



## Material Safety Data Sheet

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**PRODUCT NAME:** 04240 DURAMIX™ 4040 Plastic Repair, Semi-Rigid

**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:** 11/02/12

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**Document Group:** 22-2254-5

### ID Number(s):

LB-K100-0340-4, 41-0003-6680-1, 41-0003-8012-5, 41-3701-2131-5, 62-2643-3830-2

**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:**

22-1760-2, 22-1785-9

### Revision Changes:

Kit: ID Number(s) was modified.

Section 1: Manufacturer name was added.

Section 16: Disclaimer (first paragraph) was added.

Section 16: Disclaimer (second paragraph) was added.

Section 16: Web address was added.

Section 1: Address was added.

Copyright was added.

Company logo was added.

Telephone header was added.

Company Telephone was added.

Section 1: Emergency phone information was added.

Company Logo was deleted.

Copyright was deleted.

Kit: Manufacturer's name was deleted.

Kit: Emergency phone information was deleted.

Kit: Disclaimer (first paragraph) was deleted.

Kit: Disclaimer (second paragraph) was deleted.

Kit: Address line 1 was deleted.

Kit: Address line 2 was deleted.

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<b>Issue Date:</b>	03/04/15	<b>Supersedes Date:</b>	05/03/12

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Duramix™ Plastic Repair, Semi-Rigid PNs 04240 (Part A)

#### Product Identification Numbers

LB-K100-0104-8

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

##### Recommended use

Two-part urethane adhesive/sealant., 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

Acute Toxicity (inhalation): Category 4.  
Serious Eye Damage/Irritation: Category 2A.  
Skin Corrosion/Irritation: Category 2.  
Respiratory Sensitizer: Category 1.  
Skin Sensitizer: Category 1.  
Carcinogenicity: Category 2.  
Specific Target Organ Toxicity (respiratory irritation): Category 3.  
Specific Target Organ Toxicity (repeated exposure): Category 1.

#### 2.2. Label elements

##### Signal word

Danger

## Symbols

Exclamation mark | Health Hazard |

## Pictograms



## Hazard Statements

Causes serious eye irritation.  
Causes skin irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
Harmful if inhaled.  
May cause respiratory irritation.  
Suspected of causing cancer.

Causes damage to organs through prolonged or repeated exposure:  
respiratory system |

## Precautionary Statements

### General:

Keep out of reach of children.

### Prevention:

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.  
In case of inadequate ventilation wear respiratory protection.  
Wear eye/face protection.  
Wear protective gloves.  
Do not eat, drink or smoke when using this product.  
Wash thoroughly after handling.  
Contaminated work clothing must not be allowed out of the workplace.

### Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
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.  
IF exposed or concerned: Get medical advice/attention.

### Storage:

Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.

### Disposal:

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

**2.3. Hazards not otherwise classified**

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

64% of the mixture consists of ingredients of unknown acute oral toxicity.

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

Ingredient	C.A.S. No.	% by Wt
P,P'-Methylenebis(Phenyl Isocyanate)	101-68-8	30 - 60 Trade Secret *
Castor Oil, Polymer With 1,1'-Methylenebis[4-Isocyanatobenzene]	68424-09-9	30 - 60 Trade Secret *
4,4'-Diisocyanatodiphenylmethane Polymer	25686-28-6	5 - 25 Trade Secret *
Oxirane, Methyl-, Polymer With Oxirane, Ether With 1,2,3-Propanetriol (3:1), Polymer With 1,1'-Methylenebis[4-Isocyanatobenzene]	59675-67-1	1 - 5 Trade Secret *
Carbon Black	1333-86-4	0.1 - 1 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 fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

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

None inherent in this product.

**Hazardous Decomposition or By-Products**

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

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

No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

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

Evacuate area. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Contain spill. 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. 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 container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. 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. Dispose of collected material as soon as possible.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Do not use in a confined area with minimal air exchange. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Use personal protective equipment (gloves, respirators, etc.) as required.

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

Store in a well-ventilated place. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from acids. Store away from strong bases.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Agency</u>	<u>Limit type</u>	<u>Additional Comments</u>
FREE ISOCYANATES	101-68-8	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
P,P'-Methylenebis(Phenyl Isocyanate)	101-68-8	ACGIH	TWA:0.005 ppm	

P,P'-Methylenebis(Phenyl Isocyanate)	101-68-8	OSHA	CEIL:0.2 mg/m <sup>3</sup> (0.02 ppm)	
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m <sup>3</sup>	A3: Confirmed animal carcin.
Carbon Black	1333-86-4	CMRG	TWA:0.5 mg/m <sup>3</sup>	
Carbon Black	1333-86-4	OSHA	TWA:3.5 mg/m <sup>3</sup>	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

## 8.2. Exposure controls

### 8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

#### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

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

Nitrile Rubber

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron – Butyl rubber

Apron – Nitrile

#### 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 and particulates

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

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**General Physical Form:**

Liquid

**Specific Physical Form:**

Viscous

**Odor, Color, Grade:**

Low or no detectable odor, weakly aromatic, black.

Odor threshold	No Data Available
pH	Not Applicable
Melting point	No Data Available
Boiling Point	>=400 °F
Flash Point	>=290 °F [Test Method: Tagliabue Closed Cup]
Evaporation rate	<=1 [Details: Gels with exposure to humidity.]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	<=0.000004 mmHg [@ 68 °F]
Vapor Density	>=1 [Ref Std: AIR=1]
Density	1.0 - 1.2 g/ml
Specific Gravity	1.0 - 1.2 [Ref Std: WATER=1]
Solubility in Water	Negligible
Solubility- non-water	No Data Available
Autoignition temperature	Not Applicable
Decomposition temperature	No Data Available
Hazardous Air Pollutants	94.65 lb HAPS/lb solids [Test Method: Calculated]
Volatile Organic Compounds	0 g/l [Test Method: calculated SCAQMD rule 443.1]
Volatile Organic Compounds	0 % weight [Test Method: calculated per CARB title 2]
Percent volatile	0 % weight
VOC Less H2O & Exempt Solvents	0 g/l [Test Method: 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

Water  
Strong acids  
Strong bases

### 10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be



present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

**11.1. Information on Toxicological effects**

**Signs and Symptoms of Exposure**

Based on test data and/or information on the components, this material may produce the following health effects:

**Inhalation:**

Harmful if inhaled.

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.

May cause additional health effects (see below).

**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:**

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

**Additional Health Effects:**

**Prolonged or repeated exposure may cause target organ effects:**

Prolonged or repeated exposure by inhalation 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.

**Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

<b>Ingredient</b>	<b>CAS No.</b>	<b>Class Description</b>	<b>Regulation</b>
Carbon Black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

**Additional Information:**

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

**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**

<b>Name</b>	<b>Route</b>	<b>Species</b>	<b>Value</b>
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE 10 - 20 mg/l
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
P,P'-Methylenebis(Phenyl Isocyanate)	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l

P,P'-Methylenebis(Phenyl Isocyanate)	Dermal	Rabbit	LD50 > 5,000 mg/kg
P,P'-Methylenebis(Phenyl Isocyanate)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.369 mg/l
P,P'-Methylenebis(Phenyl Isocyanate)	Ingestion	Rat	LD50 31,600 mg/kg
Carbon Black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon Black	Ingestion	Rat	LD50 > 8,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
P,P'-Methylenebis(Phenyl Isocyanate)	official classification	Irritant
Carbon Black	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
P,P'-Methylenebis(Phenyl Isocyanate)	official classification	Severe irritant
Carbon Black	Rabbit	No significant irritation

**Skin Sensitization**

Name	Species	Value
P,P'-Methylenebis(Phenyl Isocyanate)	official classification	Sensitizing

**Respiratory Sensitization**

Name	Species	Value
P,P'-Methylenebis(Phenyl Isocyanate)	Human	Sensitizing

**Germ Cell Mutagenicity**

Name	Route	Value
P,P'-Methylenebis(Phenyl Isocyanate)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Carbon Black	In Vitro	Not mutagenic
Carbon Black	In vivo	Some positive data exist, but the data are not sufficient for classification

**Carcinogenicity**

Name	Route	Species	Value
P,P'-Methylenebis(Phenyl Isocyanate)	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Carbon Black	Dermal	Mouse	Not carcinogenic
Carbon Black	Ingestion	Mouse	Not carcinogenic
Carbon Black	Inhalation	Rat	Carcinogenic

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
P,P'-Methylenebis(Phenyl Isocyanate)	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesis

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
P,P'-Methylenebis(Phenyl Isocyanate)	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
P,P'-Methylenebis(Phenyl Isocyanate)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Carbon Black	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure

**Aspiration Hazard**

For the component/components, either no data are currently available or the data are not sufficient for classification.

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 - 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

### 15.2. State Regulations

Contact 3M for more information.

#### California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
Carbon Black	1333-86-4	Carcinogen

WARNING: This product contains a chemical known to the State of California to cause cancer.

### 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

### 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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<b>Document Group:</b>	22-1785-9	<b>Version Number:</b>	5.00
<b>Issue Date:</b>	01/19/15	<b>Supersedes Date:</b>	08/22/11

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Semi-Rigid Plastic Repair PN 04240 - Part B

#### Product Identification Numbers

LB-K100-0104-7

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

##### Recommended use

Two-part urethane adhesive/sealant., 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 eye/face protection.  
 Wear protective gloves.  
 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.

**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.

## 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 fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

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

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 special protective actions for fire-fighters are anticipated.

**SECTION 6: Accidental release measures**

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

Evacuate area. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

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**

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**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

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

ACGIH : American Conference of Governmental Industrial Hygienists  
 AIHA : American Industrial Hygiene Association  
 CMRG : Chemical Manufacturer's Recommended Guidelines  
 OSHA : United States Department of Labor - Occupational Safety and Health Administration  
 TWA: Time-Weighted-Average  
 STEL: Short Term Exposure Limit  
 CEIL: Ceiling

**8.2. Exposure controls**

**8.2.1. Engineering controls**

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

**8.2.2. Personal protective equipment (PPE)**

**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

**Skin/hand protection**

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

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

**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 and particulates

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>	Viscous
<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>	>=410 °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>	1.0 - 1.1 g/ml
<b>Specific Gravity</b>	1.0 - 1.1 [ <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>	1,400 - 1,800 centipoise
<b>Hazardous Air Pollutants</b>	0 lb HAPS/lb solids [ <i>Test Method:</i> Calculated]
<b>Volatile Organic Compounds</b>	0 g/l [ <i>Test Method:</i> calculated SCAQMD rule 443.1]
<b>Volatile Organic Compounds</b>	0 % weight [ <i>Test Method:</i> calculated per CARB title 2]
<b>Percent volatile</b>	0.49 % weight
<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**

None known.

**Condition**

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:

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

#### 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
Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
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 1.2 mg/l
M-Xylene-Alpha,Alpha'-Diamine	Ingestion	Rat	LD50 980 mg/kg

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

Name	Species	Value
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Propoxylated Trimethylolpropane	Rabbit	No significant irritation
M-Xylene-Alpha,Alpha'-Diamine	Rat	Corrosive

**Serious Eye Damage/Irritation**

Name	Species	Value
Propoxylated Trimethylolpropane	Rabbit	Mild irritant
M-Xylene-Alpha,Alpha'-Diamine	Rabbit	Corrosive

**Skin Sensitization**

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

**Respiratory Sensitization**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**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**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**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'-Diamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	

**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**

For the component/components, either no data are currently available or the data are not sufficient for classification.

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. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

## 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 - Yes

### 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

### 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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