



## Material Safety Data Sheet

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**PRODUCT NAME:** 3M(TM) Concrete Repair  
**MANUFACTURER:** 3M  
**DIVISION:** Industrial Adhesives and Tapes  
  
**ADDRESS:** 3M Center  
St. Paul, MN 55144-1000

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

**Issue Date:** 01/27/2004  
**Supersedes Date:** Initial Issue

**Document Group:** 19-0351-7

**ID Number(s):**  
62-2649-1233-8

**This product is a kit or a multipart product which consists of multiple, independently packaged components. An MSDS for each of these components is included. Please do not separate the component MSDSs from this cover page. The document numbers of the MSDSs for components of this product are:**

19-0349-1, 19-0350-9

No revision information is available.

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## Material Safety Data Sheet

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** 3M™ Concrete Repair 600, Self-Leveling, Gray (Part B)

**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:** 07/01/11

**Supersedes Date:** 08/29/06

**Document Group:** 19-0349-1

**Product Use:**

Specific Use: Two-part urethane adhesive/sealant.

Intended Use: Structural adhesive

### SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Polyether Polyol	9082-00-2	40 - 70
Propoxylated Trimethylolpropane	25723-16-4	10 - 30
Tetrakis(2-hydroxypropyl)ethylenediamine	102-60-3	10 - 30
Amorphous Silica	68611-44-9	1 - 5
M-Xylene-alpha,alpha'-diamine	1477-55-0	0.1 - 1
Bis(1,2,2,6,6-pentamethyl-4-piperidiny)l Sebacate	41556-26-7	0.1 - 1
Polymeric Benzotriazole Derivative	104810-48-2	0.1 - 0.3
Titanium Dioxide	13463-67-7	0.1 - 0.3
Polymeric Benzotriazole	104810-47-1	0.1 - 0.3
Substituted Piperydiny)l Sebacate	82919-37-7	0.05 - 0.2

### SECTION 3: HAZARDS IDENTIFICATION

#### 3.1 EMERGENCY OVERVIEW

**Specific Physical Form:** Viscous

**Odor, Color, Grade:** Slight ammonia like odor, gray.

**General Physical Form:** Liquid

**Immediate health, physical, and environmental hazards:** May cause allergic skin reaction. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

## 3.2 POTENTIAL HEALTH EFFECTS

### Eye Contact:

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

### Skin Contact:

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

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

### Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

### Ingestion:

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

May be absorbed following ingestion and cause target organ effects.

### Target Organ Effects:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

## 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 unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1 FLAMMABLE PROPERTIES

**Autoignition temperature**

*Not Applicable*

**Flash Point**

$\geq 290^{\circ}\text{F}$  [*Test Method:* Tagliabue Closed Cup]

**Flammable Limits(LEL)**

*Not Applicable*

**Flammable Limits(UEL)**

*Not Applicable*

## 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:** 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

### 6.1. Personal precautions, protective equipment and emergency procedures

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. Read and follow safety precautions on the solvent label and MSDS.

### 6.2. Environmental precautions

For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

### Clean-up methods

Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Collect as much of the spilled material as possible. Clean up residue with an appropriate organic solvent.

**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

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

### 7.2 STORAGE

Store away from acids. Store away from oxidizing agents.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 ENGINEERING CONTROLS

Provide appropriate local exhaust for cutting, grinding, sanding or machining.

### 8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

### 8.2.1 Eye/Face Protection

Avoid eye contact.

### 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

### 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.

### 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><b>Ingredient</b></u>	<u><b>Authority</b></u>	<u><b>Type</b></u>	<u><b>Limit</b></u>	<u><b>Additional Information</b></u>
Bis(1,2,2,6,6-pentamethyl-4-piperidinyl) Sebacate	CMRG	TWA	1 mg/m3	
M-Xylene-alpha,alpha'-diamine	ACGIH	CEIL	0.1 mg/m3	Skin Notation*
Substituted Piperidiny Sebacate	CMRG	TWA	1 mg/m3	
POLYETHYLENE GLYCOLS	AIHA	TWA, as particulate	10 mg/m3	
Titanium Dioxide	ACGIH	TWA	10 mg/m3	
Titanium Dioxide	CMRG	TWA, as respirable dust	5 mg/m3	
Titanium Dioxide	OSHA	TWA, as total dust	15 mg/m3	

\* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

#### 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>	Slight ammonia like odor, gray.
<b>General Physical Form:</b>	Liquid
<b>Autoignition temperature</b>	<i>Not Applicable</i>
<b>Flash Point</b>	>=290 °F [Test Method: 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>Density</b>	1.04 g/ml
<b>Vapor Density</b>	>=1 [Ref Std: AIR=1]

Vapor Pressure	Not Applicable
Specific Gravity	1.04
pH	Not Applicable
Melting point	No Data Available
Solubility in Water	Negligible
Evaporation rate	<=1 [Ref Std: WATER=1]
Hazardous Air Pollutants	0 % weight [Test Method: Calculated]
Volatile Organic Compounds	0 g/l [Details: EU VOC content]
Kow - Oct/Water partition coef	No Data Available
Percent volatile	0 % weight [Test Method: Estimated]
VOC Less H2O & Exempt Solvents	< 10 g/l [Test Method: calculated SCAQMD rule 443.1] [Details: when used as intended with Part A]
VOC Less H2O & Exempt Solvents	0 g/l [Test Method: calculated SCAQMD rule 443.1]
Viscosity	3,200 - 5,600 centipoise

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable.

### Materials and Conditions to Avoid:

#### 10.1 Conditions to avoid

None known

#### 10.2 Materials to avoid

Strong acids

Strong oxidizing agents

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

### Hazardous Decomposition or By-Products

#### Substance

Carbon monoxide  
Carbon dioxide  
Hydrogen Chloride  
Oxides of Nitrogen

#### Condition

During Combustion  
During Combustion  
During Combustion  
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.

Combustion products will include HCl. Facility must be capable of handling halogenated materials.

**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 transportation classifications are based on product formulation, packaging, 3M policies and 3M 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

### 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®) 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® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint and Coatings Association (NPCA).

**Revision Changes:**

Section 1: Product name was modified.

Section 1: Product use information was modified.

Section 16: Disclaimer (second paragraph) was modified.

Section 3: Potential effects from eye contact was modified.

Section 3: Potential effects from skin contact information was modified.

Section 3: Potential effects from inhalation information was modified.

Section 3: Potential effects from ingestion information was modified.

Section 5: Unusual fire and explosion hazard information was modified.

Section 7: Handling information was modified.

Section 8: Eye/face protection phrase was modified.

Section 8: Respiratory protection information was modified.

Section 8: Skin protection - recommended gloves information was modified.

Section 4: First aid for inhalation - termination of exposure - was modified.

Section 4: First aid for inhalation - medical assistance - was modified.

Section 4: First aid for ingestion (swallowing) - decontamination - was modified.

Section 4: First aid for ingestion (swallowing) - medical assistance - was modified.

Section 14: Transportation legal text was modified.

Page Heading: Product name was modified.

Section 15: 311/312 Delayed Hazard score was modified.

Section 9: Boiling point information was modified.

Section 5: Flammable limits (UE) information was modified.

Section 5: Flammable limits (LEL) information was modified.

Section 9: Property description for optional properties was modified.

Section 9: Flammable limits (LEL) information was modified.

Section 9: Flammable limits (UEL) information was modified.

Section 3: Other potential health effects heading was added.

Section 3: Immediate other hazard(s) was added.

Section 9: Density information was added.

Section 3: Other health effects information (reproductive hazards) was added.

Section 2: Ingredient table was added.

Section 8: Exposure guidelines ingredient information was added.

Section 8: Exposure guideline note was added.

Section 8: Exposure guidelines data source legend was added.

Section 6: 6.2. Environmental precautions heading was added.

Section 6: 6.1. Personal precautions, protective equipment and emergency procedures heading was added.

Section 10.1 Conditions to avoid heading was added.

Section 10.2 Materials to avoid heading was added.

Section 16: Web address was added.



Section 6: Personal precautions information was added.  
Section 6: Environmental procedures information was added.  
Section 6: Methods for cleaning up information was added.  
Section 10: Materials to avoid physical property was added.  
Section 10: Conditions to avoid physical property was added.  
Section 1: Address was added.  
Copyright was added.  
Company logo was added.  
Section 6: Clean-up methods heading was added.  
Telephone header was added.  
Company Telephone was added.  
Section 1: Emergency phone information was added.  
Section 1: Emergency phone information was deleted.  
Section 8: Respiratory protection comment was deleted.  
Company Logo was deleted.  
Copyright was deleted.  
Section 6: Release measures information was deleted.  
Section 6: Release measures heading was deleted.  
Section 10: Materials and conditions to avoid physical property was deleted.  
Section 1: Address line 1 was deleted.  
Section 1: Address line 2 was deleted.

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** 3M™ Concrete Repair 600, Self-Leveling, Gray (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:** 07/01/11

**Supersedes Date:** 08/29/06

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

**Product Use:**

Specific Use: Two-part urethane adhesive/sealant.

Intended Use: Structural adhesive

### 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	67762-90-7	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:** May cause severe eye irritation. May cause severe skin irritation. May cause allergic skin reaction. May cause allergic respiratory reaction. May cause target organ effects.

#### 3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:**

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

**Skin Contact:**

Severe Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

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

**Inhalation:**

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

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

Prolonged or repeated exposure may cause:

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

**Ingestion:**

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

**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:** Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate 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 unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1 FLAMMABLE PROPERTIES

Autoignition temperature

*Not Applicable*

Flash Point

$\geq 290^{\circ}\text{F}$  [*Test Method:* Tagliabue Closed Cup]

Flammable Limits(LEL)

*Not Applicable*

Flammable Limits(UEL)

*Not Applicable*

### 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

### 6.1. Personal precautions, protective equipment and emergency procedures

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.

### 6.2. Environmental precautions

Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Dispose of collected material as soon as possible.

### Clean-up methods

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. 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. Contain spill. Collect as much of the spilled material 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 breathing of dust created by cutting, sanding, grinding or machining.

### 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.

### 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.

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><b>Ingredient</b></u>	<u><b>Authority</b></u>	<u><b>Type</b></u>	<u><b>Limit</b></u>	<u><b>Additional Information</b></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	0.2 mg/m <sup>3</sup>	

#### 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: Tagliabue Closed Cup</i> ]
<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>Density</b>	1.11 g/ml

Vapor Density	>=1 [Ref Std: AIR=1]
Vapor Pressure	<=0.000004 mmHg [@ 68 °F]
Specific Gravity	1.11
pH	Not Applicable
Melting point	No Data Available
Solubility in Water	Negligible
Evaporation rate	<=1 [Details: Gels with exposure to humidity.]
Hazardous Air Pollutants	53.4 % weight [Test Method: Calculated]
Volatile Organic Compounds	< 10 g/l [Details: EU VOC content]
Kow - Oct/Water partition coef	No Data Available
Percent volatile	0 % weight [Test Method: Estimated]
VOC Less H2O & Exempt Solvents	< 10 g/l [Test Method: calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	<=1 g/l [Test Method: calculated SCAQMD rule 443.1] [Details: when used as intended with Part B]
Viscosity	1,250 - 2,750 centipoise

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable.

### Materials and Conditions to Avoid:

#### 10.1 Conditions to avoid

None known

#### 10.2 Materials to avoid

Water

Strong acids

Strong bases

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

### Hazardous Decomposition or By-Products

#### Substance

Carbon monoxide

Carbon dioxide

Oxides of Nitrogen

Toxic Vapor, Gas, Particulate

#### Condition

During Combustion

During Combustion

During Combustion

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 transportation classifications are based on product formulation, packaging, 3M policies and 3M 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

### 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®) 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® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint and Coatings Association (NPCA).

**Revision Changes:**

Section 1: Product name was modified.  
Section 1: Product use information was modified.  
Section 16: Disclaimer (second paragraph) was modified.  
Section 4: First aid for eye contact - decontamination - was modified.  
Section 4: First aid for eye contact - medical assistance - was modified.  
Section 3: Immediate skin hazard(s) was modified.  
Section 3: Potential effects from eye contact was modified.  
Section 3: Potential effects from skin contact information was modified.  
Section 3: Potential effects from inhalation information was modified.  
Section 3: Potential effects from ingestion information was modified.  
Section 7: Handling information was modified.  
Section 8: Eye/face protection phrase was modified.  
Section 8: Respiratory protection information was modified.  
Section 8: Skin protection - recommended gloves information was modified.  
Section 4: First aid for ingestion (swallowing) - decontamination - was modified.  
Section 4: First aid for ingestion (swallowing) - medical assistance - was modified.  
Section 14: Transportation legal text was modified.  
Page Heading: Product name was modified.  
Section 9: Vapor pressure value was modified.  
Section 9: Boiling point information was modified.  
Section 5: Flammable limits (UE) information was modified.  
Section 5: Flammable limits (LEL) information was modified.  
Section 9: Property description for optional properties was modified.  
Section 9: Flammable limits (LEL) information was modified.  
Section 9: Flammable limits (UEL) information was modified.  
Section 3: Immediate eye hazard(s) was added.  
Section 3: Immediate other hazard(s) was added.  
Section 9: Density information was added.  
Section 2: Ingredient table was added.  
Section 8: Exposure guidelines ingredient information was added.  
Section 8: Exposure guidelines data source legend was added.  
Section 6: 6.2. Environmental precautions heading was added.  
Section 6: 6.1. Personal precautions, protective equipment and emergency procedures heading was added.  
Section 10.1 Conditions to avoid heading was added.  
Section 10.2 Materials to avoid heading was added.



Section 16: Web address was added.  
Section 6: Personal precautions information was added.  
Section 6: Environmental procedures information was added.  
Section 6: Methods for cleaning up information was added.  
Section 10: Materials to avoid physical property was added.  
Section 10: Conditions to avoid physical property was added.  
Section 1: Address was added.  
Copyright was added.  
Company logo was added.  
Section 6: Clean-up methods heading was added.  
Telephone header was added.  
Company Telephone was added.  
Section 1: Emergency phone information was added.  
Section 1: Emergency phone information was deleted.  
Company Logo was deleted.  
Copyright was deleted.  
Section 6: Release measures information was deleted.  
Section 6: Release measures heading was deleted.  
Section 10: Materials and conditions to avoid physical property was deleted.  
Section 1: Address line 1 was deleted.  
Section 1: Address line 2 was deleted.

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