



Safety Data Sheet

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Issue Date:	2021/11/22	Supersedes Date:	2020/10/27

SECTION 1: Identification

1.1. Product identifier

3M™ Panel Bonding Adhesive, PN 08116

Product Identification Numbers

41-0003-6679-3 41-0003-8017-4 41-3701-2169-5 60-9801-0901-5 XS-0414-1634-7

1.2. Recommended use and restrictions on use

Recommended use

Automotive, A two-part structural adhesive used to bond steel or aluminum auto body panels.

1.3. Supplier's details

Company: 3M Canada Company
Division: Automotive Aftermarket
Address: 1840 Oxford Street East, Post Office Box 5757, London, Ontario N6A 4T1

Telephone: (800) 364-3577

E Mail:

1.4. Emergency telephone number

Medical Emergency Telephone: 1-800-3M HELPS / 1-800-364-3577; Transportation Emergency Telephone (CANUTEC): (613) 996-6666

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

34-3781-1, 19-0736-9

Transport in accordance with applicable regulations.

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for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M Canada SDSs are available at www.3M.ca



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This Safety Data Sheet has been prepared in accordance with the Canadian Hazardous Products Regulations.

SECTION 1: Identification

1.1. Product identifier

3M™ Panel Bonding Adhesive - Part A, PN 08116

Product Identification Numbers

LB-K100-0126-5

1.2. Recommended use and restrictions on use

Intended Use

Automotive

Specific Use

Part A of a two-part structural adhesive used to bond steel or aluminum auto body panels.

Restrictions on use

Not applicable

1.3. Supplier's details

Company:	3M Canada Company
Division:	Automotive Aftermarket
Address:	1840 Oxford Street East, Post Office Box 5757, London, Ontario N6A 4T1
Telephone:	(800) 364-3577
Website:	www.3M.ca

1.4. Emergency telephone number

Medical Emergency Telephone:1-800-3M HELPS / 1-800-364-3577; Transportation Emergency Telephone (CANUTEC): (613) 996-6666

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Acute Toxicity (oral): Category 4.
Acute Toxicity (dermal): Category 4.
Acute Toxicity (inhalation): Category 4.
Serious Eye Damage/Irritation: Category 1.
Skin Corrosion/Irritation: Category 1B.

Skin Sensitizer: Category 1A.
Reproductive Toxicity: Category 1B.
Specific Target Organ Toxicity (single exposure): Category 1.
Specific Target Organ Toxicity (single exposure): Category 3.

2.2. Label elements

Signal word

Danger

Symbols

Corrosion | Exclamation mark | Health Hazard |

Pictograms



Hazard statements

Harmful if swallowed, in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause respiratory irritation. May cause drowsiness or dizziness. May damage fertility or the unborn child. Causes damage to organs: blood or blood-forming organs |

Precautionary statements

General:

Keep out of reach of children. Read label before use. 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. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves, protective clothing, and eye/face protection. Do not eat, drink or smoke when using this product. Wash exposed skin 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 or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE 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.

Storage:

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

Disposal:

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

Notes to Physician:

Overexposure to this product may result in methemoglobinemia. Methemoglobinemia may be clinically suspected by the presence of clinical "cyanosis" in the presence of a normal PaO₂ (as obtained by arterial blood gases). Routine pulse oximetry may be inaccurate for monitoring oxygen saturation in the presence of methemoglobinemia, and should not be used to make the diagnosis of this disorder. If the patient is symptomatic or if the methemoglobin level is >20%, specific therapy with methylene blue should be considered as part of the medical management.

2.3. Other hazards

May cause chemical gastrointestinal burns.

1% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt	Common Name
Aliphatic Polymer Diamine	68911-25-1	30 - 60 Trade Secret *	Fatty acids, C18-unsatd., dimers, polymers with 3,3'-[oxybis(2,1-ethanediylloxy)]bis[1-propanamine]
Fused Silica	60676-86-0	10 - 30	Silica, vitreous
Butadiene Acrylonitrile Polymer	68683-29-4	7 - 20	2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated
C12-14-tert-alkyl amines	68955-53-3	7 - 13 Trade Secret *	Amines, C12-14-tert-alkyl
Tris(2,4,6-Dimethylaminomethyl)Phenol	90-72-2	5 - 10 Trade Secret *	Phenol, 2,4,6-tris[(dimethylamino)methyl]-
Poly(Oxypropylene)Diamine	9046-10-0	3 - 7 Trade Secret *	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7	1 - 5	Siloxanes and Silicones, di-Me, reaction products with silica
Nitric acid, ammonium calcium salt	15245-12-2	1 - 5 Trade Secret *	No Data Available
Bis(3-Aminopropyl) Ether Of Diethylene Glycol	4246-51-9	< 2	1-Propanamine, 3,3'-[oxybis(2,1-ethanediylloxy)]bis-
Bis[(Dimethylamino)Methyl]Phenol	71074-89-0	0.1 - 1.5 Trade Secret *	Phenol, bis[(dimethylamino)methyl]-
Poly(Oxypropylene)Triamine	39423-51-3	0.5 - 1.5 Trade Secret *	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-(2-aminomethylethoxy)-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1)
Toluene	108-88-3	0 - 0.3	No Data Available

*The actual concentration of this ingredient 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

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Skin burns (localized redness, swelling, itching, intense pain, blistering, and tissue destruction). Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects. See Section 11 for additional details.

4.3. Indication of any immediate medical attention and special treatment required

Overexposure to this product may result in methemoglobinemia. Methemoglobinemia may be clinically suspected by the presence of clinical "cyanosis" in the presence of a normal PaO₂ (as obtained by arterial blood gases). Routine pulse oximetry may be inaccurate for monitoring oxygen saturation in the presence of methemoglobinemia, and should not be used to make the diagnosis of this disorder. If the patient is symptomatic or if the methemoglobin level is >20%, specific therapy with methylene blue should be considered as part of the medical management.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

5.3. Special protective actions for fire-fighters

Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

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 vapours, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/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

Store in a well-ventilated place. Keep container tightly closed. Store away from acids.

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

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

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Toluene	108-88-3	ACGIH	TWA:20 ppm	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)**Eye/face protection**

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

Full Face Shield

Indirect Vented Goggles

Skin/hand protection

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

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

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

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

Half facepiece or full facepiece supplied-air respirator

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**

Physical state	Liquid
Specific Physical Form:	Viscous
Colour	Amber
Odour	Slight Amine
Odour threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point/Freezing point	<i>Not Applicable</i>
Boiling point	<i>No Data Available</i>
Flash Point	>=110 °C [<i>Test Method</i> :Closed Cup] [<i>Details</i> :Closed Cup SETAFLASH (Based on flammable ingredient at highest %) (ASTM D-3278-96 e-1)]
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>
Vapour Pressure	<i>No Data Available</i>
Vapour Density and/or Relative Vapour Density	<i>No Data Available</i>
Density	1.1 g/ml
Relative density	1.1 [<i>Test Method</i> :Estimated] [<i>Ref Std</i> :WATER=1]
Water solubility	<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/Kinematic Viscosity	> 100,000 mPa-s
Volatile Organic Compounds	0.4 % weight [<i>Test Method</i> :calculated per CARB title 2]
Volatile Organic Compounds	4 g/l [<i>Test Method</i> :calculated SCAQMD rule 443.1]
Percent volatile	<i>No Data Available</i>
VOC Less H2O & Exempt Solvents	4 g/l [<i>Test Method</i> :calculated SCAQMD rule 443.1]

Nanoparticles

This material contains nanoparticles.

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

None known.

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified
Oxides of Nitrogen	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:

Harmful if inhaled. Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

Skin Contact:

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:

Harmful if swallowed. Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen. May cause additional health effects (see below).

Additional Health Effects:**Single exposure may cause target organ effects:**

Methemoglobinemia: Signs/symptoms may include headache, dizziness, nausea, difficulty breathing, and generalized weakness. Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Reproductive/Developmental Toxicity:

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

Additional Information:

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

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >1,000 - ≤2,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE >10 - ≤20 mg/l
Overall product	Ingestion		No data available; calculated ATE >300 - ≤2,000 mg/kg
Aliphatic Polymer Diamine	Dermal	Rat	LD50 > 2,000 mg/kg
Aliphatic Polymer Diamine	Ingestion	Rat	LD50 > 2,000 mg/kg
Fused Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Fused Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Fused Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Butadiene Acrylonitrile Polymer	Dermal	Rabbit	LD50 > 3,000 mg/kg
Butadiene Acrylonitrile Polymer	Ingestion	Rat	LD50 > 15,300 mg/kg
C12-14-tert-alkyl amines	Dermal	Rat	LD50 251 mg/kg
C12-14-tert-alkyl amines	Inhalation-Vapor (4 hours)	Rat	LC50 1.2 mg/l
C12-14-tert-alkyl amines	Ingestion	Rat	LD50 320 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
Poly(Oxypropylene)Diamine	Dermal	Rabbit	LD50 2,090 mg/kg
Poly(Oxypropylene)Diamine	Ingestion	Rat	LD50 475 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
Nitric acid, ammonium calcium salt	Ingestion	Rat	LD50 >300, <2000 mg/kg
Nitric acid, ammonium calcium salt	Dermal	similar compounds	LD50 > 2,000 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
Poly(Oxypropylene)Triamine	Dermal	Rabbit	LD50 562 mg/kg
Poly(Oxypropylene)Triamine	Ingestion	Rat	LD50 220 mg/kg
Bis[(Dimethylamino)Methyl]Phenol	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Aliphatic Polymer Diamine	Rat	Irritant
Fused Silica	Rabbit	No significant irritation
Butadiene Acrylonitrile Polymer	Rabbit	Irritant
C12-14-tert-alkyl amines	Rabbit	Corrosive
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Rabbit	Corrosive
Poly(Oxypropylene)Diamine	Rabbit	Corrosive
Dimethyl Siloxane, Reaction Product With Silica	Rabbit	No significant irritation
Nitric acid, ammonium calcium salt	similar compounds	No significant irritation
Bis(3-Aminopropyl) Ether Of Diethylene Glycol	Rabbit	Corrosive
Bis[(Dimethylamino)Methyl]Phenol	similar compounds	Corrosive
Toluene	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Aliphatic Polymer Diamine	In vitro data	Severe irritant
Fused Silica	Rabbit	No significant irritation
Butadiene Acrylonitrile Polymer	Rabbit	Mild irritant
C12-14-tert-alkyl amines	Rabbit	Corrosive
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Rabbit	Corrosive
Poly(Oxypropylene)Diamine	Rabbit	Corrosive
Dimethyl Siloxane, Reaction Product With Silica	Rabbit	No significant irritation
Nitric acid, ammonium calcium salt	Rabbit	Corrosive
Bis(3-Aminopropyl) Ether Of Diethylene Glycol	similar health hazards	Corrosive
Bis[(Dimethylamino)Methyl]Phenol	similar compounds	Corrosive
Toluene	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
Aliphatic Polymer Diamine	Guinea pig	Sensitizing
Fused Silica	Human and animal	Not classified
Butadiene Acrylonitrile Polymer	Guinea pig	Sensitizing
C12-14-tert-alkyl amines	Guinea pig	Sensitizing
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Guinea pig	Not classified
Dimethyl Siloxane, Reaction Product With Silica	Human and animal	Not classified
Nitric acid, ammonium calcium salt	Mouse	Not classified
Toluene	Guinea pig	Not classified

Respiratory Sensitization

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

Germ Cell Mutagenicity

Name	Route	Value
Aliphatic Polymer Diamine	In Vitro	Not mutagenic
Fused Silica	In Vitro	Not mutagenic
C12-14-tert-alkyl amines	In vivo	Not mutagenic
C12-14-tert-alkyl amines	In Vitro	Some positive data exist, but the data are not sufficient for classification
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	In Vitro	Not mutagenic
Poly(Oxypropylene)Diamine	In Vitro	Not mutagenic
Poly(Oxypropylene)Diamine	In vivo	Not mutagenic
Dimethyl Siloxane, Reaction Product With Silica	In Vitro	Not mutagenic
Nitric acid, ammonium calcium salt	In Vitro	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Fused Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification

Dimethyl Siloxane, Reaction Product With Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Aliphatic Polymer Diamine	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring into lactation
Aliphatic Polymer Diamine	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	29 days
Aliphatic Polymer Diamine	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	prematuring into lactation
Fused Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fused Silica	Inhalation	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fused Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
C12-14-tert-alkyl amines	Ingestion	Not classified for female reproduction	Rat	NOAEL 124 mg/kg/day	1 generation
C12-14-tert-alkyl amines	Ingestion	Not classified for male reproduction	Rat	NOAEL 107 mg/kg/day	1 generation
C12-14-tert-alkyl amines	Dermal	Not classified for development	Rat	NOAEL 45 mg/kg/day	during gestation
C12-14-tert-alkyl amines	Ingestion	Not classified for development	Rat	NOAEL 21 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Aliphatic Polymer Diamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	Irritation Positive	
Aliphatic Polymer Diamine	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	NOAEL Not available	
Butadiene Acrylonitrile Polymer	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
C12-14-tert-alkyl amines	Inhalation	respiratory irritation	May cause respiratory irritation	Rat	NOAEL	4 weeks

					0.019 mg/l	
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Poly(Oxypropylene)Diamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Nitric acid, ammonium calcium salt	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Nitric acid, ammonium calcium salt	Ingestion	methemoglobinemia	Causes damage to organs	similar compounds	NOAEL Not available	
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	
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Aliphatic Polymer Diamine	Ingestion	heart skin endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system liver immune system muscles nervous system eyes kidney and/or bladder respiratory system vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
Fused Silica	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
C12-14-tert-alkyl amines	Dermal	endocrine system hematopoietic system liver muscles nervous system kidney and/or bladder	Not classified	Rat	NOAEL 60 mg/kg/day	4 weeks
C12-14-tert-alkyl amines	Inhalation	hematopoietic system heart endocrine system liver muscles nervous system kidney and/or bladder	Not classified	Rat	NOAEL 0.129 mg/l	4 weeks
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Dermal	skin liver nervous system auditory system hematopoietic system eyes	Not classified	Rat	NOAEL 125 mg/kg/day	28 days
Dimethyl Siloxane, Reaction Product With Silica	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	auditory system eyes olfactory	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse

		system				
Toluene	Inhalation	nervous system	May cause damage to organs though prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart liver kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system vascular system	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks

Aspiration Hazard

Name	Value
Poly(Oxypropylene)Diamine	Some positive data exist, but the data are not sufficient for classification
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

No data available.

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by

applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

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. Safety, health and environmental regulations/legislation specific for the substance or mixture

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

SECTION 16: Other information

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.

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.

HMIS Hazard Classification

Health: *4 Flammability: 1 Physical Hazard: 0 Personal Protection: X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

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evaluate the product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M Canada SDSs are available at www.3M.ca



Safety Data Sheet

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Issue Date:	2021/11/22	Supersedes Date:	2020/10/26

This Safety Data Sheet has been prepared in accordance with the Canadian Hazardous Products Regulations.

SECTION 1: Identification

1.1. Product identifier

3M™ Panel Bonding Adhesive 08116 (Base) Part B

Product Identification Numbers

LB-K100-1679-5

1.2. Recommended use and restrictions on use

Intended Use

Automotive

Specific Use

Panel Bonding Adhesive

Restrictions on use

Not applicable

1.3. Supplier's details

Company:	3M Canada Company
Division:	Automotive Aftermarket
Address:	1840 Oxford Street East, Post Office Box 5757, London, Ontario N6A 4T1
Telephone:	(800) 364-3577
Website:	www.3M.ca

1.4. Emergency telephone number

Medical Emergency Telephone:1-800-3M HELPS / 1-800-364-3577; Transportation Emergency Telephone (CANUTEC): (613) 996-6666

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Serious Eye Damage/Irritation: Category 2A.

Skin Corrosion/Irritation: Category 2.

Skin Sensitizer: Category 1.

Reproductive Toxicity: Category 1B.

Carcinogenicity: Category 2.

Germ Cell Mutagenicity: Category 2.

2.2. Label elements

Signal word

Danger

Symbols

Exclamation mark | Health Hazard |

Pictograms



Hazard statements

Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. May damage fertility or the unborn child. Suspected of causing cancer. Suspected of causing genetic defects.

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/vapours/spray. Wear protective gloves and eye/face protection. Wash exposed skin thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response:

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

Storage:

Store locked up.

Disposal:

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

2.3. Other hazards

None known.

2% of the mixture consists of ingredients of unknown acute oral toxicity.

13% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt	Common Name
4,4'-isopropylidenediphenol-epichlorohydrin polymer	25068-38-6	30 - 60 Trade Secret *	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane

GLASS BEADS	Trade Secret	10 - 30	Not Applicable
Acrylate Polymer	Trade Secret	< 15	Not Applicable
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	7 - 13 Trade Secret *	Oxirane, 2,2'-[1,4-cyclohexanediylbis(methyleneoxymethylene)]bis-
Fused Silica	60676-86-0	7 - 13	Silica, vitreous
GLASS	Trade Secret	3 - 7	Not Applicable
Silica	Trade Secret	1 - 5	Not Applicable
3-(Trimethoxysilyl) Propyl Glycidyl Ether	2530-83-8	0.5 - 1.5	Silane, trimethoxy[3-(oxiranylmethoxy)propyl]-
Carbon Black	1333-86-4	0.1 - 1 Trade Secret *	Carbon black
Toluene	108-88-3	0 - 0.14	No Data Available

GLASS BEADS is a non-hazardous Trade Secret material according to WHMIS criteria.
 Silica is a non-hazardous Trade Secret material according to WHMIS criteria.
 Acrylate Polymer is a non-hazardous Trade Secret material according to WHMIS criteria.
 GLASS is a non-hazardous Trade Secret material according to WHMIS criteria.

*The actual concentration of this ingredient 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

Allergic skin reaction (redness, swelling, blistering, and itching).

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

5.3. Special protective actions for fire-fighters

Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

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 vapours, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/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

No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

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

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Toluene	108-88-3	ACGIH	TWA:20 ppm	
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	
GLASS BEADS	Trade Secret	Manufacturer determined	TWA(as non-fibrous, respirable)(8 hours):3 mg/m3;TWA(as non-fibrous, inhalable fraction)(8 hours):10 mg/m3	
GLASS BEADS	Trade Secret	ACGIH	TWA(as fiber):0.2 fiber/cc	
GLASS BEADS	Trade Secret	ACGIH	TWA(as fiber):1 fiber/cc	
GLASS BEADS	Trade Secret	ACGIH	TWA(inhalable fraction):5 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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/vapours/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 vapours 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

Physical state	Liquid
Specific Physical Form:	Viscous
Colour	Black
Odour	Characteristic Odour
Odour threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point/Freezing point	<i>Not Applicable</i>
Boiling point	> 148.9 °C
Flash Point	Flash point > 93 °C (200 °F)
Evaporation rate	< 1 [<i>Ref Std:BUOAC=1</i>]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	<i>No Data Available</i>

Flammable Limits(UEL)	No Data Available
Vapour Pressure	< 666.6 Pa [@ 20 °C]
Vapour Density and/or Relative Vapour Density	No Data Available
Density	1.2 g/ml
Relative density	1.2 [Ref Std: WATER=1]
Water solubility	No Data Available
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/Kinematic Viscosity	> 100,000 mPa-s
Volatile Organic Compounds	1.4 % weight [Test Method:calculated per CARB title 2]
Volatile Organic Compounds	17 g/l [Test Method:calculated SCAQMD rule 443.1]
Percent volatile	No Data Available
VOC Less H2O & Exempt Solvents	17 g/l [Test Method:calculated SCAQMD rule 443.1]

Nanoparticles

This material contains nanoparticles.

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

None known.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

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

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

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

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

Skin Contact:

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.
 Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching. May cause additional health effects (see below).

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. May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:

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

Genotoxicity:

Genotoxicity and Mutagenicity: May interact with genetic material and possibly alter gene expression.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

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

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	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
Fused Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Ingestion	Rat	LD50 1,000 mg/kg
Fused Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Fused Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Acrylate Polymer	Dermal	Rabbit	LD50 > 5,000 mg/kg
Acrylate Polymer	Ingestion	Rat	LD50 > 5,000 mg/kg
GLASS	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg

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GLASS	Ingestion	Professional judgement	LD50 estimated to be > 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
Carbon Black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon Black	Ingestion	Rat	LD50 > 8,000 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4,4'-isopropylidenediphenol-epichlorohydrin polymer	Rabbit	Mild irritant
GLASS BEADS	Professional judgement	No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	In vitro data	Irritant
Fused Silica	Rabbit	No significant irritation
Acrylate Polymer	Professional judgement	Minimal irritation
Silica	Rabbit	No significant irritation
3-(Trimethoxysilyl) Propyl Glycidyl Ether	Rabbit	Mild irritant
Carbon Black	Rabbit	No significant irritation
Toluene	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
4,4'-isopropylidenediphenol-epichlorohydrin polymer	Rabbit	Moderate irritant
GLASS BEADS	Professional judgement	No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	In vitro data	No significant irritation
Fused Silica	Rabbit	No significant irritation
Acrylate Polymer	Professional judgement	Mild irritant
Silica	Rabbit	No significant irritation
3-(Trimethoxysilyl) Propyl Glycidyl Ether	Rabbit	Corrosive
Carbon Black	Rabbit	No significant irritation
Toluene	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
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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 classified
Silica	Human and animal	Not classified
3-(Trimethoxysilyl) Propyl Glycidyl Ether	Guinea pig	Not classified
Toluene	Guinea pig	Not classified

Respiratory Sensitization

Name	Species	Value
4,4'-isopropylidenediphenol-epichlorohydrin polymer	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
4,4'-isopropylidenediphenol-epichlorohydrin polymer	In vivo	Not mutagenic
4,4'-isopropylidenediphenol-epichlorohydrin polymer	In Vitro	Some positive data exist, but the data are not sufficient for classification
GLASS BEADS	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	In Vitro	Mutagenic; structurally related to germ cell mutagens
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
Carbon Black	In Vitro	Not mutagenic
Carbon Black	In vivo	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
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
Carbon Black	Dermal	Mouse	Not carcinogenic
Carbon Black	Ingestion	Mouse	Not carcinogenic
Carbon Black	Inhalation	Rat	Carcinogenic
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
4,4'-isopropylidenediphenol-epichlorohydrin polymer	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-isopropylidenediphenol-epichlorohydrin polymer	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-isopropylidenediphenol-epichlorohydrin polymer	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
4,4'-isopropylidenediphenol-epichlorohydrin polymer	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
Fused Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fused Silica	Inhalation	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fused Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
3-(Trimethoxysilyl) Propyl Glycidyl Ether	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl) Propyl Glycidyl Ether	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl) Propyl Glycidyl Ether	Ingestion	Not classified for development	Rat	NOAEL 3,000 mg/kg/day	during organogenesis
Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
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3M™ Panel Bonding Adhesive 08116 (Base) Part B

4,4'-isopropylidenediphenol-epichlorohydrin polymer	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
4,4'-isopropylidenediphenol-epichlorohydrin polymer	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4,4'-isopropylidenediphenol-epichlorohydrin polymer	Ingestion	auditory system heart endocrine system hematopoietic system liver eyes kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
GLASS BEADS	Inhalation	respiratory system	Not classified	Human	NOAEL not available	occupational exposure
Fused Silica	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Silica	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
3-(Trimethoxysilyl) Propyl Glycidyl Ether	Ingestion	heart endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Carbon Black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	auditory system eyes olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	nervous system	May cause damage to organs though prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart liver kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system vascular system	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105	4 weeks

					mg/kg/day	
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Aspiration Hazard

Name	Value
Toluene	Aspiration hazard

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

SECTION 12: Ecological information

No data available.

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.

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. Safety, health and environmental regulations/legislation specific for the substance or mixture****Global inventory status**

Contact 3M for more information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

SECTION 16: Other information

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.

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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3M Canada SDSs are available at www.3M.ca