



## Safety Data Sheet

Copyright, 2019, 3M Company.

All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

<b>Document Group:</b>	09-3599-9	<b>Version Number:</b>	14.15
<b>Issue Date:</b>	02/22/19	<b>Supersedes Date:</b>	07/25/18

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Panel Bonding (90 Minutes) Adhesive Part A (Accelerator) PN 08115, 38315, 58115

#### Product Identification Numbers

ID Number	UPC	ID Number	UPC
LB-K100-0010-6			

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

##### Recommended use

Automotive, Use with Part B, MSDS 32-4327-6

#### 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 1.  
 Skin Corrosion/Irritation: Category 1B.  
 Skin Sensitizer: Category 1B.  
 Reproductive Toxicity: Category 1B.  
 Specific Target Organ Toxicity (single exposure): Category 1.  
 Specific Target Organ Toxicity (single exposure): Category 3.

#### 2.2. Label elements

**Signal word**

Danger

**Symbols**

Corrosion | Exclamation mark | Health Hazard |

**Pictograms****Hazard Statements**

Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
May cause respiratory irritation.  
May damage fertility or the unborn child.

Causes damage to organs:  
blood or blood-forming organs |

**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.  
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 ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
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.  
Specific treatment (see Notes to Physician on this label).  
Call a POISON CENTER or doctor/physician if you feel unwell.

**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.

**Notes to Physician:**

Overexposure to this product may result in methemoglobinemia. Methemoglobinemia may be clinically suspected by the presence of clinical "cyanosis" in the presence of a normal PaO<sub>2</sub> (as obtained by arterial blood gases). Routine pulse oximetry may be inaccurate for monitoring oxygen saturation in the presence of methemoglobinemia, and should not be used to make the diagnosis of this disorder. If the patient is symptomatic or if the methemoglobin level is >20%, specific therapy with methylene blue should be considered as part of the medical management.

### 2.3. Hazards not otherwise classified

May cause chemical gastrointestinal burns.

#### Supplemental Information:

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

36% of the mixture consists of ingredients of unknown acute oral toxicity.

37% of the mixture consists of ingredients of unknown acute dermal toxicity.

## SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Polymeric Diamide	68911-25-1	15 - 40 Trade Secret *
Butadiene Acrylonitrile Copolymer	68683-29-4	9 - 30 Trade Secret *
Fused Silica	60676-86-0	10 - 30 Trade Secret *
Bis(3-Aminopropyl) Ether of Diethylene Glycol	4246-51-9	5 - 15 Trade Secret *
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	90-72-2	5 - 10 Trade Secret *
Amine Epoxy Curing Agent	288-32-4	1 - 5 Trade Secret *
Dimethyl Siloxane, Reaction Product with Silica	67762-90-7	1 - 5 Trade Secret *
Calcium Nitrate	10124-37-5	1 - 2.5 Trade Secret *
Bis[(Dimethylamino)Methyl]Phenol	71074-89-0	0.1 - 1.5 Trade Secret *
N-Aminoethylpiperazine	140-31-8	0.1 - 1.5 Trade Secret *
Toluene	108-88-3	< 0.5 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 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

Overexposure to this product may result in methemoglobinemia. Methemoglobinemia may be clinically suspected by the presence of clinical "cyanosis" in the presence of a normal PaO<sub>2</sub> (as obtained by arterial blood gases). Routine pulse oximetry may be inaccurate for monitoring oxygen saturation in the presence of methemoglobinemia, and should not be used to make the diagnosis of this disorder. If the patient is symptomatic or if the methemoglobin level is >20%, specific therapy with methylene blue should be considered as part of the medical management.

### 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

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

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

### 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. 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 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 in accordance with applicable local/regional/national/international regulations.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

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. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) 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. 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
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin
Toluene	108-88-3	OSHA	TWA:200 ppm;CEIL:300 ppm	
SILICA, AMORPHOUS	60676-86-0	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

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

<b>General Physical Form:</b>	Liquid
<b>Specific Physical Form:</b>	Viscous liquid
<b>Odor, Color, Grade:</b>	Tan liquid, slight amine odor.
<b>Odor threshold</b>	<i>No Data Available</i>
<b>pH</b>	<i>Not Applicable</i>
<b>Melting point</b>	<i>Not Applicable</i>
<b>Boiling Point</b>	>=110 °C
<b>Flash Point</b>	110 °C [ <i>Test Method:Closed Cup</i> ]
<b>Evaporation rate</b>	<=1 [ <i>Ref Std:BUOAC=1</i> ]
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Flammable Limits(LEL)</b>	<i>No Data Available</i>
<b>Flammable Limits(UEL)</b>	<i>No Data Available</i>
<b>Vapor Pressure</b>	<=200 mmHg [ <i>@ 20 °C</i> ]
<b>Vapor Density</b>	<i>No Data Available</i>
<b>Density</b>	1.2 g/ml
<b>Specific Gravity</b>	1.2 [ <i>Ref Std:WATER=1</i> ]
<b>Solubility In Water</b>	<i>No Data Available</i>
<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>No Data Available</i>
<b>Decomposition temperature</b>	<i>No Data Available</i>
<b>Viscosity</b>	100,000 - 225,000 centipoise [ <i>Test Method:Brookfield</i> ]
<b>Hazardous Air Pollutants</b>	0.01 lb HAPS/lb solids [ <i>Test Method:Calculated</i> ]
<b>Molecular weight</b>	<i>No Data Available</i>
<b>Volatile Organic Compounds</b>	4 g/l [ <i>Test Method:calculated SCAQMD rule 443.1</i> ]
<b>Volatile Organic Compounds</b>	0.4 % weight [ <i>Test Method:calculated per CARB title 2</i> ]
<b>Percent volatile</b>	0.4 % weight
<b>VOC Less H2O &amp; Exempt Solvents</b>	4 g/l [ <i>Test Method:calculated SCAQMD rule 443.1</i> ]

**SECTION 10: Stability and reactivity****10.1. Reactivity**

This material is considered to be non reactive under normal use conditions.

**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 oxidizing agents

#### 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:

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

May cause additional health effects (see below).

##### Skin Contact:

May be harmful in contact with skin.

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.

May cause additional health effects (see below).

#### Additional Health Effects:

##### Single exposure may cause target organ effects:

Methemoglobinemia: Signs/symptoms may include headache, dizziness, nausea, difficulty breathing, and generalized weakness.

**Reproductive/Developmental Toxicity:**

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

**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 ATE2,000 - 5,000 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE5 - 12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Fused Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Fused Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Fused Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Butadiene Acrylonitrile Copolymer	Dermal	Rabbit	LD50 > 3,000 mg/kg
Butadiene Acrylonitrile Copolymer	Ingestion	Rat	LD50 > 15,300 mg/kg
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Dermal	Rabbit	LD50 2,500 mg/kg
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Ingestion	Rat	LD50 3,160 mg/kg
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Dermal	Rat	LD50 1,280 mg/kg
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Ingestion	Rat	LD50 1,000 mg/kg
Dimethyl Siloxane, Reaction Product with Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dimethyl Siloxane, Reaction Product with Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Amine Epoxy Curing Agent	Dermal		LD50 estimated to be 200 - 1,000 mg/kg
Amine Epoxy Curing Agent	Ingestion	Rat	LD50 970 mg/kg
Calcium Nitrate	Ingestion	Rat	LD50 >300, <2000 mg/kg
Calcium Nitrate	Dermal	similar compounds	LD50 > 2,000 mg/kg
Bis[(Dimethylamino)Methyl]Phenol	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg
N-Aminoethylpiperazine	Dermal	Rabbit	LD50 865 mg/kg
N-Aminoethylpiperazine	Ingestion	Rat	LD50 1,470 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Overall product	Rabbit	Corrosive
Polymeric Diamide	Rabbit	Irritant
Fused Silica	Rabbit	No significant irritation
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Rabbit	Corrosive
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Rabbit	Corrosive
Dimethyl Siloxane, Reaction Product with Silica	Rabbit	No significant irritation
Calcium Nitrate	similar compounds	No significant irritation



Bis[(Dimethylamino)Methyl]Phenol	similar compounds	Corrosive
N-Aminoethylpiperazine	Rabbit	Corrosive
Toluene	Rabbit	Irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
Overall product	similar health hazards	Corrosive
Polymeric Diamide	similar health hazards	Corrosive
Fused Silica	Rabbit	No significant irritation
Bis(3-Aminopropyl) Ether of Diethylene Glycol	similar health hazards	Corrosive
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Rabbit	Corrosive
Dimethyl Siloxane, Reaction Product with Silica	Rabbit	No significant irritation
Calcium Nitrate	Rabbit	Corrosive
Bis[(Dimethylamino)Methyl]Phenol	similar compounds	Corrosive
N-Aminoethylpiperazine	Rabbit	Corrosive
Toluene	Rabbit	Moderate irritant

**Skin Sensitization**

Name	Species	Value
Overall product	Guinea pig	Sensitizing
Polymeric Diamide	Guinea pig	Sensitizing
Fused Silica	Human and animal	Not classified
Butadiene Acrylonitrile Copolymer	Guinea pig	Not classified
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Guinea pig	Not classified
Dimethyl Siloxane, Reaction Product with Silica	Human and animal	Not classified
Calcium Nitrate	similar compounds	Not classified
N-Aminoethylpiperazine	Guinea pig	Sensitizing
Toluene	Guinea pig	Not classified

**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
Fused Silica	In Vitro	Not mutagenic
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	In Vitro	Not mutagenic
Dimethyl Siloxane, Reaction Product with Silica	In Vitro	Not mutagenic
Calcium Nitrate	In Vitro	Not mutagenic
N-Aminoethylpiperazine	In vivo	Not mutagenic
N-Aminoethylpiperazine	In Vitro	Some positive data exist, but the data are not

		sufficient for classification
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic

**Carcinogenicity**

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

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
Fused Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fused Silica	Inhalation	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fused Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Calcium Nitrate	Ingestion	Not classified for female reproduction	similar compounds	NOAEL 1,500 mg/kg/day	prematuring into lactation
Calcium Nitrate	Ingestion	Not classified for male reproduction	similar compounds	NOAEL 1,500 mg/kg/day	28 days
Calcium Nitrate	Ingestion	Not classified for development	similar compounds	NOAEL 1,500 mg/kg/day	prematuring into lactation
N-Aminoethylpiperazine	Ingestion	Not classified for female reproduction	Rat	NOAEL 598 mg/kg/day	prematuring & during gestation
N-Aminoethylpiperazine	Ingestion	Not classified for male reproduction	Rat	NOAEL 409 mg/kg/day	32 days
N-Aminoethylpiperazine	Ingestion	Not classified for development	Rat	NOAEL 899 mg/kg/day	prematuring & during gestation
Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Calcium Nitrate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Calcium Nitrate	Ingestion	methemoglobinemia	Causes damage to organs	Human	NOAEL Not available	environmental exposure
N-Aminoethylpiperazine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

#### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Fused Silica	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Dermal	skin   liver   nervous system   auditory system   hematopoietic system   eyes	Not classified	Rat	NOAEL 125 mg/kg/day	28 days
Dimethyl Siloxane, Reaction Product with Silica	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Calcium Nitrate	Ingestion	heart   skin   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system	Not classified	similar compounds	NOAEL 1,500 mg/kg/day	28 days
N-Aminoethylpiperazine	Ingestion	heart   endocrine system   hematopoietic system   liver   nervous system   kidney and/or bladder	Not classified	Rat	NOAEL 598 mg/kg/day	28 days
Toluene	Inhalation	auditory system   nervous system   eyes   olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart   liver   kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks

Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system   vascular system	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver   kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks

#### Aspiration Hazard

Name	Value
Toluene	Aspiration hazard

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

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

## SECTION 15: Regulatory information

### 15.1. US Federal Regulations

Contact 3M for more information.

#### EPCRA 311/312 Hazard Classifications:

##### Physical Hazards

Not applicable

##### Health Hazards

Hazard Not Otherwise Classified (HNOC)

Reproductive toxicity

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

Skin Corrosion or Irritation

Specific target organ toxicity (single or repeated exposure)

#### Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

##### Ingredient

Calcium Nitrate (NITRATE COMPOUNDS  
(WATER DISSOCIABLE; REPORTABLE ONLY  
WHEN IN AQUEOUS SOLUTION))

##### C.A.S. No

10124-37-5

##### % by Wt

1 - 2.5

### 15.2. State Regulations

Contact 3M for more information.

#### California Proposition 65

##### Ingredient

TOLUENE

##### C.A.S. No.

108-88-3

##### Listing

Developmental Toxin

### 15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

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: 3 Flammability: 1 Instability: 0 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.

<b>Document Group:</b>	09-3599-9	<b>Version Number:</b>	14.15
<b>Issue Date:</b>	02/22/19	<b>Supersedes Date:</b>	07/25/18

**Reason for Reissue**

Conversion to GHS format SDS.

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M.

**3M USA SDSs are available at [www.3M.com](http://www.3M.com)**



## Safety Data Sheet

Copyright, 2018, 3M Company.

All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

<b>Document Group:</b>	32-4327-6	<b>Version Number:</b>	2.05
<b>Issue Date:</b>	12/05/18	<b>Supersedes Date:</b>	08/13/18

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Panel Bonding Adhesive Part B PNs 08115, 38315, 58115

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

##### Recommended use

Automotive, Structural Panel Bonding Adhesive

#### 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.

Carcinogenicity: Category 2.

#### 2.2. Label elements

##### Signal word

Warning

##### Symbols

Exclamation mark | Health Hazard |

##### Pictograms

**Hazard Statements**

Causes serious eye irritation.  
 Causes skin irritation.  
 May cause an allergic skin reaction.  
 Suspected of causing cancer.

**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.  
 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.  
 IF exposed or concerned: Get medical advice/attention.

**Storage:**

Store locked up.

**Disposal:**

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

23% of the mixture consists of ingredients of unknown acute inhalation toxicity.

### SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	25068-38-6	30 - 60 Trade Secret *
Oxide Glass Chemicals	65997-17-3	10 - 30 Trade Secret *
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	7 - 13 Trade Secret *
Fused Silica	60676-86-0	7 - 13 Trade Secret *
Acrylate Polymer	Trade Secret*	1 - 11 Trade Secret *
Silica	7631-86-9	1 - 5 Trade Secret *
3-(Trimethoxysilyl)propyl Glycidyl Ether	2530-83-8	0.5 - 1.5 Trade Secret *
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7	0.5 - 1.5 Trade Secret *
Carbon Black	1333-86-4	< 0.5 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.

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

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

## 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. 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 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 in accordance with applicable local/regional/national/international regulations.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. 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.) Use personal protective equipment (gloves, respirators, etc.) as required.

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

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 mg/m3	A3: Confirmed animal carcin.
Carbon Black	1333-86-4	OSHA	TWA:3.5 mg/m3	
SILICA, AMORPHOUS	60676-86-0	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
CERAMIC FIBERS	65997-17-3	ACGIH	TWA(as fiber):0.2 fiber/cc	A2: Suspected human carcin.
SPECIAL PURPOSE GLASS FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A3: Confirmed animal carcin.
SILICA, AMORPHOUS	67762-90-7	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
SILICA, AMORPHOUS	7631-86-9	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:

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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

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

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>Odor, Color, Grade:</b>	Black, Viscous Liquid.
<b>Odor threshold</b>	<i>No Data Available</i>
<b>pH</b>	<i>No Data Available</i>
<b>Melting point</b>	<i>No Data Available</i>
<b>Boiling Point</b>	>= 95 °F
<b>Flash Point</b>	>= 220 °F [Test Method: Closed Cup]
<b>Evaporation rate</b>	<= 1 Units not avail. or not appl. [Ref Std: BUOAC=1]
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Flammable Limits(LEL)</b>	<i>No Data Available</i>
<b>Flammable Limits(UEL)</b>	<i>No Data Available</i>
<b>Vapor Pressure</b>	<= 27 psia
<b>Vapor Pressure</b>	<i>No Data Available</i>
<b>Vapor Density</b>	<i>No Data Available</i>
<b>Density</b>	10.014 lb/gal
<b>Specific Gravity</b>	1.2 [Ref Std: 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>No Data Available</i>
<b>Decomposition temperature</b>	<i>No Data Available</i>
<b>Viscosity</b>	100,000 centipoise - 225,000 centipoise [Test Method: Brookfield]
<b>Hazardous Air Pollutants</b>	0.00162 lb HAPS/gal

<b>Molecular weight</b>	<i>No Data Available</i>
<b>Volatile Organic Compounds</b>	15 g/l [ <i>Test Method</i> :calculated SCAQMD rule 443.1]
<b>Volatile Organic Compounds</b>	1.6 % weight [ <i>Test Method</i> :calculated per CARB title 2]
<b>Percent volatile</b>	1.6 % weight
<b>VOC Less H2O &amp; Exempt Solvents</b>	15 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

Sparks and/or flames

### 10.5. Incompatible materials

Amines  
Strong acids  
Strong bases  
Strong oxidizing agents

### 10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Aldehydes	Not Specified
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified
Hydrogen Chloride	Not Specified

## 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.

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:****Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
Generic: CERAMIC FIBERS	65997-17-3	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Generic: GLASS FILAMENTS	65997-17-3	Anticipated human carcinogen	National Toxicology Program Carcinogens
Carbon Black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

**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-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
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Rat	LD50 > 1,600 mg/kg
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Rat	LD50 > 1,000 mg/kg
Oxide Glass Chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Oxide Glass Chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Dermal	Rabbit	LD50 > 2,000 mg/kg
Fused Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.19 mg/l
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Ingestion	Rat	LD50 1,098 mg/kg
Fused Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Fused Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Acrylate Polymer	Dermal	Rabbit	LD50 > 5,000 mg/kg
Acrylate Polymer	Ingestion	Rat	LD50 > 5,000 mg/kg
Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
3-(Trimethoxysilyl)propyl Glycidyl Ether	Dermal	Rabbit	LD50 4,000 mg/kg
3-(Trimethoxysilyl)propyl Glycidyl Ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.3 mg/l
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Rat	LD50 7,010 mg/kg
Dimethyl Siloxane, Reaction Product With Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg

Dimethyl Siloxane, Reaction Product With Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Rat	LD50 > 5,110 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
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Rabbit	Mild irritant
Oxide Glass Chemicals	Professional judgement	No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	In vitro data	Irritant
Fused Silica	Rabbit	No significant irritation
Acrylate Polymer	Professional judgement	Minimal irritation
Silica	Rabbit	No significant irritation
3-(Trimethoxysilyl)propyl Glycidyl Ether	Rabbit	Mild irritant
Dimethyl Siloxane, Reaction Product With Silica	Rabbit	No significant irritation
Carbon Black	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Rabbit	Moderate irritant
Oxide Glass Chemicals	Professional judgement	No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	In vitro data	No significant irritation
Fused Silica	Rabbit	No significant irritation
Acrylate Polymer	Professional judgement	Mild irritant
Silica	Rabbit	No significant irritation
3-(Trimethoxysilyl)propyl Glycidyl Ether	Rabbit	Corrosive
Dimethyl Siloxane, Reaction Product With Silica	Rabbit	No significant irritation
Carbon Black	Rabbit	No significant irritation

**Skin Sensitization**

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Human and animal	Sensitizing
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Mouse	Sensitizing
Fused Silica	Human and animal	Not classified
Silica	Human and animal	Not classified
3-(Trimethoxysilyl)propyl Glycidyl Ether	Guinea pig	Not classified
Dimethyl Siloxane, Reaction Product With Silica	Human and	Not classified

	animal	
--	--------	--

**Respiratory Sensitization**

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Human	Not classified

**Germ Cell Mutagenicity**

Name	Route	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	In vivo	Not mutagenic
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Oxide Glass Chemicals	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	In vivo	Not mutagenic
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Fused Silica	In Vitro	Not mutagenic
Silica	In Vitro	Not mutagenic
3-(Trimethoxysilyl)propyl Glycidyl Ether	In vivo	Not mutagenic
3-(Trimethoxysilyl)propyl Glycidyl Ether	In Vitro	Some positive data exist, but the data are not sufficient for classification
Dimethyl Siloxane, Reaction Product With Silica	In Vitro	Not mutagenic
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
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Oxide Glass Chemicals	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Fused Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
3-(Trimethoxysilyl)propyl Glycidyl Ether	Dermal	Mouse	Not carcinogenic
Dimethyl Siloxane, Reaction Product With Silica	Not Specified	Mouse	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
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	prematings into lactation
1,4-Bis[(2,3-	Ingestion	Not classified for male reproduction	Rat	NOAEL 300	33 days

				mg/kg/day	
Epoxypropoxy)Methyl]Cyclohexane					
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Ingestion	Not classified for development	Rat	NOAEL 300 mg/kg/day	prematuring into lactation
Fused Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fused Silica	Inhalation	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fused Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Not classified for development	Rat	NOAEL 3,000 mg/kg/day	during organogenesis
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

#### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	auditory system   heart   endocrine system   hematopoietic system   liver   eyes   kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Oxide Glass Chemicals	Inhalation	respiratory system	Not classified	Human	NOAEL not available	occupational exposure
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Ingestion	endocrine system   gastrointestinal tract   liver   heart   hematopoietic system   immune system   nervous system   kidney	Not classified	Rat	NOAEL 300 mg/kg/day	33 days



		and/or bladder				
Fused Silica	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Silica	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	heart   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   nervous system   kidney and/or bladder   respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Dimethyl Siloxane, Reaction Product With Silica	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Carbon Black	Inhalation	pneumoconiosis	Not classified	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 waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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 <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

## SECTION 15: Regulatory information

**15.1. US Federal Regulations**

Contact 3M for more information.

**EPCRA 311/312 Hazard Classifications:****Physical Hazards**

Not applicable

**Health Hazards**

Carcinogenicity

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

Skin Corrosion or Irritation

**15.2. State Regulations**

Contact 3M for more information.

**California Proposition 65****Ingredient****C.A.S. No.****Listing**

SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)

None

Carcinogen

METHANOL

67-56-1

Developmental Toxin

CERAMIC FIBERS (AIRBORNE PARTICLES OF RESPIRABLE SIZE)

None

Carcinogen

PHENYL GLYCIDYL ETHER

122-60-1

Carcinogen

CARBON BLACK (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE [ $\leq 10$  MICROMETERS])

1333-86-4

Carcinogen

**15.3. Chemical Inventories**

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

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:** 0 **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.

**Document Group:**

32-4327-6

**Version Number:**

2.05

**Issue Date:** 12/05/18**Supersedes Date:** 08/13/18

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M.

**3M USA SDSs are available at [www.3M.com](http://www.3M.com)**