

MATERIAL SAFETY DATA SHEET

ULTRABOND 680 PART B

SECTION 01: PRODUCT IDENTIFICATION

Product Identifier:	Clear Epoxy Flooring
WHMIS Classification:	D2B (materials causing other toxic effects, toxic material) E (corrosive material).
Product Use:	Concrete Floor Protection
Manufacturer's Name:	Concretech Inc., #106, 2567- 192 Street, Surrey, BC, V3S 3X1, Canada,
Supplier's Name	Concretech Inc., #106, 2567- 192 Street, Surrey, BC, V3S 3X1, Canada,
Preparation Date of MSDS:	December 10 th , 2007
Revision Date of MSDS:	February 11 th , 2011
MSDS Prepared By:	Farhad Kazemian
Phone Number of Preparer:	1 604 210 1147
Emergency Phone Number	1 888 503 6780

SECTION 02: HAZARDOUS INGREDIENTS

Ingredients:	% by Weight	CAS#	LD/50	LC50	Comments
Benzyl Alcohol	30-60	100-52-6	1230- 3100 mg/kg (Oral Rat)	360 ppm / 48 hr (daphnia)	NA
1,3-Cyclohexanedimethanamine	10-30	2579-20-6	200-2000 mg/kg (Oral Rat)	NA	NA
Isophorone Diamine	10-30	2855-13-2	1030 mg/kg (Oral Rat)	23 mg / 48 hr (daphnia)	NA

SECTION 03: HAZARDOUS IDENTIFICATION

Route of Entry:	Eye contact, ingestion, inhalation, and skin contact. Skin absorption.
Skin Contact:	CORROSIVE. Contact may cause skin burning. Contact may cause skin sensitization, an allergic reaction which becomes evident on re-exposure to this material.
Skin Absorption:	Skin absorption of harmful amounts possible from excessive exposure only. Contact causes severe skin irritation.
Eye Contact:	Corrosive. Direct contact with eyes will cause severe burns and may cause permanent damage, including blindness. High vapor concentrations may be irritating.
Inhalation:	Inhalation of vapor or aerosol may cause severe irritation to the respiratory tract (nose, throat, and lungs). Inhalation of vapor or aerosol may cause central nervous system depression with symptoms that include headache, nausea, impaired judgment, confusion, blurred vision, fatigue, loss of coordination, or dizziness.
Ingestion:	Ingestion (swallowing) of this material may burn the mouth, throat, and stomach. Aspiration into lungs may cause chemical pneumonia and lung damage.
Emergency Overview:	Exposure Guidelines: There are no exposure limits assigned to Benzyl Alcohol by the Occupational Safety and Health Administration (OSHA) or American Conference of Governmental Industrial Hygienists (ACGIH).
WHMIS Symbols:	D2B (materials causing other toxic effects, toxic material) E (corrosive material).
HMIS Rating	Health=3, Fire= 1, Reactivity= 0

SECTION 04: FIRST AID MEASURES

Skin Contact:	Continuously flush contaminated area with lukewarm, gently flowing water for at least 20-60 minutes. Remove contaminated clothing. Get immediate medical attention.
Eye Contact:	Immediately flush eye(s) continuously with lukewarm, gently flowing water for at least 20-60 minutes. Get immediate medical attention.
Inhalation:	Remove victim to fresh air. Keep warm and quiet. If not breathing, give artificial respiration. If breathing is difficult, give oxygen by trained personnel. GET IMMEDIATE MEDICAL ATTENTION. If the heart has stopped, trained personnel should immediately administer CPR.

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Ingestion:	DO NOT INDUCE VOMITING. CORROSIVE HAZARD: this material may cause further damage if vomiting is induced. Immediately give the victim one or two glasses of water or milk to drink. Never give anything by mouth to an unconscious person. GET IMMEDIATE MEDICAL ATTENTION. Place the patient in the lateral recumbent position to provide better drainage to minimize the risk of aspiration. If breathing has stopped or the heart has stopped, trained personnel should immediately administer artificial respiration of cardiopulmonary resuscitation, as required.
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SECTION 05: FIRE FIGHTING MEASURES

Flammable (Yes / No)	Yes
Yes	Containers of this material may build up pressure if exposed to heat (fire). Use water spray to cool fire exposed containers.
Means of Extinction	Use carbon dioxide, foam, dry chemical or water fog to extinguish fire.
Flash Point (°C / Method)	>93 C (>200 F), Closed Cup, Seta Flash
Upper Flammable Limit (% by Volume)	NA
Lower Flammable Limit (% by Volume)	NA
Autoignation Temperature (°C)	NA
Explosion Data- Sensitivity to Impact	NA
Explosion Data- Sensitivity to Static Discharge	NA
Hazardous combustion Products	Combustion may produce carbon monoxide, carbon dioxide and irritating or toxic vapors and gases. Oxides of nitrogen.
Special Fire Fighting Procedures	Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazard while extinguishing the blaze. Use water spray to cool fire-exposed containers.
NFPA	Health=3, Fire= 1, Reactivity= 0

SECTION 06: ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedures	Accidental Release Measures: FOR SMALL SPILLS: Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. LARGE SPILL: Persons not wearing protective equipment (see Section 8) should be excluded from the area of the spill until cleanup has been completed. Prevent spilled material from 1) contaminating soil, 2) entering sanitary sewers, storm sewers, and drainage systems, and 3) entering bodies of water or ditches that lead to waterways. Shut off the leak when it is safe to do so, dike and pump the liquid into waste containers.
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SECTION 07: HANDLING AND STORAGE

Handling Procedures and Equipment	Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling and before eating or drinking. Remove and wash contaminated clothing before reuse. Avoid breathing vapor or fumes. Use with adequate ventilation. Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioned or properly disposed.
Storage requirements	Keep container closed when not in use. Store in a cool well ventilated area.

SECTION 08: EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limit	ACGIH TLV	There are no exposure limits assigned to Benzyl Alcohol by the Occupational Safety and Health Administration (OSHA) or American Conference of Governmental Industrial Hygienists (ACGIH).
	OSHA PEL	See Above
	Other	NA

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Engineering Controls	General	Good general ventilation should be sufficient to control airborne levels of irritating vapors. Local ventilation may be required during certain operations.
	Local Exhaust	NA
	Other	NA
Personal Protective Equipment	Gloves	Wear chemical resistant gloves such as butyl rubber, nitrile rubber or neoprene.
	Respirator	When respiratory protection is needed, a NIOSH/MSHA approved respirator is recommended.
	Eye	Wear 1) safety glasses with side shields and a faceshield or 2) goggles and a faceshield. Facilities storing or utilizing this material should be equipped with an eyewash station and safety shower.
	Footwear	NA
	Clothing	If splashing is likely, wear impervious clothing and boots to prevent skin contact. Consult your supplier of personal protective equipment for additional instructions on proper usage.
	Other	The American Industrial Hygiene Association (AIHA) has established, for Benzyl Alcohol, a Workplace Environmental Exposure Level (WEEL) of 10 ppm Time Weighted Average (TWA) for an 8 hour exposure.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Odor and Appearance	Clear, Mild Amine Odor
Odor Threshold (ppm)	NA
Specific Gravity	1.018 (water=1) at 25 C (77 F)
Vapor Density (air = 1)	NA
Vapor Pressure (mmHg)	NA
Evaporation Rate	NA
Boiling Point °C	NA
Freezing Point °C	NA
Volatile % By Weight	NA
PH	Not Applicable
Coefficient of Water / Oil Distribution	NA
Solubility in Water	NA

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability	Stable at normal temperatures and storage conditions. See Section 7 for additional storage information.
Incompatibility With Other Substances	Avoid contact with oxidizing materials such as peroxides, chlorates, and permanganates. Avoid contact with epoxy resins under uncontrolled conditions. Avoid contact with sulfuric acid.
Reactivity	See Above
Hazardous Decomposition Products	Thermal decomposition may produce carbon dioxide, carbon monoxide and volatile amines. Nitrogen oxides

SECTION 11: TOXICOLOGICAL INFORMATION

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Effects on Acute Exposure	Acute Skin Toxicity: Benzyl alcohol: dermal LD50 (rabbit), 2000 mg / kg. 1,3-Cyclohexanedimethanamine: dermal LD50 (rabbit), 1700 mg/kg. Acute Inhalation Toxicity: Benzyl Alcohol: inhalation LC50 (rat), 1000 ppm / 8 hr. Acute Oral Toxicity: Benzyl Alcohol: oral LD50 (rat) 1230-3100 mg / kg. 1,3-Cyclohexanedimethanamine: oral LD50 (rat), 200 - 2000 mg/kg. Isophorone Diamine: oral LD50 (rat), 1030 mg/kg.
Effects on Chronic Exposure	Subchronic: Central nervous system effects were reported in rats given up to 800 mg/kg/day Benzyl Alcohol orally for 13 weeks.
Irritancy of Product	See Section 3
Skin Sensitization	See Section 3
Respiratory sensitization	See Section 3
Carcinogenicity	Chronic/Carcinogenicity: This material does not contain 0.1% or more of any chemical listed by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or regulated by the United States Occupational Safety and Health Administration (OSHA) as a carcinogen.
Other Toxicity Information	Benzyl alcohol has been shown to cause brain, thymus and skeletal muscle effects in animals.
IARC (1,A2 or 2B)	See Above
ACGIH (A1, A2 or A3)	See Section 3
Reproductive Toxicity	NA
Teratogenicity	NA
Embryotoxicity	NA
Mutagenicity	Mutagenicity: It has been reported that benzyl alcohol has caused in vitro mutagenic effects in mammalian cells and in bacteria in the presence of metabolic activation
Name of Synergistic Products / Effects	NA

SECTION 12: ECOLOGICAL INFORMATION

Aquatic Toxicity	Ecotoxicity: Benzyl Alcohol: LC50 (fathead minnow), 460 ppm / 96 hr; LC50 (daphnia), 360 ppm / 48 hr. Isophorone diamine: LC50 (fish), 110 mg / l / 96 H; EC50 (daphnia), 23 mg / l / 48 H. Environmental Fate: Benzyl Alcohol is expected to biodegrade relatively quickly. Bioconcentration is not expected to be significant in fish and aquatic organisms.
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SECTION 13: DISPOSABLE CONSIDERATION

Waste Disposal	Waste Disposal Method: Not a RCRA hazardous waste. Disposal of this material is not regulated under RCRA. Consult federal, state and local regulations to ensure that this material and its containers, if discarded, is disposed of in compliance with all regulatory requirements. "Empty containers", as defined under 40 CFR 261.7 or other applicable state or provincial regulations or transportation regulations, are not classified as hazardous wastes. RCRA Hazard Class: NOT A RCRA HAZARDOUS WASTE: When discarded in its purchased form, this material would not be regulated as a RCRA Hazardous waste under 40 CFR 261.
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SECTION 14: TRANSPORT INFORMATION

Special Shipping Information	Technical Shipping Name (If n.o.s.): ALIPHATIC AMINES Hazard Class: CLASS 8 ID Number: UN2735 Packing Group: PG III
PIN	NA
TDG	Bulk and Non-Bulk Proper Shipping Name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. Technical Shipping Name (If n.o.s.): ALIPHATIC AMINES Hazard Class: CLASS 8 ID Number: UN2735

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	Packing Group: PG III ERG Number: 153
DOT	Bulk and Non-Bulk Proper Shipping Name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. Technical Shipping Name (If n.o.s.): ALIPHATIC AMINES, Hazard Class: 8 ID Number: UN2735 Packing Group: III ERG Number: 153
IMO	NA
ICAO	NA
ERAP	NA

SECTION 15: REGULATORY INFORMATION

WHMIS Classification	Canadian WHMIS: This material is classified by the Canadian Workplace Hazardous Material Information System as: D2B (materials causing other toxic effects, toxic material) E (corrosive material).
OSHA	This material is classified as a hazardous chemical under the criteria of the US Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910.1200.
SARA	SARA Title III: Section 304 - CERCLA: Reportable Quantities have not been established for any of this material's components. SARA Title III: Section 311/312 - Hazard Communication Standard (HCS): This material is classified as an IMMEDIATE HEALTH HAZARD under the US Superfund Amendment and Reauthorization Act (Section 311/312). SARA Title III: Section 313 Toxic Chemical List (TCL): This product does not contain any chemicals for routine annual toxic chemical release reporting under Section 313 (40 CFR 372).
TSCA	TSCA Section 8(b) - Inventory Status: All components of this material are listed on the US Toxic Substances Control Act (TSCA) inventory. TSCA Section 12(b) - Export Notification: This material does not contain any components that are subject to the US Toxic Substances Control Act (TSCA) Section 12(b) Export Notification requirements.
DSL / TOSCA	Canadian Inventory Status: All components of this material are listed on the Canadian Domestic Substances List (DSL).

SECTION 16: OTHER INFORMATION

Regulatory Information	Additional Canadian Regulatory Information: This product contains the following chemical(s) listed on the WHMIS Ingredient Disclosure List at or above the specified concentration limit: Benzyl Alcohol (CAS# 100-51-6)
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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This information is provided solely for the customer's consideration and verification. Concrete Chemical Technologies shall not be held liable for any damage resulting from improper handling, contact or use with respect to the above product(s).

CONCRETECH

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