



## Material Safety Data Sheet

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**PRODUCT NAME:** 3M(TM) Super-Fast Repair Adhesive, 04747

**MANUFACTURER:** 3M

**DIVISION:** Automotive Aftermarket

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

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

**Issue Date:** 03/04/10

**Supersedes Date:** Initial Issue

**Document Group:** 28-1002-6

### ID Number(s):

60-4550-5242-7

**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:**

22-1870-9, 22-1807-1

No revision information is available.

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** 3M™ Super-Fast Repair Adhesive PN 04747 - Part A  
**MANUFACTURER:** 3M  
**DIVISION:** Automotive Aftermarket  
**ADDRESS:** 3M Center, St. Paul, MN 55144-1000

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

**Issue Date:** 07/16/13  
**Supersedes Date:** 06/27/11

**Document Group:** 22-1807-1

#### Product Use:

**Specific Use:** Two-part urethane system.  
**Intended Use:** Industrial use

### SECTION 2: INGREDIENTS

<b>Ingredient</b>	<b>C.A.S. No.</b>	<b>% by Wt</b>
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	101-68-8	30 - 60
CASTOR OIL, POLYMER WITH 1,1'-METHYLENEBIS[4-ISOCYANATOBENZENE]	68424-09-9	15 - 40
4,4'-DIISOCYANATODIPHENYLMETHANE POLYMER	25686-28-6	5 - 25
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	2530-83-8	1 - 5
ISOCYANIC ACID, 3-(TRIETHOXYSILYL)PROPYL ESTER	24801-88-5	0.1 - 1

### SECTION 3: HAZARDS IDENTIFICATION

#### 3.1 EMERGENCY OVERVIEW

**Specific Physical Form:** Viscous

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

**General Physical Form:** Liquid

**Immediate health, physical, and environmental hazards:** May cause severe eye irritation. May cause allergic skin reaction. May cause severe skin irritation. 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:

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

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

### Inhalation:

May be harmful if inhaled.

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

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

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

<b>Autoignition temperature</b>	<i>Not Applicable</i>
<b>Flash Point</b>	$\geq 290$ °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>OSHA Flammability Classification:</b>	Class IIIB Combustible Liquid

## 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 not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

**Unusual Fire and Explosion Hazards:** No unusual fire or explosion hazards are anticipated.

**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. Avoid contact with water.

### 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. Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS.

**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 vapors, mists or spray. Avoid eye contact with vapors, mists, or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining. Keep out of the reach of children. Avoid skin contact. For industrial or professional use only. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment. Keep container closed when not in use. Avoid contact with water.

### 7.2 STORAGE

Store away from acids. Store away from areas where product may come into contact with food or pharmaceuticals. Store away from strong bases.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 ENGINEERING CONTROLS

Use in an enclosed process area is recommended. 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. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

### 8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### 8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Indirect Vented Goggles

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#### 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

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#### 8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining. Consult the current 3M Respirator Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

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 air-purifying respirator suitable for organic vapors

For questions about suitability for a specific application, consult with your respirator manufacturer.

#### 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>
3-(TRIMETHOXY-SILYL)PROPYL GLYCIDYL ETHER	CMRG	TWA	5 ppm	
Benzene, 1,1'-methylenebis[4-isocyanato-	ACGIH	TWA	0.005 ppm	
Benzene, 1,1'-methylenebis[4-isocyanato-	OSHA	CEIL	0.2 mg/m3	
FREE ISOCYANATES	Manufacturer determined	TWA	0.005 ppm	
FREE ISOCYANATES	Manufacturer determined	STEL	0.02 ppm	
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	ACGIH	TWA	0.005 ppm	
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	OSHA	CEIL	0.2 mg/m3	

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, clear.
<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>Density</b>	1.1 g/ml
<b>Vapor Density</b>	>=1 [ <i>Ref Std:</i> AIR=1]
<b>Vapor Pressure</b>	<=0.000004 mmHg [@ 68 °F]
<b>Specific Gravity</b>	1.1 [ <i>Ref Std:</i> WATER=1]
<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>Hazardous Air Pollutants</b>	40.877 % weight [ <i>Test Method:</i> Calculated]
<b>Volatile Organic Compounds</b>	22 g/l [ <i>Test Method:</i> calculated SCAQMD rule 443.1]
<b>Volatile Organic Compounds</b>	2.0 % weight [ <i>Test Method:</i> calculated per CARB title 2]
<b>Kow - Oct/Water partition coef</b>	<i>No Data Available</i>
<b>Percent volatile</b>	2.0 % weight [ <i>Test Method:</i> Estimated]
<b>VOC Less H2O &amp; Exempt Solvents</b>	22 g/l [ <i>Test Method:</i> calculated SCAQMD rule 443.1]
<b>Viscosity</b>	1,000 - 2,000 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  
Hydrogen Cyanide  
Oxides of Nitrogen  
Toxic Vapor, Gas, Particulate

**Condition**

During Combustion  
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**

**CHEMICAL FATE INFORMATION**

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** Dispose of completely cured (or polymerized) wastes in a sanitary landfill. Incinerate in an industrial or commercial facility in the presence of a combustible material. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

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

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

**SECTION 14: TRANSPORT INFORMATION**

LB-K100-0780-5, LA-D100-0021-7

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

**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>
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	101-68-8	30 - 60
P,P'-METHYLENEBIS(PHENYL ISOCYANATE) (Benzene, 1,1'-methylenebis[4-isocyanato-)	101-68-8	30 - 60
P,P'-METHYLENEBIS(PHENYL ISOCYANATE) (DIISOCYANATES (CERTAIN CHEMICALS ONLY))	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®) 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 use information was modified.
- Section 3: Immediate skin hazard(s) was modified.
- Section 3: Potential effects from skin contact information was modified.
- Section 5: Fire fighting procedures information was modified.
- Section 7: Handling information was modified.
- Section 7: Storage information was modified.
- Section 8: Respiratory protection information was modified.

Section 10: Hazardous decomposition or by-products table was modified.  
Section 13: Waste disposal method information was modified.  
Section 8: Respiratory protection - recommended respirators information was modified.  
Section 8: Respiratory protection - recommended respirators was modified.  
Section 16: HMIS explanation was modified.  
Section 9: Density information was modified.  
Section 9: Vapor density value 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 5: Autoignition temperature information was modified.  
Section 5: Flash point information was modified.  
Section 9: Property description for optional properties was modified.  
Section 9: Specific gravity information was modified.  
Section 9: pH information was modified.  
Section 9: Melting point information was modified.  
Section 9: Solubility in water text was modified.  
Section 8: Respiratory protection - recommended respirators guide was modified.  
Section 9: Flash point information was modified.  
Section 9: Flammable limits (LEL) information was modified.  
Section 9: Flammable limits (UEL) information was modified.  
Section 9: Autoignition temperature information was modified.  
Section 2: Ingredient table was modified.  
Section 15: EPCRA 313 information was modified.  
Section 8: Exposure guidelines ingredient information was modified.  
Section 6: Methods for cleaning up information was modified.  
Copyright was modified.  
Section 8: Respiratory protection - recommended respirators punctuation was deleted.  
Section 12: Ecotoxicological phrase was deleted.  
Section 12: Chemical Fate phrase was deleted.

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<b>Document Group:</b>	22-1870-9	<b>Version Number:</b>	4.00
<b>Issue Date:</b>	03/20/14	<b>Supersedes Date:</b>	11/18/11

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Super Fast Adhesive PN 04747 Accelerator (Part B)

#### Product Identification Numbers

LB-K100-0780-6, LA-D100-0023-3

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Two-part urethane system., Industrial use

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Automotive Aftermarket
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	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

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

#### 2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2A.

Skin Corrosion/Irritation: Category 2.

Skin Sensitizer: Category 1.

#### 2.2. Label elements

##### Signal word

Warning

##### Symbols

Exclamation mark |

**Pictograms****Hazard Statements**

Causes serious eye irritation.  
 Causes skin irritation.  
 May cause an allergic skin reaction.

**Precautionary Statements****General:**

Keep out of reach of children.

**Prevention:**

Avoid breathing dust/fume/gas/mist/vapors/spray.  
 Wear protective gloves and eye/face protection.  
 Wash thoroughly after handling.  
 Contaminated work clothing must not be allowed out of the workplace.

**Response:**

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.  
 Take off contaminated clothing and wash it before reuse.  
 Wash contaminated clothing before reuse.

**Disposal:**

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

**2.3. Hazards not otherwise classified**

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

18% of the mixture consists of ingredients of unknown acute inhalation toxicity.

**SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
Polyether Polyol	9082-00-2	40 - 70 Trade Secret *
Propoxylated Trimethylolpropane	25723-16-4	10 - 30 Trade Secret *
Tetrakis(2-Hydroxypropyl)Ethylenediamine	102-60-3	10 - 30 Trade Secret *
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	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. If you feel unwell, get medical attention.

**Skin Contact:**

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

**Eye Contact:**

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. 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**

Not applicable

**SECTION 5: Fire-fighting measures**

**5.1. Suitable extinguishing media**

In case of fire: Use a dry chemical extinguisher to extinguish.

**5.2. Special hazards arising from the substance or mixture**

None inherent in this product.

**Hazardous Decomposition or By-Products**

Substance

Carbon monoxide  
Carbon dioxide  
Oxides of Nitrogen

Condition

During Combustion  
During Combustion  
During Combustion

**5.3. Special protective actions for fire-fighters**

No unusual fire or explosion hazards are anticipated.

**SECTION 6: Accidental release measures**

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

Evacuate area. 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. 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**

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on

the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid breathing of dust created by cutting, sanding, grinding or machining. Keep out of reach of children. Avoid breathing 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

### 7.2. Conditions for safe storage including any incompatibilities

Store away from acids. Store away from oxidizing agents.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
M-Xylene-Alpha,Alpha'-Diamine	1477-55-0	Amer Conf of Gov. Indust. Hyg.	CEIL:0.1 mg/m3	Skin Notation

Amer Conf of Gov. Indust. Hyg. : American Conference of Governmental Industrial Hygienists

American Indust. Hygiene Assoc : American Industrial Hygiene Association

Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines

US Dept of Labor - 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

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

Wear 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 Fluoroelastomer

Apron – Butyl rubber

**Respiratory protection**

In case of inadequate ventilation wear 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 air-purifying respirator suitable for organic vapors

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**

<b>General Physical Form:</b>	Liquid
<b>Specific Physical Form:</b>	Gel
<b>Odor, Color, Grade:</b>	Slight ammonia like odor, clear.
<b>Odor threshold</b>	<i>No Data Available</i>
<b>pH</b>	<i>Not Applicable</i>
<b>Melting point</b>	<i>No Data Available</i>
<b>Boiling Point</b>	>=400 °F
<b>Flash Point</b>	>=290 °F [ <i>Test Method:</i> Tagliabue Closed Cup]
<b>Evaporation rate</b>	<=1 [ <i>Ref Std:</i> WATER=1]
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Flammable Limits(LEL)</b>	<i>Not Applicable</i>
<b>Flammable Limits(UEL)</b>	<i>Not Applicable</i>
<b>Vapor Pressure</b>	<i>Not Applicable</i>
<b>Vapor Density</b>	>=1 [ <i>Ref Std:</i> AIR=1]
<b>Density</b>	1.02 g/ml
<b>Specific Gravity</b>	1.02 [ <i>Ref Std:</i> WATER=1]
<b>Solubility in Water</b>	Negligible
<b>Solubility- non-water</b>	<i>No Data Available</i>
<b>Partition coefficient: n-octanol/ water</b>	<i>No Data Available</i>
<b>Autoignition temperature</b>	<i>Not Applicable</i>
<b>Decomposition temperature</b>	<i>No Data Available</i>
<b>Viscosity</b>	1,300 - 2,000 centipoise
<b>Hazardous Air Pollutants</b>	0 lb HAPS/gal [ <i>Test Method:</i> Calculated]
<b>Volatile Organic Compounds</b>	0 % weight [ <i>Test Method:</i> calculated per CARB title 2]
<b>Volatile Organic Compounds</b>	0 g/l [ <i>Test Method:</i> calculated SCAQMD rule 443.1]
<b>Percent volatile</b>	<=1 % weight [ <i>Test Method:</i> Estimated]
<b>VOC Less H2O &amp; Exempt Solvents</b>	0 g/l [ <i>Test Method:</i> calculated SCAQMD rule 443.1]

**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**

None known.

**10.5. Incompatible materials**

Strong acids

Strong oxidizing agents

**10.6. Hazardous decomposition products**

**Substance**

**Condition**

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:**

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

**Skin Contact:**

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.

**Eye Contact:**

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

**Ingestion:**

No health effects are expected.

**Additional Information:**

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

**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
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Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE > 12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
Polyether Polyol	Dermal	Rabbit	LD50 > 5,000 mg/kg
Polyether Polyol	Ingestion	Rat	LD50 > 10,000 mg/kg
Propoxylated Trimethylolpropane	Dermal	Rat	LD50 > 2,000 mg/kg
Propoxylated Trimethylolpropane	Ingestion	Rat	LD50 > 2,500 mg/kg
Tetrakis(2-Hydroxypropyl)Ethylenediamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
Tetrakis(2-Hydroxypropyl)Ethylenediamine	Ingestion	Rat	LD50 3,280 mg/kg
M-Xylene-Alpha,Alpha'-Diamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
M-Xylene-Alpha,Alpha'-Diamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.8 mg/l
M-Xylene-Alpha,Alpha'-Diamine	Ingestion	Rat	LD50 980 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
M-Xylene-Alpha,Alpha'-Diamine	Rat	Corrosive

**Serious Eye Damage/Irritation**

Name	Species	Value
M-Xylene-Alpha,Alpha'-Diamine	Rabbit	Corrosive

**Skin Sensitization**

Name	Species	Value
M-Xylene-Alpha,Alpha'-Diamine	Guinea pig	Sensitizing

**Respiratory Sensitization**

Name	Species	Value

**Germ Cell Mutagenicity**

Name	Route	Value
M-Xylene-Alpha,Alpha'-Diamine	In Vitro	Not mutagenic
M-Xylene-Alpha,Alpha'-Diamine	In vivo	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
M-Xylene-Alpha,Alpha'-Diamine	Ingestion	Not toxic to female reproduction	Rat	NOAEL 450 mg/kg/day	1 generation
M-Xylene-Alpha,Alpha'-Diamine	Ingestion	Not toxic to male reproduction	Rat	NOAEL 450 mg/kg	1 generation
M-Xylene-Alpha,Alpha'-Diamine	Ingestion	Not toxic to development	Rat	NOAEL 450 mg/kg/day	1 generation

**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
M-Xylene-Alpha,Alpha'-	Inhalation	respiratory irritation	Some positive data exist, but the	Not	NOAEL Not	

Diamine			data are not sufficient for classification	available	available	
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**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
M-Xylene-Alpha,Alpha'-Diamine	Ingestion	endocrine system   blood   bone marrow	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 600 mg/kg/day	28 days

**Aspiration Hazard**

Name	Value

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 completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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.

**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****15.1. 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 - No

## 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:** 1 **Instability:** 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 **Physical Hazard:** 1 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® III) 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® III ratings are to be used with a fully implemented HMIS® III program. HMIS® is a registered mark of the American Coatings Association (ACA).

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