

# **Safety Data Sheet**

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Issue Date:	03/10/15	Supercedes Date:	11/13/12

#### **Product identifier**

3M<sup>™</sup> NVH Dampening Material PN04274

**ID** Number(s):

41-0003-6658-7, 41-0003-8020-8, 41-3701-2167-9, 62-3275-3830-2

#### **Recommended use** Industrial use

Supplier's details

<b>MANUFACTURER:</b>	3M
DIVISION:	Automotive Aftermarket
	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

**Emergency telephone number** 1-800-364-3577 or (651) 737-6501 (24 hours)

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

22-2049-9, 22-2043-2

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# Safety Data Sheet

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Issue Date:	02/02/15	Supercedes Date:	07/08/14

# **SECTION 1: Identification**

#### 1.1. Product identifier

3M<sup>TM</sup> Duramix<sup>TM</sup> NVH Damping Material PN 04274, 34275 (Part B)

#### **Product Identification Numbers** LB-K100-0150-4, 60-4550-3637-0

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

**Recommended use** Automotive

3M
Automotive Aftermarket
Industrial Adhesives and Tapes Division
3M Center, St. Paul, MN 55144-1000, USA
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 1. Skin Corrosion/Irritation: Category 2. Skin Sensitizer: Category 1A.

2.2. Label elements Signal word Danger

Symbols Corrosion | Exclamation mark |



Hazard Statements Causes serious eye damage. Causes skin irritation. May cause an allergic skin reaction.

#### **Precautionary Statements**

#### **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 ON SKIN: Wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician. 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.

10% of the mixture consists of ingredients of unknown acute oral toxicity.10% of the mixture consists of ingredients of unknown acute dermal toxicity.

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

Ingredient	C.A.S. No.	% by Wt
Polyether Polyol	9082-00-2	40 - 70 Trade Secret *
Polypropylene Glycol	25322-69-4	40 - 70 Trade Secret *
Bis(methylthio)toluenediamine	106264-79-3	7 - 13 Trade Secret *
Dimethyl Siloxane, Reaction Product with Silica	67762-90-7	1 - 5 Trade Secret *
Isophorone Diamine	2855-13-2	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 for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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 Comb
Carbon dioxide	During Comb
Oxides of Nitrogen	During Comb

#### 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. 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. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

#### 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

bustion bustion bustion

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. For industrial or professional use only. 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. Avoid release to the environment. 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	<b>Additional Comments</b>
Polypropylene Glycol	25322-69-4	AIHA	TWA(as aerosol):10 mg/m3	
Dimethyl Siloxane, Reaction	67762-90-7	CMRG	CEIL:5 mg/m3	
Product with Silica				
SILICA, AMORPHOUS	67762-90-7	OSHA	TWA concentration:0.8	
			mg/m3;TWA:20 millions of	
			particles/cu. ft.	

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: Full Face Shield 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

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

#### **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:	Clear.
Odor threshold	No Data Available
рН	Not Applicable
Melting point	No Data Available
Boiling Point	No Data Available
Flash Point	>=290 °F [Test Method: Tagliabue Closed Cup]
Evaporation rate	<=1 [ <i>Ref Std:</i> WATER=1]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Vapor Pressure	No Data Available
Vapor Density	>=1 [ <i>Ref Std:</i> AIR=1]
Density	1.03 g/ml
Specific Gravity	1.03 [ <i>Ref Std:</i> WATER=1]
Solubility in Water	Negligible
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	Not Applicable
Decomposition temperature	No Data Available
Viscosity	2,000 - 3,000 centipoise
Hazardous Air Pollutants	0 lb HAPS/lb solids [Test Method: Calculated]
Volatile Organic Compounds	31 g/l [Test Method: calculated per EPA method 24]
Volatile Organic Compounds	3.0 % weight [ <i>Test Method:</i> calculated per CARB title 2]
Percent volatile	3 % weight [ <i>Test Method:</i> Estimated]
VOC Less H2O & Exempt Solvents	31 g/l [Test Method: calculated per EPA method 24]

## **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:**

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of 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
Polypropylene Glycol	Dermal	Rabbit	LD50 > 10,000 mg/kg
Polypropylene Glycol	Ingestion	Rat	LD50 > 2,000 mg/kg
Dimethyl Siloxane, Reaction Product with Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dimethyl Siloxane, Reaction Product with Silica	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		
	(4 hours)		
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Isophorone Diamine	Dermal	Rat	LD50 > 2,000 mg/kg
Isophorone Diamine	Inhalation-	Rat	LC50 estimated to be 1 - 5 mg/l
	Dust/Mist		
	(4 hours)		
Isophorone Diamine	Ingestion	Rat	LD50 1,030 mg/kg

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

Name	Species	Value
Polypropylene Glycol	Rabbit	No significant irritation
Dimethyl Siloxane, Reaction Product with Silica	Rabbit	No significant irritation
Isophorone Diamine	official classifica	Corrosive
	tion	

#### Serious Eye Damage/Irritation

Name	Species	Value
Polypropylene Glycol	Rabbit	No significant irritation
Dimethyl Siloxane, Reaction Product with Silica	Rabbit	No significant irritation
Isophorone Diamine	Rabbit	Corrosive

#### **Skin Sensitization**

Name	Species	Value
Dimethyl Siloxane, Reaction Product with Silica	Human	Not sensitizing
	and	
	animal	
Isophorone Diamine	Guinea	Sensitizing
	pig	

#### **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
Dimethyl Siloxane, Reaction Product with Silica	In Vitro	Not mutagenic
Isophorone Diamine	In Vitro	Not mutagenic
Isophorone Diamine	In vivo	Not mutagenic

#### Carcinogenicity

Name	Route	Species	Value
Dimethyl Siloxane, Reaction Product with Silica	Not	Mouse	Some positive data exist, but the data are not
	Specified sufficient for classification		sufficient for classification

### **Reproductive Toxicity**

#### **Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure

					Duration
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s
Isophorone Diamine	Ingestion	Not toxic to female reproduction	Rat	NOAEL 160 mg/kg/day	90 days
Isophorone Diamine	Ingestion	Not toxic to male reproduction	Rat	NOAEL 160 mg/kg/day	90 days
Isophorone Diamine	Ingestion	Not toxic to development	Rat	NOAEL 250 mg/kg/day	during gestation

#### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Isophorone Diamine	Inhalation	respiratory irritation	May cause respiratory irritation	Rat	LOAEL 0.002 mg/l	2 weeks

#### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Dimethyl Siloxane, Reaction Product with Silica	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Isophorone Diamine	Ingestion	hematopoietic system   liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 160 mg/kg/day	13 weeks

#### **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.

Incinerate uncured product in a permitted waste incineration facility. Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, utilize an acceptable permitted waste disposal facility. 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 <u>not</u> 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 ClassificationHealth: 3Flammability: 1Physical Hazard: 1Personal 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).

<b>Document Group:</b>	22-2043-2	Version Number:	3.01
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Issue Date:	02/02/15	Supercedes Date:	07/08/14

# **SECTION 1: Identification**

#### 1.1. Product identifier

3M<sup>TM</sup> DURAMIX<sup>TM</sup> NVH Dampening Material PN 04274, 04275 (Part A)

### **Product Identification Numbers**

LB-K100-0147-7, 60-4550-3636-2

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

#### **Recommended use**

Part A of a 2-Part Urethane Dampening Material, Industrial use

1.3. Supplier's details	
<b>MANUFACTURER:</b>	3M
DIVISION:	Automotive Aftermarket
	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	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 3. Serious Eye Damage/Irritation: Category 1. Skin Corrosion/Irritation: Category 1B. 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

Corrosion | Skull and crossbones | Health Hazard |

**Pictograms** 



#### **Hazard Statements**

Toxic if inhaled. Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause respiratory irritation. Suspected of causing cancer.

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

#### **Precautionary Statements**

#### **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 protective gloves, protective clothing, and eye/face protection. 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 ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF ON SKIN: Wash with plenty of soap and water.
Immediately call a POISON CENTER or doctor/physician.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Call a POISON CENTER or doctor/physician.

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

May cause chemical gastrointestinal burns. Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

73% of the mixture consists of ingredients of unknown acute oral toxicity.73% of the mixture consists of ingredients of unknown acute dermal toxicity.9% of the mixture consists of ingredients of unknown acute inhalation toxicity.

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

Ingredient	C.A.S. No.	% by Wt
Polyurethane Prepolymer	39420-98-9	60 - 100 Trade Secret *
1,1'-Methylenebis(Isocyanatobenzene)	26447-40-5	10 - 30 Trade Secret *
Benzene, 1,1'-Methylenebis[Isocyanato-, Homopolymer]	39310-05-9	5 - 10 Trade Secret *
Isocyanaic Acid, 3-(Triethoxysilyl)Propyl Ester	24801-88-5	5 - 10 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. Get medical attention.

#### Skin Contact:

Immediately flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

#### **Eye Contact:**

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

#### If Swallowed:

Rinse mouth. Do not induce vomiting. Get immediate 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

Closed containers exposed to heat from fire may build pressure and explode.

# Hazardous Decomposition or By-Products

**Substance** 

#### **Condition**

Carbon monoxide	During Combustion
Carbon dioxide	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. 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

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

#### 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. 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 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

For industrial or professional use only. Do not use in a confined area with minimal air exchange. 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. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard. 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 heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents. Store away from amines.

# **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

Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3	A3: Confirmed animal
			mg/m3	carcin.
Carbon Black	1333-86-4	CMRG	TWA:0.5 mg/m3	
Carbon Black	1333-86-4	OSHA	TWA:3.5 mg/m3	
FREE ISOCYANATES	26447-40-5	Manufacturer	TWA:0.005 ppm;STEL:0.02	
		determined	ppm	

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:  $\Sigma = 0.05 \pm 0.05$ 

Full Face Shield

#### **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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Nitrile Rubber Polymer laminate

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 - polymer laminate

#### **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: Specific Physical Form: Odor, Color, Grade: Odor threshold Liquid Viscous Low or no detectable odor, black. *No Data Available* 

pH Melting point Boiling Point Flash Point Evaporation rate Flammability (solid, gas) Flammable Limits(LEL) Flammable Limits(UEL) Vapor Pressure Vapor Density Density Specific Gravity Solubility in Water Solubility in Water Solubility - non-water Partition coefficient: n-octanol/ water Autoignition temperature Decomposition temperature Viscosity Hazardous Air Pollutants Volatile Organic Compounds	Not Applicable No Data Available >=400 °F >=290 °F [ <i>Test Method:</i> Tagliabue Closed Cup] <=1 [ <i>Details:</i> Gels with exposure to humidity.] Not Applicable No Data Available No Data Available <=0.000004 mmHg [@ 68 °F] >=1 [ <i>Ref Std:</i> AIR=1] 1.06 g/ml 1.06 [ <i>Ref Std:</i> WATER=1] Negligible No Data Available No Data Available No Data Available No Data Available No Data Available No Data Available 0.981 lb HAPS/lb solids [ <i>Test Method:</i> Calculated] 8 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 may occur.

#### **10.4.** Conditions to avoid

Heat Sparks and/or flames

#### **10.5. Incompatible materials**

Water Strong acids Strong bases Reactive metals Alcohols Amines Strong oxidizing agents

#### 10.6. Hazardous decomposition products

<u>Substance</u> 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:

Toxic 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:**

Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

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

#### **Eye Contact:**

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

#### **Ingestion:**

May be harmful if swallowed.

Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

#### **Additional Health Effects:**

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

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.

Carbon Black 1333-86-4 Grp. 2B: Possible human carc. International Agency for Research		<u>gredient</u>
Carbon Black 1333-86-4 Grp. 2B: Possible human carc. International Agency for Research of	on Cancer	rbon Black

#### **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

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Inhalation-		No data available; calculated ATE 2 - 10 mg/l
	Vapor(4 hr)		
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000
			mg/kg
1,1'-Methylenebis(Isocyanatobenzene)	Inhalation-		LC50 estimated to be 10 - 20 mg/l
	Vapor		
1,1'-Methylenebis(Isocyanatobenzene)	Dermal	Rabbit	LD50 > 5,000 mg/kg
1,1'-Methylenebis(Isocyanatobenzene)	Inhalation-	Rat	LC50 0.369 mg/l
	Dust/Mist		
	(4 hours)		
1,1'-Methylenebis(Isocyanatobenzene)	Ingestion	Rat	LD50 31,600 mg/kg
Isocyanaic Acid, 3-(Triethoxysilyl)Propyl Ester	Dermal	Rabbit	LD50 1,259 mg/kg
Isocyanaic Acid, 3-(Triethoxysilyl)Propyl Ester	Inhalation-	Rat	LC50 0.36 mg/l
	Vapor (4		
	hours)		
Isocyanaic Acid, 3-(Triethoxysilyl)Propyl Ester	Ingestion	Rat	LD50 706 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
1,1'-Methylenebis(Isocyanatobenzene)	official classifica tion	Irritant
Isocyanaic Acid, 3-(Triethoxysilyl)Propyl Ester	Rabbit	Corrosive
Carbon Black	Rabbit	No significant irritation

#### Serious Eye Damage/Irritation

Name	Species	Value
1,1'-Methylenebis(Isocyanatobenzene)	official classifica tion	Severe irritant
Isocyanaic Acid, 3-(Triethoxysilyl)Propyl Ester	Rabbit	Corrosive
Carbon Black	Rabbit	No significant irritation

### **Skin Sensitization**

Name	Species	Value
1,1'-Methylenebis(Isocyanatobenzene)	official	Sensitizing
	classifica	
	tion	
Isocyanaic Acid, 3-(Triethoxysilyl)Propyl Ester	similar	Sensitizing
	compoun	
	ds	

#### **Respiratory Sensitization**

Name	Species	Value
1,1'-Methylenebis(Isocyanatobenzene)	Human	Sensitizing
Isocyanaic Acid, 3-(Triethoxysilyl)Propyl Ester	similar	Sensitizing
	compoun	
	ds	

## Germ Cell Mutagenicity

Name	Route	Value

1,1'-Methylenebis(Isocyanatobenzene)	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
1,1'-Methylenebis(Isocyanatobenzene)	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
1,1'-Methylenebis(Isocyanatobenzene)	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesi s

#### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
1,1'-	Inhalation	respiratory irritation	May cause respiratory irritation	official	NOAEL Not	
Methylenebis(Isocyanatobe				classifica	available	
nzene)				tion		

#### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
1,1'- Methylenebis(Isocyanatob enzene)	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.

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, utilize an acceptable permitted waste disposal facility. 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**

For Transport Information, please visit <u>http://3M.com/Transportinfo</u> or call 1-800-364-3577 or 651-737-6501.

# **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: 3 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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