



Safety Data Sheet

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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

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
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

Serious Eye Damage/Irritation: Category 2A.

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.
 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.
 Wash contaminated clothing 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.

2.3. Hazards not otherwise classified

None.

34% 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 *
Fused Silica	60676-86-0	7 - 13 Trade Secret *
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	7 - 13 Trade Secret *
Acrylate Polymer	Trade Secret*	5 - 10 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 *

Epichlorohydrin

106-89-8

< 0.02 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

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. 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.

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
Epichlorohydrin	106-89-8	ACGIH	TWA:0.5 ppm	A3: Confirmed animal carcin., Skin Notation
Epichlorohydrin	106-89-8	OSHA	TWA:19 mg/m3(5 ppm)	Skin Notation
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	A3: Confirmed animal carcin.
Carbon Black	1333-86-4	CMRG	TWA:0.5 mg/m3	
Carbon Black	1333-86-4	OSHA	TWA:3.5 mg/m3	
3-(Trimethoxysilyl)propyl Glycidyl Ether	2530-83-8	CMRG	TWA:5 ppm	
SILICA, AMORPHOUS	60676-86-0	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
Oxide Glass Chemicals	65997-17-3	Manufacturer determined	TWA(as dust):10 mg/m3	
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7	CMRG	CEIL:5 mg/m3	
SILICA, AMORPHOUS	67762-90-7	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
Silica	7631-86-9	CMRG	TWA(as respirable dust):3 mg/m3	
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 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
Odor, Color, Grade:	Black, Viscous Liquid.
Odor threshold	<i>No Data Available</i>
pH	<i>No Data Available</i>
Melting point	<i>No Data Available</i>
Boiling Point	>= 95 °F
Flash Point	>= 220 °F [<i>Test Method: Closed Cup</i>]
Evaporation rate	<= 1 Units not avail. or not appl. [<i>Ref Std: BUOAC=1</i>]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Vapor Pressure	<= 27 psia
Vapor Pressure	<i>No Data Available</i>
Vapor Density	<i>No Data Available</i>
Density	10.014 lb/gal
Specific Gravity	1.2 [<i>Ref Std: WATER=1</i>]

Solubility in Water	Negligible
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	100,000 centipoise - 225,000 centipoise [Test Method: Brookfield]
Hazardous Air Pollutants	0.00162 lb HAPS/gal
Volatile Organic Compounds	15 g/l [Test Method: calculated SCAQMD rule 443.1]
Volatile Organic Compounds	1.6 % weight [Test Method: calculated per CARB title 2]
Percent volatile	1.6 % weight
VOC Less H2O & Exempt Solvents	15 g/l [Test Method: calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

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

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:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. 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: 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
Epichlorohydrin	106-89-8	Grp. 2A: Probable human carc.	International Agency for Research on Cancer
Epichlorohydrin	106-89-8	Anticipated human carcinogen	National Toxicology Program Carcinogens

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 2,500 mg/kg
Fused Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Ingestion	Rat	LD50 2,450 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	Rat	LC50 > 5.3 mg/l

	(4 hours)		
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
Epichlorohydrin	Dermal	Rabbit	LD50 755 mg/kg
Epichlorohydrin	Inhalation-Vapor (4 hours)	Rat	LC50 1.7 mg/l
Epichlorohydrin	Ingestion	Rat	LD50 260 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Rabbit	Mild irritant
Oxide Glass Chemicals	Professional judgment	No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Professional judgment	Mild irritant
Fused Silica	Rabbit	No significant irritation
Acrylate Polymer	Professional judgment	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
Epichlorohydrin	Human and animal	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Rabbit	Moderate irritant
Oxide Glass Chemicals	Professional judgment	No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Professional judgment	Mild irritant
Fused Silica	Rabbit	No significant irritation
Acrylate Polymer	Professional judgment	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
Epichlorohydrin	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Human and animal	Sensitizing
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	similar compounds	Sensitizing
Fused Silica	Human and animal	Not sensitizing
Silica	Human and animal	Not sensitizing
3-(Trimethoxysilyl)propyl Glycidyl Ether	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Dimethyl Siloxane, Reaction Product With Silica	Human and animal	Not sensitizing
Epichlorohydrin	Human and animal	Sensitizing

Respiratory Sensitization

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Human	Some positive data exist, but the data are not sufficient for classification

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
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
Epichlorohydrin	In Vitro	Some positive data exist, but the data are not sufficient for classification
Epichlorohydrin	In vivo	Mutagenic

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
Epichlorohydrin	Dermal	Mouse	Not carcinogenic
Epichlorohydrin	Ingestion	Rat	Carcinogenic
Epichlorohydrin	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 toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation
Fused Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fused Silica	Inhalation	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fused Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 3,000 mg/kg/day	during organogenesis
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 organogenesis
Epichlorohydrin	Inhalation	Not toxic to female reproduction	Rat	NOAEL 0.2 mg/l	10 weeks
Epichlorohydrin	Inhalation	Not toxic to development	Multiple animal species	NOAEL 0.09 mg/l	during organogenesis
Epichlorohydrin	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 160 mg/kg/day	during gestation
Epichlorohydrin	Ingestion	Toxic to male reproduction	Rat	LOAEL 6.25 mg/kg/day	23 days
Epichlorohydrin	Inhalation	Toxic to male reproduction	Rat	NOAEL 0.02 mg/l	10 weeks

Target Organ(s)

Specific Target Organ Toxicity - single exposure

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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	nervous system	All data are negative	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	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
Oxide Glass Chemicals	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure
Fused Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Silica	Inhalation	respiratory system silicosis	All data are negative	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	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
Dimethyl Siloxane, Reaction Product With Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Carbon Black	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Epichlorohydrin	Inhalation	liver	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.21 mg/l	19 days
Epichlorohydrin	Inhalation	kidney and/or bladder	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 0.04 mg/l	136 weeks
Epichlorohydrin	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.377 mg/l	4 weeks
Epichlorohydrin	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.211 mg/l	4 weeks
Epichlorohydrin	Inhalation	heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.02 mg/l	98 days
Epichlorohydrin	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.002 mg/l	98 days
Epichlorohydrin	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.02 mg/l	13 weeks

Epichlorohydrin	Inhalation	blood	All data are negative	Rat	NOAEL 0.189 mg/l	90 days
Epichlorohydrin	Ingestion	heart blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 80 mg/kg/day	12 weeks
Epichlorohydrin	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 25 mg/kg/day	90 days

Aspiration Hazard

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

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information**Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations**13.1. Disposal methods**

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

Dispose of 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. 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.

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.

California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
Epichlorohydrin	106-89-8	Male reproductive toxin
Epichlorohydrin	106-89-8	Carcinogen
Carbon Black	1333-86-4	Carcinogen

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

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

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

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:	1.01
Issue Date:	09/23/15	Supersedes Date:	11/24/14

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Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PM-8576 (Accelerator for 3M Panel Bonding Adhesive, P/N 08115) (Intermediate)
MANUFACTURER: 3M
DIVISION: Automotive Aftermarket
ADDRESS: 3M Center, St. Paul, MN 55144-1000

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

Issue Date: 09/19/12
Supercedes Date: 09/10/12
Document Group: 07-6447-2

Product Use:

Intended Use: Automotive
 Specific Use: Panel Bonding Adhesive - Accelerator

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
POLYMERIC DIAMIDE	68911-25-1	15 - 40
FUSED SILICA	60676-86-0	10 - 30
BUTADIENE ACRYLONITRILE COPOLYMER	68683-29-4	9 - 30
BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL	4246-51-9	7 - 13
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	90-72-2	5 - 10
INORGANIC SALT - NJTSRN 04499600-6317	Trade Secret	1 - 5
AMINE EPOXY CURING AGENT	288-32-4	1 - 5
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	67762-90-7	1 - 5
BIS[(DIMETHYLAMINO)METHYL]PHENOL	71074-89-0	0.1 - 1.5
N-AMINOETHYLPIPERAZINE	140-31-8	0.1 - 1.5
TOLUENE	108-88-3	< 0.5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Viscous

Odor, Color, Grade: Tan Liquid Minor Amine odor.

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: May cause chemical eye burns. May cause chemical skin burns. May cause allergic skin reaction. May cause chemical gastrointestinal burns. May cause target organ effects. Contains a chemical or

chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

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.

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.

Inhalation:

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

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal 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 be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

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

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

Contains a chemical or chemicals which can cause cancer.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water for at least 15 minutes. Get immediate medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature

No Data Available

Flash Point

≥ 110 °C [*Test Method: Closed Cup*]

Flammable Limits(LEL)

No Data Available

Flammable Limits(UEL)

No Data Available

OSHA Flammability Classification:

Class IIIB Combustible Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

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

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode.

6.2. Environmental precautions

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

Clean-up methods

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

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Contents may be under pressure, open carefully. Avoid breathing of vapors, mists or spray. Avoid skin contact. Avoid eye contact with vapors, mists, or spray. Avoid contact with oxidizing agents.

7.2 STORAGE

Store away from acids. Keep container in well-ventilated area. Store away from areas where product may come into contact with food or pharmaceuticals. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Provide appropriate local exhaust ventilation on open containers. Use in an enclosed process area is recommended. Do not use in a confined area or areas with little or no air movement. For additional health and precautionary information, including air monitoring methodology, contact 3M. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.
 The following eye protection(s) are recommended: Safety Glasses with side shields
 Indirect Vented Goggles

8.2.2 Skin Protection

Avoid skin contact.
 Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
 Gloves made from the following material(s) are recommended: Neoprene
 Polymer laminate

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Avoid breathing of fumes.
 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 air-purifying respirator suitable for organic vapors/acid gases and particulates
 For questions about suitability for a specific application, consult with your respirator manufacturer.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	CMRG	CEIL	5 mg/m3	
SILICA, AMORPHOUS	OSHA	TWA concentration	0.8 mg/m3	
SILICA, AMORPHOUS	OSHA	TWA	20 millions of particles/cu. ft.	
TOLUENE	ACGIH	TWA	20 ppm	
TOLUENE	CMRG	STEL	75 ppm	Skin Notation*
TOLUENE	OSHA	TWA	200 ppm	
TOLUENE	OSHA	CEIL	300 ppm	
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	CMRG	TWA	5 ppm	

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

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists
 CMRG: Chemical Manufacturer Recommended Guideline
 OSHA: Occupational Safety and Health Administration
 AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Viscous
Odor, Color, Grade:	Tan Liquid Minor Amine odor.
General Physical Form:	Liquid
Autoignition temperature	<i>No Data Available</i>
Flash Point	>=110 °C [<i>Test Method:</i> Closed Cup]
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Boiling Point	> 110 °C
Density	9.5 lb/gal
Vapor Density	<i>No Data Available</i>
Vapor Pressure	<=200 mmHg [@ 20 °C]
Specific Gravity	1.2 [<i>Ref Std:</i> WATER=1]
pH	<i>No Data Available</i>
Melting point	<i>No Data Available</i>
Solubility In Water	<i>No Data Available</i>
Evaporation rate	<=1 [<i>Ref Std:</i> BUOAC=1]
Hazardous Air Pollutants	0.05 lb HAPS/gal [<i>Test Method:</i> Calculated]
Volatile Organic Compounds	0.5 % weight [<i>Test Method:</i> calculated per CARB title 2]
Volatile Organic Compounds	5 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Kow - Oct/Water partition coef	<i>No Data Available</i>
Percent volatile	0.5 %
Percent volatile	Negligible
VOC Less H2O & Exempt Solvents	5 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Viscosity	100000 - 225000 centipoise [<i>Test Method:</i> Brookfield]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

Not determined

10.2 Materials to avoid

Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of according to the policies/procedures contained in the 3M Waste Management Program Manual and the instructions provided on the Waste Stream Profile Reference Sheet. Consult your Waste Management (RCRA) Coordinator with any questions. Consult 3M Waste Disposal Manual for proper procedures for packaging, labelling, marking, and shipping waste.

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

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

LB-K100-1275-3, 41-3700-8576-7

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

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

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

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
INORGANIC SALT - NJTSRN 04499600-6317 (NITRATE COMPOUNDS (WATER DISSOCIABLE; REPORTABLE ONLY WHEN IN AQUEOUS SOLUTION))	Trade Secret	1 - 5

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
TOLUENE	108-88-3	*Female reproductive toxin
TOLUENE	108-88-3	*Developmental Toxin

* WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

WHMIS: Hazardous

US LABEL INFORMATION

DANGER! Causes burns to eyes. Causes burns to the gastrointestinal tract. Causes burns to skin. Irritating to respiratory system. May cause sensitization by skin contact. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

PRECAUTIONS: See MSDS for suggested first aid and precautions.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 3 Flammability: 1 Reactivity: 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.

Revision Changes:

Section 9: Property description for optional properties was modified.

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Document Group:	31-5886-2	Version Number:	2.00
Issue Date:	09/03/14	Supersedes Date:	02/06/13

SECTION 1: Identification

1.1. Product identifier

PM-81333 with Kaneka MX-257 (Base for 3M Panel Bonding Adhesive, P/N 08115)

Product Identification Numbers

41-3588-1333-9

1.2. Recommended use and restrictions on use

Recommended use

Intermediate

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
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

Serious Eye Damage/Irritation: Category 2A.

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.
 May cause an allergic skin reaction.
 Suspected of causing cancer.

Precautionary Statements**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 eye/face protection.
 Wear protective gloves.
 Wash thoroughly after handling.
 Contaminated work clothing must not be allowed out of the workplace.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing 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.

2.3. Hazards not otherwise classified

None.

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 *
Glass Beads	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*	5 - 10 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	<= 0.47 Trade Secret *
Epichlorohydrin	106-89-8	< 0.012 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

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

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

For industrial or professional use only. 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

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Epichlorohydrin	106-89-8	ACGIH	TWA:0.5 ppm	A3: Confirmed animal carcin., Skin Notation
Epichlorohydrin	106-89-8	OSHA	TWA:19 mg/m3(5 ppm)	Skin Notation
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	A3: Confirmed animal carcin.
Carbon Black	1333-86-4	CMRG	TWA:0.5 mg/m3	
Carbon Black	1333-86-4	OSHA	TWA:3.5 mg/m3	
3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	CMRG	TWA:5 ppm	
SILICA, AMORPHOUS	60676-86-0	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
Glass Beads	65997-17-3	Manufacturer determined	TWA(as dust):10 mg/m3	
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7	CMRG	CEIL:5 mg/m3	
SILICA, AMORPHOUS	67762-90-7	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
Silica	7631-86-9	CMRG	TWA(as respirable dust):3 mg/m3	
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, acid gases 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:	Black, Viscous Liquid.
Odor threshold	<i>No Data Available</i>
pH	<i>No Data Available</i>
Melting point	<i>No Data Available</i>
Boiling Point	>=95 °F
Flash Point	>=220 °F [<i>Test Method:</i> Closed Cup] [<i>Details:</i> MITS data]
Evaporation rate	<=1 [<i>Ref Std:</i> BUOAC=1]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Vapor Pressure	<=27 psia [@ 131.0000000000 °F] [<i>Details:</i> MITS data]
Vapor Density	<i>No Data Available</i>
Density	8.2 lb/gal
Specific Gravity	Approximately 1.2 Units not avail. or not appl. [<i>Ref Std:</i> WATER=1]
Solubility In Water	<i>No Data Available</i>
Solubility in Water	Negligible

Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	100,000 - 225,000 centipoise [<i>Test Method</i> : Brookfield]
Volatile Organic Compounds	125.04 g/l [<i>Test Method</i> : calculated SCAQMD rule 443.1] [<i>Details</i> : Excluding exempt compounds (1.04 lb/gal)]
Percent volatile	10.42 %
Percent volatile	Negligible
VOC Less H2O & Exempt Solvents	125.04 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

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:

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

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient	C.A.S. No.	Class Description	Regulation
Generic: GLASS FILAMENTS	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
Epichlorohydrin	106-89-8	Grp. 2A: Probable human carc.	International Agency for Research on Cancer
Epichlorohydrin	106-89-8	Anticipated human carcinogen	National Toxicology Program Carcinogens

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
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Rat	LD50 > 1,600 mg/kg
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Rat	LD50 > 1,000 mg/kg
Glass Beads	Dermal		LD50 estimated to be > 5,000 mg/kg
Glass Beads	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Dermal	Rabbit	LD50 2,500 mg/kg
Fused Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Ingestion	Rat	LD50 2,450 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

Epichlorohydrin	Dermal	Rabbit	LD50 755 mg/kg
Epichlorohydrin	Inhalation-Vapor (4 hours)	Rat	LC50 1.7 mg/l
Epichlorohydrin	Ingestion	Rat	LD50 260 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Rabbit	Mild irritant
Glass Beads		No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane		Mild irritant
Fused Silica	Rabbit	No significant irritation
Acrylate Polymer		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
Epichlorohydrin	Human and animal	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Rabbit	Moderate irritant
Glass Beads		No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane		Mild irritant
Fused Silica	Rabbit	No significant irritation
Acrylate Polymer		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
Epichlorohydrin	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Human and animal	Sensitizing
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	similar compounds	Sensitizing
Fused Silica	Human and animal	Not sensitizing
Silica	Human and animal	Not sensitizing
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Dimethyl Siloxane, Reaction Product With Silica	Human and animal	Not sensitizing
Epichlorohydrin	Human and animal	Sensitizing

Respiratory Sensitization

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Human	Some positive data exist, but the data are not sufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
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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
Glass Beads	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
Epichlorohydrin	In Vitro	Some positive data exist, but the data are not sufficient for classification
Epichlorohydrin	In vivo	Mutagenic

Carcinogenicity

Name	Route	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Glass Beads	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
Epichlorohydrin	Dermal	Mouse	Not carcinogenic
Epichlorohydrin	Ingestion	Rat	Carcinogenic
Epichlorohydrin	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 toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation
Fused Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fused Silica	Inhalation	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fused Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350	during organogenesis

				mg/kg/day	s
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 3,000 mg/kg/day	during organogenesis
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 organogenesis
Epichlorohydrin	Inhalation	Not toxic to female reproduction	Rat	NOAEL 0.2 mg/l	10 weeks
Epichlorohydrin	Inhalation	Not toxic to development	Multiple animal species	NOAEL 0.09 mg/l	during organogenesis
Epichlorohydrin	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 160 mg/kg/day	during gestation
Epichlorohydrin	Ingestion	Toxic to male reproduction	Rat	LOAEL 6.25 mg/kg/day	23 days
Epichlorohydrin	Inhalation	Toxic to male reproduction	Rat	NOAEL 0.02 mg/l	10 weeks

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		NOAEL Not available	
Epichlorohydrin	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL not available	occupational exposure
Epichlorohydrin	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	nervous system	All data are negative	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	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
Glass Beads	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure
Fused Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Silica	Inhalation	respiratory system	All data are negative	Human	NOAEL Not	occupational

		silicosis			available	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	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
Dimethyl Siloxane, Reaction Product With Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Carbon Black	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Epichlorohydrin	Inhalation	liver	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.21 mg/l	19 days
Epichlorohydrin	Inhalation	kidney and/or bladder	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 0.04 mg/l	136 weeks
Epichlorohydrin	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.377 mg/l	4 weeks
Epichlorohydrin	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.211 mg/l	4 weeks
Epichlorohydrin	Inhalation	heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.02 mg/l	98 days
Epichlorohydrin	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL .002 mg/l	98 days
Epichlorohydrin	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.02 mg/l	13 weeks
Epichlorohydrin	Inhalation	blood	All data are negative	Rat	NOAEL 0.189 mg/l	90 days
Epichlorohydrin	Ingestion	heart blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 80 mg/kg/day	12 weeks
Epichlorohydrin	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 25 mg/kg/day	90 days

Aspiration Hazard

Name	Value
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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 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.

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.

California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
Epichlorohydrin	106-89-8	Male reproductive toxin
Epichlorohydrin	106-89-8	Carcinogen
Carbon Black	1333-86-4	Carcinogen

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

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

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

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.

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