585 (Monday-Friday 8:00am-5:00pm). In Ohio and outside the United States call (330) 753-4585

Transportation Emergency: CHEMTREC 1-800-424-9300 (24 hours). One-Component Polyurethane Foam Sealant HC is registered by the manufacturer, FOMO PRODUCTS, INC.

International Transportation Emergency: CHEMTREC (703) 527-3887

Product is a pressurized, flammable organic solvent. Containers should not be heated above 120°F (49°C) to avoid excessive pressure build-up.

2. HAZARDS IDENTIFICATION

Emergency Overview

DANGER! Extremely Flammable Liquid and Vapor. Vapors may cause a flash fire. May cause eye, skin, nose, throat and respiratory tract irritation. Harmful if inhaled. Contents under pressure, storage temperature should not exceed 120°F (49°C) in order to avoid excessive pressure build up and possible container rupture. May cause central nervous system effects causing dizziness, headache, or nausea. Prolonged or repeated contact may dry the skin and cause irritation and burns. Turn off all ignition sources.

Potential Health Effects

The primary adverse health effects of this product are related to an acute or chronic over exposure to Acetone. This material can be harmful or fatal if inhaled or ingested. This product should be used in a well ventilated area to avoid exceeding the exposure limits of these components (listed in Section 8 of this MSDS). If used indoors, mechanical ventilation or exhaust should be provided during use (see Section 8).

Entry Route: Effects of Overexposure

Inhalation: Repeated and prolonged exposure to organic solvents at or above levels can produce anesthetic effects, such as dizziness or lightheadedness. May cause physiological injury and should be avoided. Exposure to extremely high vapor concentrations can cause death.

Eyes: Liquids and vapors are an irritant to the eyes, causing pain, lacrimation and general inflammation. Symptoms include stinging, tearing, redness, and swelling of the eyes.

Skin: May be mildly irritating to skin. Continued exposure may lead to dermatitis and general inflammation. Symptoms may include redness, burning, drying and cracking of skin, and skin burns. Passage of the material into the skin is possible, but unlikely to result in absorption of harmful amounts.

Ingestion: Small amounts swallowed as a result of normal handling are not likely to cause injury; swallowing large amounts may cause injury. This material can get into the lungs through swallowing or vomiting. If vomiting results in aspiration, chemical pneumonia or lung damage could occur.

If accidental contact occurs, follow the appropriate first aid procedure described in Section 4 of this MSDS.

3. COMPOSITION

<u>Chemical Name (common names)</u>	<u>CAS Number</u>	<u>Percentage</u>
Acetone	67-64-1	60 to 100 percent
Carbon Dioxide (Compressed Gas)	124-38-9	5 to 10 percent

(NOTE: See Section 8 of this MSDS for Exposure Guidelines)

(NOTE: See Section 11 of this MSDS for Toxicological Information- LC₅₀ and LD₅₀)

4. FIRST AID

Inhalation: If breathing difficulty is experienced, move to area free of exposure. Provide fresh air. If necessary, provide oxygen or artificial respiration by trained personnel and obtain medical attention.

Eye Contact: Immediately flush with clean water for at least 15 minutes and obtain medical attention. If the person is wearing contact lenses, flush initially for 5 minutes, remove lenses and then flush for an additional 15 minutes. Contact a physician.

Skin Contact: Remove contaminated clothing. Wash off immediately with soap and plenty of water. If irritation persists, obtain medical attention. Wash contaminated clothing before re-use.

Ingestion: Do not induce vomiting. Never give anything orally to an unconscious person. Contact or transport to a medical facility immediately.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Dry Chemical, carbon dioxide, Halon 1211, chemical foams, or water spray (if used in large quantities).

Firefighting Procedures: Isolate area and deny unnecessary entry. Stay upwind. Water is not recommended unless used in large quantities as a fine spray when other extinguishing agents are not available. Water may spread the fire. Protective equipment: Wear self-contained breathing apparatus to protect against toxic decomposition by-products, including Carbon monoxide, and Carbon dioxide. Wear all turn out gear (boots, trousers, helmet, gloves, and hood).

Unusual Fire/Explosion Hazards: Contains flammable propellant. Eliminate ignition sources. High temperatures will raise the pressure in the containers, which may lead to rupturing. Aerosol cans exposed to fire or high temperature can rupture and rocket. Vapors are heavier than air, and may travel along the ground and for long distances. This material is volatile and can be ignited by static discharge, flames, sparks, heaters, smoking, or other ignition source.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear skin, eye, and respiratory protection and equipment (See section 8). Ventilate the area. Vapors can accumulate in low areas. Read all product instructions before using.

Environmental Precautions: Containment should include preventing the spill from entering drains, sewers, waterways, groundwater, or soil. If run-off occurs contact the proper authorities as required.

Clean Up Procedures/Neutralization: Absorb liquid on vermiculite, floor absorbent or other absorbent material. Materials used in cleaning up spill may be considered hazardous waste.

7. HANDLING AND STORAGE

Handling: Extremely flammable aerosol compressed gas. Keep away from sources of heat, sparks, and flame. Remove all ignition sources. Turn off all pilot lights. Do not smoke. Wear proper personal protective equipment when using the product. Use only in a well ventilated area. Take precautionary measures against static discharge.

Storage: Store in a dry place. Ideal storage temperature for is 60°F to 80°F (15.5°C to 26.6°C). Keep away from heat and sources of ignition. Keep containers closed. Always store container upright. KEEP OUT OF REACH OF CHILDREN

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Read all product instructions before using.

Exposure Guidelines

Acetone	<u>OSHA</u>	1000 ppm	2,400 mg/m ³
	<u>ACGIH</u>	500 ppm TWA	
	<u>ACGIH</u>	750 ppm STEL	
	<u>NIOSH</u>	250 ppm REL	590 mg/m ³
Carbon dioxide	<u>ACGIH</u>	5000 ppm	
	<u>OSHA</u>	1000 ppm	

Personal Protective Equipment

Respiratory Protection/Ventilation: Only use in a well ventilated area. Mechanical ventilation may be needed to maintain exposure below exposure guidelines.

Hand Protection: Use chemically resistant gloves. Nitrile/butadiene rubber, Butyl Rubber, polyethylene, PVC (vinyl), or neoprene gloves are also effective. Glove selection should take into account potential body reactions to certain materials and manufacturer's instructions for use.

Eye Protection: Use safety glasses with side shields or goggles. An eye wash station should be in the area.

Skin Protection: Avoid contact with skin. Use clothing that protects against dermal exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid
Odor:	Solvent Odor.
pH:	No test data available
Melting/Freezing Point:	-94.8 °C (-138.6 °F) Acetone Vendor
Boiling Point:	56°C (132.8°F) Acetone Vendor
Flash Point:	-20°C (-4°F)
Specific Gravity:	0.8 (H ₂ O = 1)
Solubility in Water:	Soluble
Partition Coefficient N-octanol/water:	No test data available
Auto-ignition Temperature:	465°C (869°F)
Decomposition Temperature:	Not available
Evaporation Rate:	14.40
Flammability Limits:	Lower 2.6% (V) Upper 12.8% (V) - Acetone Vendor
Vapor Pressure:	Container is under pressure (greater than 50 psig) 345kPa Liquid vapor pressure 30.79 kPa @77°F (25°C)
Vapor Density:	2 (AIR = 1)

10. STABILITY AND REACTIVITY

Stability: This product is considered stable under normal and anticipated storage and handling conditions. Do not store above 120°F (49°C).

Materials to Avoid: Strong oxidizing agents, incompatible with acids, halogenated compounds, reducing agents, and strong bases.

Conditions to Avoid: High temperatures will raise the pressure in the containers, which may lead to rupturing. Avoid static discharge.

Thermal Decomposition: Toxic decomposition by-products include Carbon monoxide and Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity for Acetone:

Ingestion: LD50 5,800 mg/kg (rat, male/female)

Skin: LD50 >20,000 mg/kg (rabbit)

Sensitization

Skin: (rabbit, slightly irritating)

Eye: (rabbit, moderately irritating)

Repeated Dose Toxicity: Symptoms of excessive exposure include dizziness and drowsiness. This product contains components which have been reported to cause effects of the following organs in animals: blood, kidney and liver.

Developmental Toxicity: has been toxic to the fetus in lab animals at dos toxic to the mother

Genetic Toxicity In vitro: In vitro studies were negative.

12. ECOLOGICAL INFORMATION

Ecological Data for Acetone:

Biodegradation: Readily Biodegradeable.

Bioaccumulation: 1

Acute Toxicity to Fish: LC50: 5540 mg/l *Oncorhynchus mykiss* (rainbow trout), 96h

LC50: 8300 mg/l *Lepomis macrochirus* (bluegill sunfish), 96h

LC50: 8120 mg/l *Pimephales promelas* (fathead minnow) 96h

Acute Toxicity to Aquatic Invertebrates: EC50: 10 mg/l *Daphnia magna* (water flea), 24h

Toxicity to algae: EC50: >100 mg/l, *Selenastrum capricornutum*, 96h

13. DISPOSAL CONSIDERATIONS

Do not dispose product into drains, sewers, waterways, groundwater, or soil.

1. DO NOT INCINERATE CONTAINERS

2. Before disposing of containers, relieve container of any remaining pressure. Never discard in a liquid state. Always wear safety glasses or goggles, nitrile gloves, and clothing that protects against dermal exposure when disposing of product.

3. DISPOSE OF EMPTY CONTAINERS ACCORDING TO APPLICABLE FEDERAL, STATE, PROVINCIAL AND LOCAL REGULATIONS. CHECK WITH YOUR LOCAL WASTE DISPOSAL SERVICE FOR GUIDANCE.

14. TRANSPORTATION

Shipping Information

Containers 1000 cu. cm. (1 liter) or Less

Ground Consumer Commodity ORM-D (On Shipper Carton)

Air UN1950 Aerosols, Flammable 2.1 (Flammable Gas Label)

LIMITED QUANTITY

Packing Instruction (Cargo & Passenger) 203

Water UN1950 Aerosols, Flammable 2.1 (Flammable Gas Label)

LIMITED QUANTITY

Note Emergency Response Guide Numbers – Consumer Commodity #171, for Aerosols #126

15. REGULATORY

OSHA Hazcom Standard Rating:

Hazardous

WHMIS Classification:

A
B2
D2B

Toxic Substances Control Act (TSCA)/Domestic Substances List (DSL):

All ingredients are listed on the TSCA inventory, as well as the Canadian Domestic Substances List.

SARA Title III: Section 311/312:

Acute Health Hazard, Chronic Health Hazard, Fire Hazard, Sudden Release of Pressure Hazard

SARA Title III: Section 313

This product does not contain chemicals at levels which require reporting under this statute.

State Right-To Know Information: Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

<u>Chemical Name (common names)</u>	<u>CAS Number</u>	<u>Percentage</u>
Acetone	67-64-1	60 to 100 percent

California Proposition 65:

Based on information currently available, this product is not known to contain detectable amounts of any chemicals currently listed under California Proposition 65.

16. OTHER

NFPA: Health Hazard 1; Flammability 3; Reactivity 0
HMIS: Health Hazard 1; Flammability 3; Physical Hazard 0

The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving it will make their own determination as to its suitability for their purposes prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, of merchantability or fitness for a particular use are made hereunder with respect to this information or the product to which information refers.

Information contained herein is deemed to be reliable, conservative and accurate. Fomo Products, Inc. reserves the right to change the design, specifications or any other features at any time and without notice, while otherwise maintaining regulatory compliance.

LAST REVISION: August 2010-3

Product Management

A16304

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Goof Off Professional Strength VOC Compliant	
Company Name:	W. M. Barr 2105 Channel Avenue Memphis, TN 38113	Phone Number: (901)775-0100
Web site address:	www.wmbarr.com	
Emergency Contact Information:	3E 24 Hour Emergency Contact W.M. Barr Customer Service	(800)451-8346 (800)398-3892
Product Category:	General Purpose Adhesive Remover	
Intended Use:	Mult-Purpose Remover for tar, ink, paint, adhesive, etc.	
Synonyms:	FG603, FG603BULK, FG612, FG650, FG650SK, FG651, FG651BULK, FG651BULK2, FG651BULK3, FG653, FG653B, FG653BBLK, FG654, FG654BWS, FG655B, FG655BUL, FG655BWS, FG657, FG683, FG690, FG750, 2410B.3, FG650LWS, FG650LDS	

2. HAZARDS IDENTIFICATION

Flammable Liquids, Category 2
Skin Corrosion/Irritation, Category 2
Serious Eye Damage/Eye Irritation, Category 2A
Target Organ Systemic Toxicity (single exposure), Category 3
Carcinogenicity, Category 1B



GHS Signal Word: **Danger**

GHS Hazard Phrases: H225: Highly flammable liquid and vapor.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
H350: May cause cancer.

GHS Precaution Phrases: P233: Keep container tightly closed.
P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P243: Take precautionary measures against static discharge.
P242: Use only non-sparking tools.
P264: Wash hands thoroughly after handling.
P362+364: Take off contaminated clothing and wash it before reuse.
P261: Avoid breathing gas/mist/vapours/spray.
P271: Use only outdoors or in a well-ventilated area.
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.

GHS Response Phrases: P370+378: In case of fire, use dry chemical powder to extinguish.
P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P302+352: IF ON SKIN: Wash with plenty of soap and water.
P321: Specific treatment see label.

Goof Off Professional Strength VOC Compliant

Printed: 10/28/2014

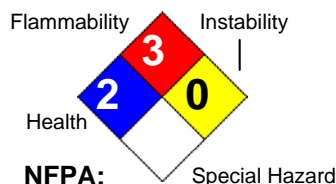
Revision: 10/28/2014

Supersedes Revision: 08/06/2014

P332+313: If skin irritation occurs, get medical advice/attention.
 P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+313: If eye irritation persists, get medical advice/attention.
 P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P312: Call a POISON CENTER/doctor if you feel unwell.
 P308+313: IF exposed or concerned: Get medical attention/advice.
 P403+235: Store in cool/well-ventilated place.
 P501: Dispose of contents/container according to local, state and federal regulations.
 P403+233: Store container tightly closed in well-ventilated place - if product is as volatile as to generate hazardous atmosphere.
 P405: Store locked up.

GHS Storage and Disposal Phrases:**Hazard Rating System:**

HEALTH	*	2
FLAMMABILITY		3
PHYSICAL		0
PPE		X

**HMIS:****OSHA Regulatory Status:**

This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic):

This product has not been tested as a whole to determine health effects. The health effects listed below are associated with the individual ingredients listed in Section 3.

INHALATION:

High vapor concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, loss of consciousness and even death). Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal.

EYES:

High vapor concentrations may cause irritation of the eyes. Causes eye irritation.

SKIN:

Prolonged or repeated contact may cause drying, cracking, or irritation.

INGESTION:

Harmful or fatal if swallowed. Pulmonary aspiration hazard. Ingestion may cause nausea, vomiting, diarrhea and inflammation of the lungs. Irritating to the throat, mouth, and stomach. May produce central nervous system effects, which include dizziness, loss of balance and coordination, unconsciousness, coma and even death.

CHRONIC OVEREXPOSURE EFFECTS:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal. Overexposure may cause liver and kidney injury.

TARGET ORGANS: liver, kidneys, central nervous system

PRIMARY ROUTES OF ENTRY: inhalation, ingestion, absorption

Medical Conditions Generally Aggravated By Exposure:

The following diseases or disorders may be aggravated by exposure to this product: skin, eye, liver, kidney, nervous system, respiratory system

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration	RTECS #
67-64-1	Acetone {2-Propanone}	83.0 %	AL3150000
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	13.6 %	ZE2100000
100-41-4	Ethylbenzene {Ethylbenzol; Phenylethane}	3.4 %	DA0700000

4. FIRST AID MEASURES

Emergency and First Aid Procedures:

Skin:
 Immediately begin washing the skin thoroughly with large amounts of water and mild soap, if available, while removing contaminated clothing. Seek medical attention if irritation persists.

Eyes:
 Immediately begin to flush eyes with water, remove any contact lens. Continue to flush the eyes for at least 15 minutes, then seek immediate medical attention.

Inhalation:
 Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

Ingestion:
 If swallowed, do NOT induce vomiting. Seek immediate medical attention. Call a physician, hospital emergency room, or poison control center immediately. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than hips to prevent aspiration.

Signs and Symptoms Of Exposure:

See Potential Health Effects.

Note to Physician:

Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

Flash Pt: NFPA Class IB
 -4.00 F Method Used: Setaflash Closed Cup (Rapid Setaflash)

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: No data.

Suitable Extinguishing Media: Carbon dioxide, dry chemical, foam and/or water fog.

Unsuitable Extinguishing Media: None known.

Fire Fighting Instructions: Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards: Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, sparks, flame, and other ignition sources distant from material handling point.

6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled: Vapors may cause flash fire or ignite explosively.

Clean up: Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area. Use non-sparking tools. Use proper bonding and grounding methods for all equipment and processes. Keep out of waterways and bodies of water. Be cautious of vapors collecting in small enclosed spaces, sewers, low lying areas, confined spaces, etc.

Small spills: Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills: Dike far ahead of spill for later disposal.

Waste Disposal: Dispose in accordance with applicable local, state and federal regulations.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling: Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Do not use this product near any source of heat or open flame, furnace areas, pilot lights, stoves, etc.

Do not use in small enclosed spaces, such as basements and bathrooms. Vapors can accumulate and explode if ignited.

Do not spread this product over large surface areas because fire and health safety risks will increase dramatically.

Precautions To Be Taken in Storing: Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

Other Precautions: Keep away from heat, sparks and open flame. No smoking.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
67-64-1	Acetone {2-Propanone}	PEL: 1000 ppm	TLV: 500 ppm STEL: 750 ppm	No data.
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	PEL: 100 ppm	TLV: 100 ppm STEL: 150 ppm	No data.
100-41-4	Ethylbenzene {Ethylbenzol; Phenylethane}	PEL: 100 ppm	TLV: 100 ppm STEL: 125 ppm	No data.

Additional Physical Information VOC (g/L): 161 g/L max

10. STABILITY AND REACTIVITY

Stability: Unstable [] Stable [X]
Conditions To Avoid - Instability: No data available.
Incompatibility - Materials To Avoid: Strong oxidizing agents.
Hazardous Decomposition Or Byproducts: Carbon monoxide, carbon dioxide.
Possibility of Hazardous Reactions: Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions: No data available.

11. TOXICOLOGICAL INFORMATION

Toxicological Information: This product has not been tested as a whole. Information below will be for individual ingredients.

Chronic Toxicological Effects:

CAS# 67-64-1:
Standard Draize Test, Eyes, Species: Rabbit, 20.00 MG, Severe.
Result:
Behavioral: Change in motor activity (specific assay).
Behavioral: Alteration of classical conditioning.
- American Journal of Ophthalmology., Ophthalmic Pub. Co., 435 N. Michigan Ave., Suite 1415, Chicago, IL 60611, Vol/p/yr: 29,1363, 1946

CAS# 1330-20-7:
Standard Draize Test, Skin, Species: Rabbit, 100.0 %, Moderate.
Result:
Specific Developmental Abnormalities: Craniofacial (including nose and tongue).
- AMA Archives of Industrial Health., For publisher information, see AEHLAU, Chicago, IL, Vol/p/yr: 14,387, 1956

Standard Draize Test, Eyes, Species: Rabbit, 5.000 MG, 24 H, Severe.
Result:
Behavioral: General anesthetic.
Behavioral: Somnolence (general depressed activity).
Behavioral: Irritability.
- "Sbornik Vysledku Toxilogickeho Vysetreni Latek A Pripravku," , Institut Pro Vychovu Vedoucicn P, Marhold, J.V., Institut Pro Vychovu Vedoucicn, Pracovniku Chemickeho, Prumyclu Praha Czechoslovakia, Vol/p/yr: -,24, 1972

Carcinogenicity/Other Information: ACGIH A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
ACGIH A4 - Not Classifiable as a Human Carcinogen
IARC 2B - Possibly Carcinogenic to Humans
IARC 3: Not Classifiable as to Carcinogenicity in Humans.

Goof Off Professional Strength VOC Compliant

Printed: 10/28/2014

Revision: 10/28/2014

Supersedes Revision: 08/06/2014

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
67-64-1	Acetone {2-Propanone}	n.a.	n.a.	A4	n.a.
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	n.a.	3	A4	n.a.
100-41-4	Ethylbenzene {Ethylbenzol; Phenylethane}	n.a.	2B	A3	n.a.

12. ECOLOGICAL INFORMATION

General Ecological Information: This product has not been tested as a whole. Information below will be for individual ingredients.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of waste at an approved hazardous waste treatment/disposal facility in accordance with applicable local, provincial and federal regulations.

Do not place material in general trash.

Do not allow material to enter bodies of water or sewers.

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Paint Related Material

DOT Hazard Class: 3 FLAMMABLE LIQUID

UN/NA Number: UN1263 **Packing Group:** II



LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Paint Related Material

Additional Transport Information: The shipper/supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

15. REGULATORY INFORMATION

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

<input checked="" type="checkbox"/> Yes [] No	Acute (immediate) Health Hazard
<input checked="" type="checkbox"/> Yes [] No	Chronic (delayed) Health Hazard
<input checked="" type="checkbox"/> Yes [] No	Fire Hazard
[] Yes <input checked="" type="checkbox"/> No	Sudden Release of Pressure Hazard
[] Yes <input checked="" type="checkbox"/> No	Reactive Hazard

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
67-64-1	Acetone {2-Propanone}	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory, 4 Test; CA PROP.65: No
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	CAA HAP,ODC: HAP; CWA NPDES: Yes; TSCA: Yes - Inventory; CA PROP.65: No
100-41-4	Ethylbenzene {Ethylbenzol; Phenylethane}	CAA HAP,ODC: HAP; CWA NPDES: Yes; TSCA: Yes - Inventory, 4 Test; CA PROP.65: Yes

Regulatory Information:

Regulatory Information Statement: All components of this material are listed on the TSCA Inventory or are exempt.

16. OTHER INFORMATION

Revision Date: 10/28/2014
Preparer Name: W.M. Barr EHS Dept (901)775-0100

Additional Information About This Product: No data available.

Company Policy or Disclaimer: The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

FRP AND FRP ADHESIVES

- 1. NUDO – Fiberlite FRP Panels**
- 2. Panolam – FRP Panels**
- 3. Franklin – Titebond GREENchoice FRP Adhesive**
- 4. Franklin – Titebond Solvent Based FRP Adhesive**



Material Safety Data Sheet

Material Name: FiberLite

*** Section 1 - Chemical Product and Company Identification ***

Manufacturer Information

Nudo
1500 Taylor Avenue
Springfield, IL 62703

Phone: 217-528-5636
Fax: 217-528-8722

*** Section 2 - Hazards Identification ***

Emergency Overview

No specific hazards anticipated from normal product handling. Dust and other particulates generated during cutting, shaping, or forming may cause eye, skin, and respiratory tract irritation.

Potential Health Effects: Eyes

Dusts and particulates may cause eye irritation.

Potential Health Effects: Skin

Dusts and particulates may cause skin irritation.

Potential Health Effects: Ingestion

Not a likely route of exposure under normal product use conditions.

Potential Health Effects: Inhalation

Dusts and particulates may cause respiratory tract irritation.

HMIS Ratings: Health: 1 Fire: 0 HMIS Reactivity 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** Section 3 - Composition / Information on Ingredients ***

CAS #	Component
Not Available	Fiberglass Panel

*** Section 4 - First Aid Measures ***

First Aid: Eyes

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Eye injuries from glass particles should be treated by a physician immediately.

First Aid: Skin

For skin contact flush with large amounts of water. If irritation persists, get medical attention.

First Aid: Ingestion

If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting.

First Aid: Inhalation

Move person to non-contaminated air. If the affected person is not breathing, apply artificial respiration.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards

See Section 9 for Flammability Properties.
None anticipated.

Hazardous Combustion Products

Not Determined

Extinguishing Media

Use appropriate extinguishing media suitable for surrounding fire.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear.

NFPA Ratings: Health: 1 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Material Safety Data Sheet

Material Name: FiberLite

*** Section 6 - Accidental Release Measures ***

Containment Procedures

None necessary.

Clean-Up Procedures

No special cleanup procedures needed.

Evacuation Procedures

None

Special Procedures

None

*** Section 7 - Handling and Storage ***

Handling Procedures

Avoid dust generation.

Storage Procedures

No special storage procedures needed.

*** Section 8 - Exposure Controls / Personal Protection ***

A: Component Exposure Limits

ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Engineering Controls

Ventilation is not normally required.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear dust goggles.

Personal Protective Equipment: Skin

None necessary.

Personal Protective Equipment: Respiratory

Not normally needed.

Personal Protective Equipment: General

None

*** Section 9 - Physical & Chemical Properties ***

Appearance: Multi-colored

Physical State: Solid

Vapor Pressure: ND

Boiling Point: ND

Solubility (H2O): ND

Evaporation Rate: NA

Octanol/H2O Coeff.: ND

Flash Point Method: ND

Lower Flammability Limit (LFL): ND

Auto Ignition: ND

Odor: None

pH: NA

Vapor Density: ND

Melting Point: ND

Specific Gravity: 1.6-1.8

VOC: ND

Flash Point: ND

Upper Flammability Limit (UFL): ND

Burning Rate: ND

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

This is a stable material.

Chemical Stability: Conditions to Avoid

Avoid dust generation.

Incompatibility

Not Determined

Hazardous Decomposition

Not Determined

Material Safety Data Sheet

Material Name: FiberLite

Possibility of Hazardous Reactions

Will not occur.

*** Section 11 - Toxicological Information ***

Acute Dose Effects

A: General Product Information

No information available for the product.

B: Component Analysis - LD50/LC50

No LD50/LC50's are available for this product's components.

Carcinogenicity

A: General Product Information

No information available for the product.

B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

No information available for the product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

No ecotoxicity data are available for this product's components.

*** Section 13 - Disposal Considerations ***

US EPA Waste Number & Descriptions

Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Not Regulated

TDG Information

Shipping Name: Not Regulated

*** Section 15 - Regulatory Information ***

US Federal Regulations

Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations

Component Analysis - State

None of this product's components are listed on the state lists from CA, MA, MN, NJ, PA, or RI.

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

Additional Regulatory Information

Material Safety Data Sheet

Material Name: FiberLite

* * * Section 16 - Other Information * * *

Other Information

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

End of Sheet



MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

Product: Fiberglass Reinforced Plastic (FRP)
Trade Name: None
Product Description: Fiberglass Reinforced Plastic

CAS Number: Not applicable

Preparation Date: September 20, 2010
Previous Revision: July 27, 2007

Manufacturer Information: Panolam Industries International Inc.
325 DeSoto Avenue
Morristown, TN 37816
(423) 587-1842

Emergency Contact (24 hours): 1-800-CHEMTREC

SECTION II – COMPOSITION/INFORMATION ON INGREDIENTS

Panolam FRP panels are solid sheets which are composed of fiberglass, inorganic fillers, pigments and other additives that are embedded in a cured unsaturated polyester resin. These panels are considered as “articles” as defined in the OSHA Hazard Communication standard in 29 CFR 1910.1200 (c) and are not considered hazardous under normal use.

Fabricating, machining, etc. may produce dust, which should be controlled subject to the OSHA standards for particulate exposure as included below:

CHEMICAL COMPONENT	OSHA PEL's	ACGIH TLV's
Particulate	TWA: 15.0 mg/m ³ (total dust) TWA: 5.0 mg/m ³ (respirable fraction)	TWA: 5.0 mg/m ³ (inhalable fraction) TWA: 1 fiber/cm ³ (respirable fraction)

SECTION III – HEALTH HAZARDS

Route of Entry: Skin contact [X] Skin absorption [] Eye contact [X]
Inhalation [X] Ingestion []

EFFECTS OF ACUTE EXPOSURE:

Inhalation: Not considered a problem under normal use. Dust generated during machining can cause short-term irritation of the mouth, nose, throat or upper respiratory tract.

Eye Contact: Not considered a problem under normal use. Contact with dust generated during machining can cause short-term irritation.

Skin Contact: Not considered a problem under normal use. Contact with dust generated during machining can cause skin irritation.

Skin Absorption: Not likely to occur

Ingestion: Not considered a problem under normal use.

EFFECTS OF OVEREXPOSURE:

Exposure to dust in excess of the exposure limits in Section II may result in skin or upper respiratory tract irritation.

SECTION IV – FIRST AID MEASURES

Inhalation: If exposed to dust remove to fresh air. Get medical attention if irritation persists, or if severe coughing or breathing difficulty occurs.

Eye Contact: Flush eyes with large amounts of water. Remove to fresh air. Get medical attention if irritation persists.

Skin Contact: Remove contaminated clothing. Wash affected areas with soap and water. Get medical attention if rash or irritation persists or dermatitis occurs.

Ingestion: Rinse mouth with water. Get medical attention if irritation persists.

SECTION V - FIRE OR EXPLOSION HAZARDS

Extinguishing media:	Water, Carbon Dioxide, Dry Chemical, Chemical Foam.
Hazardous combustion products:	Panels exposed to fire may liberate oxides of nitrogen and carbon and hydrocarbons.
Special fire fighting procedures:	Firefighters should use appropriate personal protective equipment including self-contained breathing apparatus.
Flash point & method of determination:	Material is classified as nonflammable
Upper flammable limit:	Not Applicable
Lower flammable limit:	Not Applicable
Auto-ignition temperature:	Typically >450 °F
Explosion Hazards:	Finely divided airborne dust from machining could produce Class 1 dusts. Follow NFPA guides for fire safety practices.

SECTION VI – ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of a leak or spill:	Minimize dust. Sweep, shovel or vacuum.
--	---

SECTION VII – HANDLING AND STORAGE

Precautions to be taken in handling and storing:	Store flat if possible. Avoid excessive heat. Secondary operations such as cutting, grinding or sanding may produce dust.
---	---

SECTION VIII – EXPOSURE CONTROL /PERSONAL PROTECTION

Hand protection:	Gloves may be worn to prevent contact with rough panel edges, and dusts from machining activities.
Eye protection:	Safety glasses or goggles are recommended when machining this material.
Respiratory protection:	None should be required during normal operations. When dust is generated, a NIOSH approved mask may be used when exposure levels to dust have the potential to be above regulated values.
Body protection:	No special precautions are required. If exposed to dust wear normal work clothing covering arms and legs. Wash with soap and water to remove any material from the skin.
Foot protection:	Safety shoes are recommended when handling the

Ventilation controls:

material.

When dust is created, use local ventilation where required to maintain airborne levels below OSHA PELs

SECTION IX - PHYSICAL DATA

Physical state (room temperature):	Solid
Odor:	No significant odor
Appearance:	Rigid, solid sheet. Various surface colors/textures.
Odor threshold:	Not applicable
Boiling point:	Not applicable
Freezing point:	Not applicable
Percent volatile by volume:	Not applicable
Specific gravity:	> 1
Evaporation rate:(Butyl Acetate = 1)	Not applicable
Vapor pressure:	Not applicable
Vapor density (Air = 1):	Not applicable
pH:	Not applicable
Coefficient of water/oil distribution:	Not determined
Solubility in water (% by weight):	Not Soluble

SECTION X – STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Conditions to Avoid:	Store away from excessive heat, open flame or other ignition sources.
Incompatibility (Materials to Avoid):	None known
Hazardous decomposition products:	Combustion of the material can release hydrocarbons and oxides of nitrogen and carbon.
Hazardous polymerization:	Will not occur.

SECTION XI- TOXICOLOGICAL PROPERTIES

Toxicity:	LD ₅₀ : Not available LC ₅₀ : Not available
Irritancy:	Not available
Sensitization:	Not available
Carcinogenicity:	Not available
Reproductive toxicity:	Not available
Teratogenicity:	Not available
Mutagenicity:	Not available
Toxicologically synergistic products:	Not available

SECTION XII – ECOLOGICAL INFO

No information available

SECTION XIII – WASTE DISPOSAL METHOD

Waste disposal method: This product is not considered a hazardous waste under EPA Hazardous Waste Regulations 40 CFR Part 261. State and local requirements for waste disposal may differ and should be reviewed.
Disposal should occur in accordance with local, provincial, state, federal regulations.

SECTION XIV – TRANSPORT INFORMATION

PIN Number	Not applicable
TDG Shipping Name	Not applicable
TDG Hazard Class	Not applicable
DOT Class	Not regulated

It is the responsibility of the transporting organization to follow all applicable laws, regulations, and rules relating to the transportation of the material.

SECTION XV – REGULATORY INFORMATION

NFPA Rating:	Health: 1	Flammability: 0	Reactivity: 0
HMIS Rating:	Health: 1	Flammability: 0	Reactivity: 0

OSHA (29CFR 1910.1200): See Section II of MSDS

TSCA: All components are listed on the TSCA Inventory

CERCLA RQ: This product contains the following chemical(s), which have reportable quantities:

None

SARA 311/312: Immediate (Acute) Health Hazard: No
Delayed (Chronic) Health Hazard: No
Fire Hazard: No
Reactive Hazard: No
Sudden Release of Pressure Hazard: No

SARA 313: This product contains the following chemical(s) in concentrations, which should require reporting under SARA 313.

None

SECTION XVI – OTHER INFORMATION

None

DISCLAIMER:

The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. Buyer assumes all risk of use, storage and handling of the product in compliance with applicable federal, state, provincial and local laws and regulations. Panolam Industries makes no warranty of any kind, express or implied, concerning the accuracy or completeness of the information and data herein. The implied warranties of merchantability and fitness for a particular purpose are specifically excluded. Panolam Industries will not be liable for claims relating to any party's use of or reliance on information and data contained herein regardless of whether it is claimed that the information and data are inaccurate, incomplete or otherwise misleading.

Franklin International

Material Safety Data Sheet

GREENchoice Fast Grab FRP Adhesive

1. Product and company identification

CAS #	: Mixture
Address	: Franklin International 2020 Bruck Street Columbus OH 43207
Contact person	: Franklin Technical Services
Telephone	: (800) 877-4583
<u>In case of emergency</u>	: Franklin Security (614) 445-1300
Reference number	: 3432
Product code	: 4054
Date of revision	: 5/16/2013.
Print date	: 5/16/2013.
Chemtrec (24 Hour)	: (800) 424 - 9300
Chemtrec International	: (703) 527 - 3887
Product use	: Adhesive Solvent Free Adhesive

2. Hazards identification

Emergency overview

Physical state	: Liquid. [Paste.]
Color	: Brown. [Light]
Odor	: Characteristic. [Slight]
Signal word	: WARNING!
Hazard statements	: CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION.
Precautionary measures	: Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Wash thoroughly after handling.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Routes of entry	: Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation	: Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation. Slightly irritating to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: Harmful if swallowed.
Skin	: Slightly irritating to the skin.
Eyes	: Irritating to eyes.

Potential chronic health effects

Chronic effects	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.

2. Hazards identification

- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : May cause damage to the following organs: upper respiratory tract, skin, eyes.
Contains material which may cause damage to the following organs: eye, lens or cornea.

Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Ingestion** : No specific data.
- Skin** : Adverse symptoms may include the following:
irritation
redness
- Eyes** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Medical conditions aggravated by over-exposure** : None known.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
oxydipropyl dibenzoate	27138-31-4	1 - 5
urea	57-13-6	1 - 5

Canada

Name	CAS number	%
oxydipropyl dibenzoate	27138-31-4	1 - 5
urea	57-13-6	1 - 5
ethanediol	107-21-1	0.5 - 1

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special
urea	57-13-6	Not available.	1 - 5	-	2	0	0	-
oxydipropyl dibenzoate	27138-31-4	Not available.	1 - 5	-	2	0	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

4. First aid measures

- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Small spill** : Stop leak if without risk. Move containers from spill area. Dispose of via a licensed waste disposal contractor. Absorb with an inert material.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

7. Handling and storage

Storage : Do not store below the following temperature: 0°C (32°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
urea	AIHA WEEL (United States, 10/2011). TWA: 10 mg/m ³ 8 hour(s).

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling				
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	Notations	
ethanediol	US ACGIH 3/2012	-	-	-	-	-	-	-	100	-	[a]	
	AB 4/2009	-	-	-	-	-	-	-	100	-	[3] [b]	
	BC 4/2012	-	-	-	-	-	-	-	100	-	[a]	
		-	10	-	-	20	-	-	-	-	-	[c]
		-	-	-	-	-	-	-	50	-	-	[d]
urea	ON 7/2010	-	-	-	-	-	-	-	100	-	[b]	
	QC 9/2011	-	-	-	50	127	-	-	-	-	[e]	
	US AIHA 10/2011	-	10	-	-	-	-	-	-	-		

[3]Skin sensitization

Form: [a]Aerosol [b]aerosol [c]Particulate [d]Vapour [e]vapour and mist

Mexico

Occupational exposure limits

No exposure limit value known.

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

8. Exposure controls/personal protection

- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

9. Physical and chemical properties

- Physical state** : Liquid. [Paste.]
- Flash point** : Closed cup: >93.3°C (>199.9°F) [Setaflash.]
- Color** : Brown. [Light]
- Odor** : Characteristic. [Slight]
- pH** : 5
- Boiling/condensation point** : 100°C (212°F)
- Relative density** : 1.39
- Volatility** : 33% (w/w)
- Evaporation rate** : <1 (butyl acetate = 1)
- VOC (less water, less exempt solvents)** : 2.6 g/l
- Solubility** : Soluble in the following materials: cold water and hot water.

10. Stability and reactivity

- Chemical stability** : The product is stable.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.
- Incompatibility** : Reactive or incompatible with the following materials: acids and alkalis.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
urea	LD50 Oral	Rat	8471 mg/kg	-
oxydipropyl dibenzoate	LD50 Oral	Rat	3295 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
urea	Skin - Mild irritant	Human	-	72 hours 22 milligrams Intermittent	-
	Skin - Moderate irritant	Human	-	24 hours 20 Percent	-

Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

11. Toxicological information

Eyes : This product may irritate eyes upon contact.

Respiratory : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethanediol	LD50 Oral	Rat	4700 mg/kg	-
oxydipropyl dibenzoate	LD50 Oral	Rat	3295 mg/kg	-
urea	LD50 Oral	Rat	8471 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanediol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	1 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	6 hours 1440 milligrams	-
urea	Skin - Mild irritant	Rabbit	-	555 milligrams	-
	Skin - Mild irritant	Human	-	72 hours 22 milligrams Intermittent	-
	Skin - Moderate irritant	Human	-	24 hours 20 Percent	-

Conclusion/Summary

Skin : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Eyes : This product may irritate eyes upon contact.

Respiratory : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

11. Toxicological information

Mexico

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
urea	LD50 Oral	Rat	8471 mg/kg	-
oxydipropyl dibenzoate	LD50 Oral	Rat	3295 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
-	Skin - Mild irritant	Human	-	72 hours 22 milligrams Intermittent	-
-	Skin - Moderate irritant	Human	-	24 hours 20 Percent	-

Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : This product may irritate eyes upon contact.
- Respiratory** : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
urea	Acute EC50 3910000 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 1000 mg/L Marine water	Crustaceans - Chaetogammarus marinus - Young - 5 mm	48 hours
	Acute LC50 5000 ug/L Fresh water	Fish - Colisa fasciata - Fingerling	96 hours

Persistence/degradability

No known significant effects or critical hazards.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure

12. Ecological information

ethanediol	Acute LC50 100000 ug/L Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 10000000 ug/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 8050000 ug/L Fresh water	Fish - Pimephales promelas - <=7 days	96 hours
urea	Acute EC50 3910000 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 1000 mg/L Marine water	Crustaceans - Chaetogammarus marinus - Young - 5 mm	48 hours
	Acute LC50 5000 ug/L Fresh water	Fish - Colisa fasciata - Fingerling	96 hours

Persistence/degradability

No known significant effects or critical hazards.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
urea	Acute EC50 3910000 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
	Acute LC50 1000 mg/L Marine water	Crustaceans - Chaetogammarus marinus - Young - 5 mm	48 hours
	Acute LC50 5000 ug/L Fresh water	Fish - Colisa fasciata - Fingerling	96 hours

No known significant effects or critical hazards.

Persistence/degradability

No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal

: The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-	-	-
TDG Classification	Not regulated.	-	-	-	-	-
Mexico Classification	Not regulated.	-	-	-	-	-
ADR/RID Class	Not regulated.	-	-	-	-	-

14. Transport information

IMDG Class	Not regulated.	-	-	-	-	-
IATA-DGR Class	Not regulated.	-	-	-	-	-

PG* : Packing group

15. Regulatory information

United States

- HCS Classification** : Irritating material
U.S. Federal regulations : **TSCA 4(a) final test rules:** sodium hydroxymethanesulphinate; acetaldehyde
TSCA 8(a) PAIR: acetaldehyde
TSCA 8(a) IUR Exempt/Partial exemption: Not determined

Commerce control list precursor: 2-diethylaminoethanol

United States inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: No products were found.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

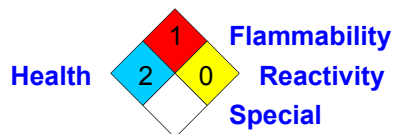
Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :

15. Regulatory information



International regulations

International lists : Australia inventory (AICS): Not determined.
 China inventory (IECSC): Not determined.
 Japan inventory: Not determined.
 Korea inventory: Not determined.
 New Zealand Inventory of Chemicals (NZIoC): Not determined.
 Philippines inventory (PICCS): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION.

Hazardous Material Information System (U.S.A.) :

Health	1
Flammability	1
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of printing : 5/16/2013.

16. Other information

Date of issue : 5/16/2013.

Date of previous issue : 2/13/2013.

Version : 2

✔ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Franklin International

Material Safety Data Sheet

Titebond Solvent Based FRP Adhesive

1. Product and company identification

CAS #	: Mixture
Address	: Franklin International 2020 Bruck Street Columbus OH 43207
Contact person	: Franklin Technical Services
Telephone	: (800) 877-4583
In case of emergency	: Franklin Security (614) 445-1300
Reference number	: 3103
Product code	: 3227
Date of revision	: 2/13/2014.
Print date	: 2/13/2014.
Chemtrec (24 Hour)	: (800) 424 - 9300
Chemtrec International	: (703) 527 - 3887
Product use	: Adhesive Solvent Based

2. Hazards identification

Emergency overview

Physical state	: Liquid. [Paste.]
Color	: Beige.
Odor	: Solvent(s) [Slight]
Signal word	: DANGER!
Hazard statements	: EXTREMELY FLAMMABLE LIQUID AND VAPOR. FLAMMABLE. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED.
Precautionary measures	: Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks and flame. Keep container tightly closed. Wash thoroughly after handling.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Routes of entry	: Dermal contact. Eye contact. Inhalation. Ingestion.
<u>Potential acute health effects</u>	
Inhalation	: Toxic by inhalation. Irritating to respiratory system.
Ingestion	: Harmful if swallowed.
Skin	: Irritating to skin.
Eyes	: Severely irritating to eyes. Risk of serious damage to eyes.
<u>Potential chronic health effects</u>	
Chronic effects	: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

2. Hazards identification

- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : Contains material which may cause damage to the following organs: the nervous system, peripheral nervous system, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Over-exposure signs/symptoms

- Inhalation** : High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.
Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Ingestion** : No specific data.
- Skin** : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
- Eyes** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Medical conditions aggravated by over-exposure** : None known.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
n-hexane	110-54-3	10 - 25
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	5 - 10

Canada

Name	CAS number	%
n-hexane	110-54-3	10 - 25
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	5 - 10

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special
n-hexane Distillates (petroleum), hydrotreated heavy naphthenic	110-54-3 64742-52-5	UN1993 Not available.	10 - 25 5 - 10	1100 ppm 2500 mg/m ³	1	3	0	-
					2	1	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

- Flammability of the product** : Extremely flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
- Extinguishing media**
- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Absorb with an inert material.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency

6. Accidental release measures

contact information and Section 13 for waste disposal.

7. Handling and storage

Handling

- Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage

- Do not store above the following temperature: 43.333°C (110°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
n-hexane	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 50 ppm 8 hours. TWA: 180 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2013). TWA: 50 ppm 10 hours. TWA: 180 mg/m³ 10 hours.</p> <p>ACGIH TLV (United States, 6/2013). Absorbed through skin. TWA: 50 ppm 8 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 500 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.</p>
Distillates (petroleum), hydrotreated heavy naphthenic	<p>ACGIH TLV (United States, 6/2013). TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction</p> <p>NIOSH REL (United States, 10/2013). TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist</p> <p>OSHA PEL (United States, 2/2013). TWA: 5 mg/m³ 8 hours.</p>

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			Notations
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	

8. Exposure controls/personal protection

n-hexane Distillates (petroleum), hydrotreated heavy naphthenic	US ACGIH 6/2013	50	-	-	-	-	-	-	-	-	[1]
	AB 4/2009	50	176	-	-	-	-	-	-	-	[1]
	BC 7/2013	20	-	-	-	-	-	-	-	-	[1]
	ON 1/2013	50	-	-	-	-	-	-	-	-	[1]
	QC 12/2012	50	176	-	-	-	-	-	-	-	[1]
	US ACGIH 6/2013	-	5	-	-	-	-	-	-	-	[a]
	AB 4/2009	-	5	-	-	10	-	-	-	-	[b]
	ON 1/2013	-	5	-	-	10	-	-	-	-	[c]
	QC 12/2012	-	5	-	-	10	-	-	-	-	[c]

[1]Absorbed through skin.

Form: [a]Inhalable fraction [b]Mist [c]mist

Mexico

Occupational exposure limits

Ingredient	Exposure limits
n-hexane	NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 50 ppm 8 hours. LMPE-PPT: 176 mg/m ³ 8 hours.
Distillates (petroleum), hydrotreated heavy naphthenic	NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 5 mg/m ³ 8 hours. Form: mist LMPE-CT: 10 mg/m ³ 15 minutes. Form: mist

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

8. Exposure controls/personal protection

- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

9. Physical and chemical properties

- Physical state** : Liquid. [Paste.]
- Flash point** : Closed cup: <-17.778°C (<-0.0004°F) [Setaflash.]
- Flammable limits** : Lower: 1.2%
Upper: 7.5%
- Color** : Beige.
- Odor** : Solvent(s) [Slight]
- Boiling/condensation point** : 61.667°C (143°F)
- Relative density** : 1.26
- Volatility** : 20.39% (w/w)
- VOC (less water, less exempt solvents)** : 258.3 g/l
- Solubility** : Insoluble in the following materials: cold water and hot water.

10. Stability and reactivity

- Chemical stability** : The product is stable.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- Incompatible materials** : Highly reactive or incompatible with the following materials:
oxidizing materials
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
n-hexane	LC50 Inhalation Gas. LD50 Oral	Rat Rat	48000 ppm 15840 mg/kg	4 hours -
Distillates (petroleum), hydrotreated heavy naphthenic	LD50 Oral	Rat	>5000 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
n-hexane Distillates (petroleum), hydrotreated heavy naphthenic	Eyes - Mild irritant Skin - Severe irritant	Rabbit Rabbit	- -	10 milligrams 500 milligrams	- -

Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : Severely irritating to eyes.
- Respiratory** : High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Distillates (petroleum), hydrotreated heavy naphthenic	A4	-	-	-	-	-

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
n-hexane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
Distillates (petroleum), hydrotreated heavy naphthenic	LD50 Oral	Rat	15840 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
n-hexane Distillates (petroleum), hydrotreated heavy naphthenic	Eyes - Mild irritant Skin - Severe irritant	Rabbit Rabbit	- -	10 milligrams 500 milligrams	- -

Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : Severely irritating to eyes.
- Respiratory** : High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.

Sensitizer

11. Toxicological information

No known significant effects or critical hazards.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Distillates (petroleum), hydrotreated heavy naphthenic	A4	-	-	-	-	-

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Mexico

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
n-hexane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
Distillates (petroleum), hydrotreated heavy naphthenic	LD50 Oral	Rat	15840 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
n-hexane	Eyes - Mild irritant	Rabbit	-	10 milligrams	-
Distillates (petroleum), hydrotreated heavy naphthenic	Skin - Severe irritant	Rabbit	-	500 milligrams	-

Conclusion/Summary

Skin

: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Eyes

: Severely irritating to eyes.

Respiratory

: High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Distillates (petroleum), hydrotreated heavy naphthenic	A4	-	-	-	-	-

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Titebond Solvent Based FRP Adhesive

Reproductive toxicity

No known significant effects or critical hazards.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
n-hexane	Acute LC50 113000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours

Persistence/degradability

No known significant effects or critical hazards.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
n-hexane	Acute LC50 113000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours

Persistence/degradability

No known significant effects or critical hazards.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
n-hexane	Acute LC50 113000 µg/l Fresh water	Fish - Oreochromis mossambicus	96 hours

Persistence/degradability

No known significant effects or critical hazards.







13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	1133	ADHESIVES, containing flammable liquid RQ (n-hexane)	3	III		Reportable quantity 24319.4 lbs / 11041 kg [2314.9 gal / 8762.7 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
TDG Classification	1133	ADHESIVES, containing flammable liquid	3	III		-
Mexico Classification	1133	FLAMMABLE LIQUID, N.O.S. (n-hexane)	3	III		-
ADR/RID Class	1133	ADHESIVES, containing flammable liquid	3	III		Special provisions 640 (E) Tunnel code (D/E)
IMDG Class	1133	ADHESIVES, containing flammable liquid	3	III		-
IATA-DGR Class	1133	ADHESIVES, containing flammable liquid	3	III		-

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Flammable liquid
Toxic material
Irritating material

U.S. Federal regulations :

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Commerce control list precursor: 2-diethylaminoethanol

United States inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304: No products were found.

SARA 311/312 Hazards identification: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

15. Regulatory information

- Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed
- Clean Air Act Section 602 Class I Substances** : Not listed
- Clean Air Act Section 602 Class II Substances** : Not listed
- DEA List I Chemicals (Precursor Chemicals)** : Not listed
- DEA List II Chemicals (Essential Chemicals)** : Not listed

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	n-hexane	110-54-3	10 - 25
Supplier notification	n-hexane	110-54-3	10 - 25

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: HEXANE
- New York** : The following components are listed: Hexane
- New Jersey** : The following components are listed: n-HEXANE; HEXANE; MINERAL OIL (UNTREATED and MILDLY TREATED)
- Pennsylvania** : The following components are listed: HEXANE

Canada

- WHMIS (Canada)** : Class B-2: Flammable liquid
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

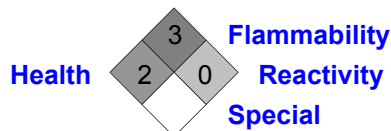
Canadian lists

- Canadian NPRI** : The following components are listed: n-Hexane
- CEPA Toxic substances** : None of the components are listed.
- Canada inventory** : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

- Classification** :



International regulations

- International lists** :
- Australia inventory (AICS)**: Not determined.
 - China inventory (IECSC)**: Not determined.
 - Japan inventory**: Not determined.
 - Korea inventory**: Not determined.
 - Malaysia Inventory (EHS Register)**: Not determined.
 - New Zealand Inventory of Chemicals (NZIoC)**: Not determined.
 - Philippines inventory (PICCS)**: Not determined.

15. Regulatory information

Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : EXTREMELY FLAMMABLE LIQUID AND VAPOR. FLAMMABLE. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED.

Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	3
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Version : 2.1

☑ Indicates information that has changed from previously issued version.

[Notice to reader](#)

16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.