



## Material Safety Data Sheet

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** 3M(TM) Concrete Repair (Part A)  
**MANUFACTURER:** 3M  
**DIVISION:** Industrial Adhesives and Tapes Division

**ADDRESS:** 3M Center  
 St. Paul, MN 55144-1000

**EMERGENCY PHONE:** 1-800-364-3577 or (651) 737-6501 (24 hours)

**Issue Date:** 08/29/2006  
**Supersedes Date:** 01/11/2005

**Document Group:** 19-0350-9

**Product Use:**

Specific Use: Two-part urethane adhesive/sealant.

### SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
4,4'-diphenylmethane diisocyanate	101-68-8	30 - 60
diphenylmethanediisocyanate prepolymer	68424-09-9	15 - 40
poly(diphenylmethane-4,4'-diisocyanate)	25686-28-6	15 - 40
amorphous silica	7631-86-9	1 - 5

### SECTION 3: HAZARDS IDENTIFICATION

#### 3.1 EMERGENCY OVERVIEW

**Specific Physical Form:** Viscous

**Odor, Color, Grade:** Low or no detectable odor, opaque.

**General Physical Form:** Liquid

**Immediate health, physical, and environmental hazards:** respiratory reaction.

May cause allergic skin reaction. May cause allergic

#### 3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:**

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Skin Contact:**

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Prolonged or repeated exposure may cause:

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Inhalation:**

Prolonged or repeated exposure may cause:

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

Vapors released during curing may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

**Ingestion:**

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, nausea, diarrhea and vomiting.

**Target Organ Effects:**

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

## SECTION 4: FIRST AID MEASURES

### 4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

**Eye Contact:** Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

**Skin Contact:** Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

**Inhalation:** Remove person to fresh air. If signs/symptoms develop, get medical attention.

**If Swallowed:** Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>Not Applicable</i>
Flash Point	$\geq 290$ °F [ <i>Test Method:</i> Tagliabue Closed Cup]
Flammable Limits - LEL	<i>Not Applicable</i>
Flammable Limits - UEL	<i>Not Applicable</i>

### 5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

### 5.3 PROTECTION OF FIRE FIGHTERS

**Special Fire Fighting Procedures:** Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

**Unusual Fire and Explosion Hazards:** Non-flammable: ordinary combustible material.

**Note:** See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Accidental Release Measures:** Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Collect as much of the spilled material as possible. Dispose of collected material as soon as possible.

**In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.**

## SECTION 7: HANDLING AND STORAGE

### 7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid eye contact with vapors, mists, or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not breathe vapors.

### 7.2 STORAGE

Store away from acids.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 ENGINEERING CONTROLS**

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust for cutting, grinding, sanding or machining. Do not use in a confined area or areas with little or no air movement.

**8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)****8.2.1 Eye/Face Protection**

Avoid eye contact with vapors, mists, or spray.

**8.2.2 Skin Protection**

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Butyl Rubber, Nitrile Rubber.

**8.2.3 Respiratory Protection**

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection. Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not breathe vapors. Consult the current 3M Respirator Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

During application and curing:

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges.

Cutting, Grinding or Sanding Cured Material:

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: air-purifying respirator with N95 filter.

**8.2.4 Prevention of Swallowing**

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

**8.3 EXPOSURE GUIDELINES**

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
amorphous silica	CMRG	CEIL	5 mg/m <sup>3</sup>	
FREE ISOCYANATES	3M	TWA	0.005 ppm	
FREE ISOCYANATES	3M	STEL	0.02 ppm	
4,4'-diphenylmethane diisocyanate	ACGIH	TWA	0.005 ppm	
4,4'-diphenylmethane diisocyanate	OSHA	CEIL	0.02 ppm	Table Z-1

**SOURCE OF EXPOSURE LIMIT DATA:**

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Specific Physical Form:</b>	Viscous
<b>Odor, Color, Grade:</b>	Low or no detectable odor, opaque.
<b>General Physical Form:</b>	Liquid
<b>Autoignition temperature</b>	<i>Not Applicable</i>
<b>Flash Point</b>	>=290 °F [ <i>Test Method:</i> Tagliabue Closed Cup]
<b>Flammable Limits - LEL</b>	<i>Not Applicable</i>
<b>Flammable Limits - UEL</b>	<i>Not Applicable</i>
<b>Boiling point</b>	>=400 °F
<b>Vapor Density</b>	>=1 [ <i>Ref Std:</i> AIR=1]
<b>Vapor Pressure</b>	<=0.000004 mmHg [@ 68 °F]
<b>Specific Gravity</b>	1.11
<b>pH</b>	<i>Not Applicable</i>
<b>Melting point</b>	<i>No Data Available</i>
<b>Solubility in Water</b>	Negligible
<b>Evaporation rate</b>	<=1 [ <i>Details:</i> Gels with exposure to humidity.]
<b>Volatile Organic Compounds</b>	<=10 g/l [ <i>Test Method:</i> calculated per EPA method 24]
<b>Volatile Organic Compounds</b>	<=5 g/l [ <i>Test Method:</i> calculated per EPA method 24] [ <i>Details:</i> Mixed 1:1 with Part B]
<b>Percent volatile</b>	<=1 % volume [ <i>Test Method:</i> Estimated]
<b>Percent volatile</b>	<=0.5 % volume [ <i>Test Method:</i> Estimated] [ <i>Details:</i> Mixed 1:1 with Part B]
<b>VOC Less H2O &amp; Exempt Solvents</b>	<=10 g/l [ <i>Test Method:</i> calculated per EPA method 24]
<b>VOC Less H2O &amp; Exempt Solvents</b>	<=5 g/l [ <i>Test Method:</i> calculated per EPA method 24] [ <i>Details:</i> Mixed 1:1 with Part B]
<b>Viscosity</b>	1,250 - 2,750 centipoise

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable.

**Materials and Conditions to Avoid:** Water; Strong acids; Strong bases

**Hazardous Polymerization:** Hazardous polymerization will not occur.

### Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Oxides of Nitrogen	During Combustion
Toxic Vapor, Gas, Particulate	During Combustion

## SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

## SECTION 12: ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION

Not determined.

### CHEMICAL FATE INFORMATION

Not determined.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Dispose of completely cured (or polymerized) wastes in a sanitary landfill. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator in the presence of a combustible material.

**EPA Hazardous Waste Number (RCRA):** Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

## SECTION 14: TRANSPORT INFORMATION

Not regulated per U.S. DOT, IATA or IMO.

*These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.*

## SECTION 15: REGULATORY INFORMATION

### US FEDERAL REGULATIONS

Contact 3M for more information.

#### 311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No 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>
4,4'-diphenylmethane diisocyanate (Diisocyanates (EPCRA 313))	101-68-8	30 - 60

## STATE REGULATIONS

Contact 3M for more information.

## CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

## INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS 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: 1 Reactivity: 1 Special Hazards: None

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.

### HMIS Hazard Classification

Health: 2 Flammability: 1 Reactivity: 1 Protection: X - See PPE section.

Hazardous Material Identification System (HMIS(r)) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS(r) ratings are to be used with a fully implemented HMIS(r) program. HMIS(r) is a registered mark of the National Paint and Coatings Association (NPCA).

### Revision Changes:

Section 1: Division name was modified.

Copyright was modified.

Section 6: Release measures information was modified.

Section 8: Respiratory protection information was modified.

Section 8: Respiratory protection comment was added.  
Section 8: Respiratory protection - recommended respirators information was deleted.  
Section 8: Respiratory protection - recommended respirators was deleted.  
Section 8: Respiratory protection - recommended respirators guide was deleted.  
Section 8: Respiratory protection - recommended respirators punctuation was deleted.

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