



Material Safety Data Sheet

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PRODUCT NAME: 3M™ Panel Bonding Adhesive, P.N. 08115 (FG)
MANUFACTURER: 3M
DIVISION: Automotive Aftermarket
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

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

Issue Date: 01/23/14
Supersedes Date: 02/07/13
Document Group: 07-1664-7

ID Number(s):

41-0003-6745-2, 41-0003-8009-1, 60-9800-3093-0, 60-9800-3246-4, 60-9800-4450-1, 60-9801-0532-8

This product is a kit or a multipart product which consists of multiple, independently packaged components. An SDS for each of these components is included. Please do not separate the component SDSs from this cover page. The document numbers of the SDSs for components of this product are:

09-3599-9, 06-6873-1

Revision Changes:

Section 16: Disclaimer (first paragraph) information was modified.
Section 16: Disclaimer (second paragraph) information was modified.
Kit: Component heading paragraph information was modified.
Section 16: Web address information was modified.
Section 1: Address information was modified.
Copyright information was modified.
Telephone header information was modified.
Company Telephone information was modified.

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Document Group:	09-3599-9	Version Number:	14.05
Issue Date:	01/21/14	Supersedes Date:	02/04/13

SECTION 1: Identification

1.1. Product identifier

3M™ Panel Bonding (90 Minutes) Adhesive PN 08115 - Accelerator

LB-K100-0010-6

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Use with Part B, MSDS 06-6873-1

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 1.
Skin Corrosion/Irritation: Category 1B.
Skin Sensitizer: Category 1B.
Reproductive Toxicity: Category 1B.
Specific Target Organ Toxicity (single exposure): Category 2.

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 damage fertility or the unborn child.

May cause 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.
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.
IF ON SKIN: Wash with plenty of soap and water.
Immediately call a POISON CENTER or doctor/physician.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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.

Notes to Physician

Not applicable

2.3. Hazards not otherwise classified

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

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	7 - 13 Trade Secret *
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	90-72-2	5 - 10 Trade Secret *
Dimethyl Siloxane, Reaction Product with Silica	67762-90-7	1 - 5 Trade Secret *
Inorganic Salt - NJTSRN 04499600-6317	Trade Secret*	1 - 5 Trade Secret *
Amine Epoxy Curing Agent	288-32-4	1 - 5 Trade Secret *
N-Aminoethylpiperazine	140-31-8	0.1 - 1.5 Trade Secret *
Bis[(Dimethylamino)Methyl]Phenol	71074-89-0	0.1 - 1.5 Trade Secret *
Toluene	108-88-3	< 0.5 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

*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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

SubstanceCarbon monoxide
Carbon dioxide**Condition**During Combustion
During Combustion**5.3. Special protective actions for fire-fighters**

No unusual fire or explosion hazards are anticipated.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. 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**

Do not use in a confined area with minimal air exchange. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) 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 oxidizing agents.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits**

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Toluene	108-88-3	Amer Conf of Gov. Indust. Hyg.	TWA:20 ppm	
Toluene	108-88-3	Chemical Manufacturer Rec Guid	STEL:75 ppm	Skin Notation
Toluene	108-88-3	US Dept of	TWA:200 ppm;CEIL:300 ppm	

		Labor - OSHA		
SILICA, AMORPHOUS	60676-86-0	US Dept of Labor - OSHA	TWA concentration:0.8 mg/m ³ ;TWA:20 millions of particles/cu. ft.	
Dimethyl Siloxane, Reaction Product with Silica	67762-90-7	Chemical Manufacturer Rec Guid	CEIL:5 mg/m ³	
SILICA, AMORPHOUS	67762-90-7	US Dept of Labor - OSHA	TWA concentration:0.8 mg/m ³ ;TWA:20 millions of particles/cu. ft.	
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	90-72-2	Chemical Manufacturer Rec Guid	TWA:5 ppm	

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

American Indust. Hygiene Assoc : American Industrial Hygiene Association

Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

Full Face Shield

Indirect Vented Goggles

Skin/hand protection

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

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

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
Specific Physical Form:	Viscous liquid
Odor, Color, Grade:	Tan liquid, slight amine odor.
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Boiling Point	>=110 °C
Flash Point	110 °C [Test Method: Closed Cup]
Evaporation rate	<=1 [Ref Std: 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	<=200 mmHg [@ 20 °C]
Vapor Density	<i>No Data Available</i>
Density	1.2 g/ml
Specific Gravity	1.2 [Ref Std: WATER=1]
Solubility In Water	<i>No Data Available</i>
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 [Test Method: Brookfield]
Hazardous Air Pollutants	0.33 % weight [Test Method: Calculated]
Volatile Organic Compounds	4 g/l [Test Method: calculated SCAQMD rule 443.1]
Volatile Organic Compounds	0.4 % weight [Test Method: calculated per CARB title 2]
Percent volatile	0.4 % weight
VOC Less H2O & Exempt Solvents	4 g/l [Test Method: calculated SCAQMD rule 443.1]

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:

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

May cause target organ effects after inhalation.

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 target organ effects after ingestion.

Target Organ Effects:

Single exposure may cause:

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.

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 2,032.3 mg/kg

Overall product	Ingestion		No data available; calculated ATE 3,667.2 mg/kg
Polymeric Diamide			Data not available or insufficient for classification
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
Inorganic Salt - NJTSRN 04499600-6317	Dermal	Rat	LD50 estimated to be > 5,000 mg/kg
Inorganic Salt - NJTSRN 04499600-6317	Ingestion	Rat	LD50 9,285 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 2,600 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
Butadiene Acrylonitrile Copolymer		Data not available or insufficient for classification
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
Amine Epoxy Curing Agent		Data not available or insufficient for classification
Inorganic Salt - NJTSRN 04499600-6317		Data not available or insufficient for classification
Bis[(Dimethylamino)Methyl]Phenol		Data not available or insufficient for classification
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
Butadiene Acrylonitrile Copolymer		Data not available or insufficient for classification
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
Amine Epoxy Curing Agent		Data not available or insufficient for classification
Inorganic Salt - NJTSRN 04499600-6317		Data not available or insufficient for classification
Bis[(Dimethylamino)Methyl]Phenol		Data not available or insufficient for classification
N-Aminoethylpiperazine	Rabbit	Corrosive

Toluene	Rabbit	Moderate irritant
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Skin Sensitization

Name	Species	Value
Overall product	Guinea pig	Sensitizing
Polymeric Diamide	Guinea pig	Sensitizing
Fused Silica	Human and animal	Not sensitizing
Butadiene Acrylonitrile Copolymer	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Bis(3-Aminopropyl) Ether of Diethylene Glycol		Data not available or insufficient for classification
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	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
Amine Epoxy Curing Agent		Data not available or insufficient for classification
Inorganic Salt - NJTSRN 04499600-6317		Data not available or insufficient for classification
Bis[(Dimethylamino)Methyl]Phenol		Data not available or insufficient for classification
N-Aminoethylpiperazine	Guinea pig	Sensitizing
Toluene	Guinea pig	Not sensitizing

Respiratory Sensitization

Name	Species	Value
Polymeric Diamide		Data not available or insufficient for classification
Fused Silica		Data not available or insufficient for classification
Butadiene Acrylonitrile Copolymer		Data not available or insufficient for classification
Bis(3-Aminopropyl) Ether of Diethylene Glycol		Data not available or insufficient for classification
Tris(2,4,6-Dimethylaminomonomethyl)Phenol		Data not available or insufficient for classification
Dimethyl Siloxane, Reaction Product with Silica		Data not available or insufficient for classification
Amine Epoxy Curing Agent		Data not available or insufficient for classification
Inorganic Salt - NJTSRN 04499600-6317		Data not available or insufficient for classification
Bis[(Dimethylamino)Methyl]Phenol		Data not available or insufficient for classification
N-Aminoethylpiperazine		Data not available or insufficient for classification
Toluene		Data not available or insufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
Polymeric Diamide		Data not available or insufficient for classification
Fused Silica	In Vitro	Not mutagenic
Butadiene Acrylonitrile Copolymer		Data not available or insufficient for classification
Bis(3-Aminopropyl) Ether of Diethylene Glycol		Data not available or insufficient for classification
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	In Vitro	Not mutagenic
Dimethyl Siloxane, Reaction Product with Silica	In Vitro	Not mutagenic
Amine Epoxy Curing Agent		Data not available or insufficient for classification
Inorganic Salt - NJTSRN 04499600-6317		Data not available or insufficient for classification
Bis[(Dimethylamino)Methyl]Phenol		Data not available or insufficient for classification
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
Polymeric Diamide			Data not available or insufficient for classification
Fused Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Butadiene Acrylonitrile Copolymer			Data not available or insufficient for classification
Bis(3-Aminopropyl) Ether of Diethylene Glycol			Data not available or insufficient for classification

Tris(2,4,6-Dimethylaminomonomethyl)Phenol			Data not available or insufficient for classification
Dimethyl Siloxane, Reaction Product with Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Amine Epoxy Curing Agent			Data not available or insufficient for classification
Inorganic Salt - NJTSRN 04499600-6317			Data not available or insufficient for classification
Bis[(Dimethylamino)Methyl]Phenol			Data not available or insufficient for classification
N-Aminoethylpiperazine			Data not available or insufficient 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
Polymeric Diamide		Data not available or insufficient for classification			
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
Butadiene Acrylonitrile Copolymer		Data not available or insufficient for classification			
Bis(3-Aminopropyl) Ether of Diethylene Glycol		Data not available or insufficient for classification			
Tris(2,4,6-Dimethylaminomonomethyl)Phenol		Data not available or insufficient for classification			
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
Amine Epoxy Curing Agent		Data not available or insufficient for classification			
Inorganic Salt - NJTSRN 04499600-6317		Data not available or insufficient for classification			
Bis[(Dimethylamino)Methyl]Phenol		Data not available or insufficient for classification			
N-Aminoethylpiperazine	Ingestion	Not toxic to female reproduction	Rat	NOAEL 598 mg/kg/day	prematuring & during gestation
N-Aminoethylpiperazine	Ingestion	Not toxic to male reproduction	Rat	NOAEL 409 mg/kg/day	32 days
N-Aminoethylpiperazine	Ingestion	Not toxic to development	Rat	NOAEL 899 mg/kg/day	prematuring & during gestation
Toluene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	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
Polymeric Diamide			Data not available or insufficient for classification			
Fused Silica			Data not available or insufficient for classification			
Butadiene Acrylonitrile Copolymer			Data not available or insufficient for classification			
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	
Dimethyl Siloxane, Reaction Product with Silica			Data not available or insufficient for classification			
Amine Epoxy Curing Agent			Data not available or insufficient for classification			
Inorganic Salt - NJTSRN 04499600-6317			Data not available or insufficient for classification			
Bis[(Dimethylamino)Methyl]Phenol			Data not available or insufficient for classification			
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	Some positive data exist, but the data are not sufficient for classification	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
Polymeric Diamide			Data not available or insufficient for classification			
Fused Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Butadiene Acrylonitrile Copolymer			Data not available or insufficient for classification			
Bis(3-Aminopropyl) Ether of Diethylene Glycol			Data not available or insufficient for classification			
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Dermal	skin liver nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 125 mg/kg/day	28 days
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Dermal	auditory system hematopoietic system eyes	All data are negative	Rat	NOAEL 125 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
Amine Epoxy Curing Agent			Data not available or insufficient for classification			
Inorganic Salt - NJTSRN 04499600-6317			Data not available or insufficient for classification			
Bis[(Dimethylamino)Methyl]Phenol			Data not available or insufficient for classification			
N-Aminoethylpiperazine	Ingestion	heart endocrine	All data are negative	Rat	NOAEL 598	28 days

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

Aspiration Hazard

Name	Value
Polymeric Diamide	Not an aspiration hazard
Fused Silica	Not an aspiration hazard
Butadiene Acrylonitrile Copolymer	Not an aspiration hazard
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Not an aspiration hazard
Tris(2,4,6-Dimethylaminomethyl)Phenol	Not an aspiration hazard
Dimethyl Siloxane, Reaction Product with Silica	Not an aspiration hazard
Amine Epoxy Curing Agent	Not an aspiration hazard
Inorganic Salt - NJTSRN 04499600-6317	Not an aspiration hazard
Bis[(Dimethylamino)Methyl]Phenol	Not an aspiration hazard
N-Aminoethylpiperazine	Not an aspiration hazard
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.

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

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	None	Carcinogen
Toluene	108-88-3	Female reproductive toxin
Toluene	108-88-3	Developmental Toxin

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: 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.

Document Group: 09-3599-9
Issue Date: 01/21/14

Version Number: 14.05
Supersedes Date: 02/04/13

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Safety Data Sheet

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Document Group:	06-6873-1	Version Number:	19.00
Issue Date:	01/13/14	Supersedes Date:	02/04/13

SECTION 1: Identification

1.1. Product identifier

3M™ Panel Bonding Adhesive PN 08115 - Base

LB-K100-0010-5

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Use with Part A, MSDS 09-3599-9

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

Carcinogenicity: Category 2.

Serious Eye Damage/Irritation: Category 2A.

Skin Sensitizer: Category 1.

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.
May cause cancer by inhalation.

Precautionary Statements**General:**

Keep out of reach of children.
If medical advice is needed, have product container or label at hand.

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.

Notes to Physician

Not applicable

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 *
Methyl Methacrylate-Butadiene-Styrene Polymer	25053-09-2	5 - 10 Trade Secret *
Silica	7631-86-9	1 - 5 Trade Secret *
Dimethyl Siloxane, Reaction Product with Silica	67762-90-7	0.5 - 1.5 Trade Secret *

3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	0.5 - 1.5 Trade Secret *
Carbon Black	1333-86-4	< 0.5 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.

Hazardous Decomposition or By-Products

Substance

Aldehydes
Carbon monoxide
Carbon dioxide

Condition

During Combustion
During Combustion
During Combustion

5.3. Special protective actions for fire-fighters

No unusual fire or explosion hazards are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition

source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. 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. Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

Keep container tightly closed. Store away from heat.

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	Amer Conf of Gov. Indust. Hyg.	TWA:0.5 ppm	Skin Notation
Epichlorohydrin	106-89-8	US Dept of Labor - OSHA	TWA:19 mg/m3(5 ppm)	Skin Notation
Carbon Black	1333-86-4	Amer Conf of Gov. Indust. Hyg.	TWA(inhalable fraction):3 mg/m3	
Carbon Black	1333-86-4	Chemical Manufacturer Rec Guid	TWA:0.5 mg/m3	
Carbon Black	1333-86-4	US Dept of Labor - OSHA	TWA:3.5 mg/m3	
3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	Chemical Manufacturer Rec Guid	TWA:5 ppm	
SILICA, AMORPHOUS	60676-86-0	US Dept of Labor - OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
Glass Beads	65997-17-3	Manufacturer	TWA(as dust):10 mg/m3	

		determined		
Dimethyl Siloxane, Reaction Product with Silica	67762-90-7	Chemical Manufacturer Rec Guid	CEIL:5 mg/m3	
SILICA, AMORPHOUS	67762-90-7	US Dept of Labor - OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
Silica	7631-86-9	Chemical Manufacturer Rec Guid	TWA(as respirable dust):3 mg/m3	
SILICA, AMORPHOUS	7631-86-9	US Dept of Labor - OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	

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

American Indust. Hygiene Assoc : American Industrial Hygiene Association

Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

Indirect Vented Goggles

Skin/hand protection

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

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

Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: 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. 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
Specific Physical Form:	Viscous
Odor, Color, Grade:	Black, Viscous liquid.
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Boiling Point	≥ 35 °C
Flash Point	> 104 °C [<i>Test Method</i> : Closed Cup]
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	< 5 mmHg [<i>@ 20</i> °C]
Vapor Density	<i>No Data Available</i>
Density	1.2 g/ml
Specific Gravity	Approximately 1.2 [<i>Ref Std</i> : WATER=1]
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]
Hazardous Air Pollutants	0.000009 lb HAPS/lb solids [<i>Test Method</i> : Calculated]
Volatile Organic Compounds	18 g/l [<i>Test Method</i> : calculated SCAQMD rule 443.1]
Volatile Organic Compounds	1.5 % weight [<i>Test Method</i> : calculated per CARB title 2]
Percent volatile	1.5 % weight
VOC Less H2O & Exempt Solvents	18 g/l [<i>Test Method</i> : calculated SCAQMD rule 443.1]
Solids Content	38.9 % weight

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

Sparks and/or flames

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products**Substance**

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1. Information on Toxicological effects**Signs and Symptoms of Exposure**

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

Inhalation:

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

Skin Contact:

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.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
Carbon Black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Epichlorohydrin	106-89-8	Anticipated human carcinogen	National Toxicology Program Carcinogens
Epichlorohydrin	106-89-8	Grp. 2A: Probable 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

<u>Name</u>	<u>Route</u>	<u>Species</u>	<u>Value</u>
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
Methyl Methacrylate-Butadiene-Styrene Polymer	Dermal	Rabbit	LD50 > 5,000 mg/kg
Methyl Methacrylate-Butadiene-Styrene 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
Methyl Methacrylate-Butadiene-Styrene 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
Methyl Methacrylate-Butadiene-Styrene 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
Glass Beads		Data not available or insufficient for classification

1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	similar compounds	Sensitizing
Fused Silica	Human and animal	Not sensitizing
Methyl Methacrylate-Butadiene-Styrene Polymer		Data not available or insufficient for classification
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
Carbon Black		Data not available or insufficient for classification
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
Glass Beads		Data not available or insufficient for classification
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane		Data not available or insufficient for classification
Fused Silica		Data not available or insufficient for classification
Methyl Methacrylate-Butadiene-Styrene Polymer		Data not available or insufficient for classification
Silica		Data not available or insufficient for classification
3-(Trimethoxysilyl)Propyl Glycidyl Ether		Data not available or insufficient for classification
Dimethyl Siloxane, Reaction Product with Silica		Data not available or insufficient for classification
Carbon Black		Data not available or insufficient for classification
Epichlorohydrin		Data not available or insufficient 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
Glass Beads	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane		Data not available or insufficient for classification
Fused Silica	In Vitro	Not mutagenic
Methyl Methacrylate-Butadiene-Styrene Polymer		Data not available or insufficient for classification
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
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane			Data not available or insufficient for classification
Fused Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification

Methyl Methacrylate-Butadiene-Styrene Polymer			Data not available or insufficient 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
Glass Beads		Data not available or insufficient for classification			
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane		Data not available or insufficient for classification			
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
Methyl Methacrylate-Butadiene-Styrene Polymer		Data not available or insufficient for classification			
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
Carbon Black		Data not available or insufficient for classification			
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	
Fused Silica			Data not available or insufficient for classification			
Methyl Methacrylate-Butadiene-Styrene Polymer			Data not available or insufficient for classification			
Silica			Data not available or insufficient for classification			
Dimethyl Siloxane, Reaction Product with Silica			Data not available or insufficient for classification			
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
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane			Data not available or insufficient for classification			
Methyl Methacrylate-Butadiene-Styrene Polymer			Data not available or insufficient for classification			
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	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days

		system liver immune system nervous system kidney and/or bladder respiratory system				
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
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Not an aspiration hazard
Glass Beads	Not an aspiration hazard
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Not an aspiration hazard
Fused Silica	Not an aspiration hazard
Methyl Methacrylate-Butadiene-Styrene Polymer	Not an aspiration hazard
Silica	Not an aspiration hazard
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Not an aspiration hazard
Dimethyl Siloxane, Reaction Product with Silica	Not an aspiration hazard
Carbon Black	Not an aspiration hazard
Epichlorohydrin	Not an 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. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

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:	06-6873-1	Version Number:	19.00
Issue Date:	01/13/14	Supersedes Date:	02/04/13

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