



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

### IDENTIFICATION:

#### 1.1. Product identifier

3M™ Panel Bonding Adhesive PN 08115

#### Product Identification Numbers

60-9800-3093-0

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

##### Recommended use

Automotive., ADHESIVE

For Industrial or Professional use only.

#### 1.3. Supplier's details

**Address:** 3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113  
**Telephone:** 136 136  
**E Mail:** productinfo.au@mmm.com  
**Website:** www.3m.com.au

#### 1.4. Emergency telephone number

**Company Emergency Hotline:** EMERGENCY: 1800 097 146 (Australia only)

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

32-4327-6, 09-3599-9

One or more components of this KIT is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011.

### TRANSPORT INFORMATION

The Components of this KIT have various Dangerous Goods Transportation Classifications. Please refer to the attached component Safety Data Sheets for individual Transportation Classifications.

**UN No.:** UN3267

**Flammable liquid** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL AND BIS((DIMETHYLAMINO)METHYL)PHENOL)

**Class/Division:** 8

**Packing Group:** II

**Hazchem Code:** 2X

**IERG:** 37

**Special Instructions:** Limited quantity may apply

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Safety Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

Greenguard® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

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



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This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

### SECTION 1: Identification

#### 1.1. Product identifier

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

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

##### Recommended use

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

For Industrial or Professional use only.

#### 1.3. Supplier's details

**Address:** 3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113  
**Telephone:** 136 136  
**E Mail:** productinfo.au@mmm.com  
**Website:** www.3m.com.au

#### 1.4. Emergency telephone number

EMERGENCY: 1800 097 146 (Australia only)

### SECTION 2: Hazard identification

This product is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011.

Refer to Section 14 of this Safety Data Sheets for product Dangerous Goods Classification.

#### 2.1. Classification of the substance or mixture

Serious Eye Damage/Irritation: Category 1.

Skin Corrosion/Irritation: Category 1.

Skin Sensitizer: Category 1B.

Reproductive Toxicity: Category 1B.

#### 2.2. Label elements

The label elements below were prepared in accordance with the Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (Safe Work Australia, December 2011). This information may be different from the actual product label.

**Signal word**  
DANGER!

**Symbols**  
Corrosion | Exclamation mark | Health Hazard |

**Pictograms**



**Hazard statements**

H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H360 May damage fertility or the unborn child.

**Precautionary statements**

**General:**

P102 Keep out of reach of children.  
P103 Read label before use.  
P101 If medical advice is needed, have product container or label at hand.

**Prevention:**

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P280D Wear protective gloves, protective clothing, and eye/face protection.  
P281 Use personal protective equipment as required.  
P264 Wash thoroughly after handling.  
P272 Contaminated work clothing should not be allowed out of the workplace.

**Response:**

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTRE or doctor/physician.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
P363 Wash contaminated clothing before reuse.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

### 2.3. Other assigned/identified product hazards

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

### 2.4. Other hazards which do not result in classification

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

May be harmful if swallowed.

May be harmful in contact with skin.

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

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	15 - 40
2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated	68683-29-4	9 - 30
Silica, vitreous	60676-86-0	10 - 30
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	7 - 13
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	5 - 10
Imidazole	288-32-4	1 - 5
Inorganic Salt	10124-37-5	1 - 5
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	67762-90-7	1 - 5
Bis[(dimethylamino)methyl]phenol	71074-89-0	0.1 - 1.5
2-Piperazin-1-ylethylamine	140-31-8	0.1 - 1.5
Toluene	108-88-3	< 0.5

**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

### Substance

Carbon monoxide.  
Carbon dioxide.

### Condition

During combustion.  
During combustion.

## 5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

**Hazchem Code:** 2X

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

### 6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dykes 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 authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. 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. 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. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators...) as required.

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

Store away from acids. Store away from oxidising agents.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

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

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
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**3M™ Panel Bonding (90 Minutes) Adhesive Part A (Accelerator) PN 08115, 38315, 58115**

Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin
Toluene	108-88-3	Australia OELs	TWA(8 hours):191 mg/m <sup>3</sup> (50 ppm);STEL(15 minutes):574 mg/m <sup>3</sup> (150 ppm)	SKIN
Toluene	108-88-3	CMRG	STEL:75 ppm	SKIN
Silica, vitreous	60676-86-0	Australia OELs	Limit value not established:	
Silicon dioxide	60676-86-0	Australia OELs	TWA(respirable fraction)(8 hours):2 mg/m <sup>3</sup>	
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	67762-90-7	CMRG	CEIL:5 mg/m <sup>3</sup>	
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	CMRG	TWA:5 ppm	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

Australia OELs : Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment

CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Sen: Sensitiser

Sk: Absorption through the skin may be a significant source of exposure.

## 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.

Select and use eye protection in accordance with AS/NZS 1336. Eye protection should comply with the performance specifications of AS/NZS 1337.

#### 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

Select and use gloves according to AS/NZ 2161.

## 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.

Select and use respirators according to AS/NZS 1715. Respirators should comply with AS/NZS 1716 performance specifications. For information about respirators, call 3M on 1800 024 464.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Physical state</b>	Liquid.
<b>Specific Physical Form:</b>	Viscous liquid
<b>Appearance/Odour</b>	Tan liquid, slight amine odour.
<b>Odour threshold</b>	<i>No data available.</i>
<b>pH</b>	<i>Not applicable.</i>
<b>Melting point/Freezing point</b>	<i>Not applicable.</i>
<b>Boiling point/Initial boiling point/Boiling range</b>	>=110 °C
<b>Flash point</b>	110 °C [ <i>Test Method:</i> Closed Cup]
<b>Evaporation rate</b>	<=1 [ <i>Ref Std:</i> BUOAC=1]
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Flammable Limits(LEL)</b>	<i>No data available.</i>
<b>Flammable Limits(UEL)</b>	<i>No data available.</i>
<b>Vapour pressure</b>	<=26,664.4 Pa [ <i>@ 20 °C</i> ]
<b>Vapour density</b>	<i>No data available.</i>
<b>Density</b>	1.2 g/ml
<b>Relative density</b>	1.2 [ <i>Ref Std:</i> WATER=1]
<b>Water solubility</b>	<i>No data available.</i>
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Autoignition temperature</b>	<i>No data available.</i>
<b>Decomposition temperature</b>	<i>No data available.</i>
<b>Viscosity</b>	100,000 - 225,000 mPa-s [ <i>Test Method:</i> Brookfield]
<b>Molecular weight</b>	<i>No data available.</i>
<b>Volatile organic compounds (VOC)</b>	4 g/l [ <i>Test Method:</i> calculated SCAQMD rule 443.1]
<b>Volatile organic compounds (VOC)</b>	0.4 % weight [ <i>Test Method:</i> calculated per CARB title 2]
<b>Percent volatile</b>	0.4 % weight
<b>VOC less H2O &amp; exempt solvents</b>	4 g/l [ <i>Test Method:</i> 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. Conditions to avoid

None known.

#### 10.4. Possibility of hazardous reactions

Hazardous polymerisation will not occur.

#### 10.5 Incompatible materials

Strong oxidising agents.

#### 10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

## 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 labelling, 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

May be harmful in contact with skin.

Corrosive (skin burns): Signs/symptoms may include localised 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 faeces and/or vomitus may also be seen. 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.

#### Toxicological Data

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

#### Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE2,000 -

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

			5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE <sub>2,000</sub> - 5,000 mg/kg
Silica, vitreous	Dermal	Rabbit	LD <sub>50</sub> > 5,000 mg/kg
Silica, vitreous	Inhalation-Dust/Mist (4 hours)	Rat	LC <sub>50</sub> > 0.691 mg/l
Silica, vitreous	Ingestion	Rat	LD <sub>50</sub> > 5,110 mg/kg
2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated	Dermal	Rabbit	LD <sub>50</sub> > 3,000 mg/kg
2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated	Ingestion	Rat	LD <sub>50</sub> > 15,300 mg/kg
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Dermal	Rabbit	LD <sub>50</sub> 2,500 mg/kg
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Ingestion	Rat	LD <sub>50</sub> 3,160 mg/kg
2,4,6-Tris(dimethylaminomethyl)phenol	Dermal	Rat	LD <sub>50</sub> 1,280 mg/kg
2,4,6-Tris(dimethylaminomethyl)phenol	Ingestion	Rat	LD <sub>50</sub> 1,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Dermal	Rabbit	LD <sub>50</sub> > 5,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Inhalation-Dust/Mist (4 hours)	Rat	LC <sub>50</sub> > 0.691 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Ingestion	Rat	LD <sub>50</sub> > 5,110 mg/kg
Imidazole	Dermal		LD <sub>50</sub> estimated to be 200 - 1,000 mg/kg
Imidazole	Ingestion	Rat	LD <sub>50</sub> 970 mg/kg
Inorganic Salt	Ingestion	Rat	LD <sub>50</sub> >300, <2000 mg/kg
Inorganic Salt	Dermal	similar compounds	LD <sub>50</sub> > 2,000 mg/kg
Bis[(dimethylamino)methyl]phenol	Ingestion		LD <sub>50</sub> estimated to be 300 - 2,000 mg/kg
2-Piperazin-1-ylethylamine	Dermal	Rabbit	LD <sub>50</sub> 865 mg/kg
2-Piperazin-1-ylethylamine	Ingestion	Rat	LD <sub>50</sub> 1,470 mg/kg
Toluene	Dermal	Rat	LD <sub>50</sub> 12,000 mg/kg
Toluene	Inhalation-Vapour (4 hours)	Rat	LC <sub>50</sub> 30 mg/l
Toluene	Ingestion	Rat	LD <sub>50</sub> 5,550 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Overall product	Rabbit	Corrosive
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	Rabbit	Irritant
Silica, vitreous	Rabbit	No significant irritation
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Rabbit	Corrosive
2,4,6-Tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
Siloxanes and Silicones, di-Me, reaction products	Rabbit	No significant irritation

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with silica (nanomaterial)		
Inorganic Salt	similar compounds	No significant irritation
Bis[(dimethylamino)methyl]phenol	similar compounds	Corrosive
2-Piperazin-1-ylethylamine	Rabbit	Corrosive
Toluene	Rabbit	Irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
Overall product	similar health hazards	Corrosive
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	similar health hazards	Corrosive
Silica, vitreous	Rabbit	No significant irritation
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	similar health hazards	Corrosive
2,4,6-Tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Rabbit	No significant irritation
Inorganic Salt	Rabbit	Corrosive
Bis[(dimethylamino)methyl]phenol	similar compounds	Corrosive
2-Piperazin-1-ylethylamine	Rabbit	Corrosive
Toluene	Rabbit	Moderate irritant

**Skin Sensitisation**

Name	Species	Value
Overall product	Guinea pig	Sensitising
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	Guinea pig	Sensitising
Silica, vitreous	Human and animal	Not sensitizing
2-Propanenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated	Guinea pig	Some positive data exist, but the data are not sufficient for classification
2,4,6-Tris(dimethylaminomethyl)phenol	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Human and animal	Not sensitizing
Inorganic Salt	similar compounds	Not sensitizing
2-Piperazin-1-ylethylamine	Guinea pig	Sensitising
Toluene	Guinea pig	Not sensitizing

**Respiratory Sensitisation**

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

**Germ Cell Mutagenicity**

Name	Route	Value
Silica, vitreous	In Vitro	Not mutagenic
2,4,6-Tris(dimethylaminomethyl)phenol	In Vitro	Not mutagenic
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	In Vitro	Not mutagenic
Inorganic Salt	In Vitro	Not mutagenic
2-Piperazin-1-ylethylamine	In vivo	Not mutagenic
2-Piperazin-1-ylethylamine	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**

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

Name	Route	Species	Value
Silica, vitreous	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	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
Silica, vitreous	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica, vitreous	Inhalation	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica, vitreous	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Inorganic Salt	Ingestion	Not toxic to female reproduction	similar compounds	NOAEL 1,500 mg/kg/day	prematuring into lactation
Inorganic Salt	Ingestion	Not toxic to male reproduction	similar compounds	NOAEL 1,500 mg/kg/day	28 days
Inorganic Salt	Ingestion	Not toxic to development	similar compounds	NOAEL 1,500 mg/kg/day	prematuring into lactation
2-Piperazin-1-ylethylamine	Ingestion	Not toxic to female reproduction	Rat	NOAEL 598 mg/kg/day	prematuring & during gestation
2-Piperazin-1-ylethylamine	Ingestion	Not toxic to male reproduction	Rat	NOAEL 409 mg/kg/day	32 days
2-Piperazin-1-ylethylamine	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	Rat	NOAEL 2.3	1 generation

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		reproductive data exist, but the data are not sufficient for classification		mg/l	
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
3,3'-Oxybis(ethyle neoxy)bis(propylamine)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
2,4,6-Tris(dimethyl aminomethyl) phenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Inorganic Salt	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
2-Piperazin-1-ylethylamine	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
Silica, vitreous	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
2,4,6-Tris(dimethyl aminomethyl) phenol	Dermal	skin   liver   nervous system	Some positive data exist, but the data are not sufficient for	Rat	NOAEL 125 mg/kg/day	28 days

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			classification			
2,4,6-Tris(dimethyl aminomethyl) phenol	Dermal	auditory system   hematopoietic system   eyes	All data are negative	Rat	NOAEL 125 mg/kg/day	28 days
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Inorganic Salt	Ingestion	heart   skin   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system	All data are negative	similar compounds	NOAEL 1,500 mg/kg/day	28 days
2-Piperazin-1-ylethylamine	Ingestion	heart   endocrine system   hematopoietic system   liver   nervous system   kidney and/or bladder	All data are negative	Rat	NOAEL 598 mg/kg/day	28 days
Toluene	Inhalation	auditory system   nervous system   eyes   olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart   liver   kidney and/or bladder	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	Mouse	NOAEL 1.1 mg/l	8 weeks

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			classification			
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
Toluene	Aspiration hazard

**Exposure Levels**

Refer Section 8.1 Control Parameters of this Safety Data Sheet.

**Interactive Effects**

Not determined.

**SECTION 12: Ecological 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. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

**12.1. Toxicity**

**Acute aquatic hazard:**

Not acutely toxic to aquatic life by GHS criteria.

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**Chronic aquatic hazard:**

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Imidazole	288-32-4	Golden Orfe	Experimental	48 hours	LC50	283.6 mg/l
Imidazole	288-32-4	Green algae	Experimental	72 hours	EC50	133 mg/l
Imidazole	288-32-4	Water flea	Experimental	48 hours	EC50	341.5 mg/l
3,3'-Oxybis(ethylenoxy)bis(propylamine)	4246-51-9	Golden Orfe	Experimental	96 hours	LC50	220 mg/l
3,3'-Oxybis(ethylenoxy)bis(propylamine)	4246-51-9	Algae	Experimental	72 hours	EC50	69 mg/l
3,3'-Oxybis(ethylenoxy)bis(propylamine)	4246-51-9	Crustacea	Experimental	48 hours	EC50	220 mg/l
Inorganic Salt	10124-37-5	Bluegill	Experimental	96 hours	LC50	2,400 mg/l
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Common Carp	Experimental	96 hours	LC50	175 mg/l
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Grass Shrimp	Experimental	96 hours	LC50	718 mg/l
Silica, vitreous	60676-86-0	Common Carp	Experimental	72 hours	LC50	>10,000 mg/l
2-Piperazin-1-ylethylamine	140-31-8	Water flea	Experimental	48 hours	EC50	32 mg/l
2-Piperazin-1-ylethylamine	140-31-8	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l
2-Piperazin-1-ylethylamine	140-31-8	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Toluene	108-88-3	Green Algae	Experimental	72 hours	EC50	12.5 mg/l
Toluene	108-88-3	Water flea	Experimental	48 hours	EC50	3.78 mg/l
Toluene	108-88-3	Coho Salmon	Experimental	96 hours	LC50	5.5 mg/l
Imidazole	288-32-4	Green algae	Experimental	72 hours	NOEC	25 mg/l
2-Piperazin-1-ylethylamine	140-31-8	Green algae	Experimental	72 hours	NOEC	31 mg/l
Toluene	108-88-3	Sheepshead Minnow	Experimental	28 days	NOEC	3.2 mg/l
2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)eth	68683-29-4		Data not available or insufficient for classification			

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yl]amino]butyl-terminated						
Bis[(dimethylamino)methyl]phenol	71074-89-0		Data not available or insufficient for classification			
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	67762-90-7		Data not available or insufficient for classification			
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1		Data not available or insufficient for classification			

**12.2. Persistence and degradability**

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.38 days (t <sub>1/2</sub> )	Other methods
Bis[(dimethylamino)methyl]phenol	71074-89-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silica, vitreous	60676-86-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Inorganic Salt	10124-37-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2-	68683-29-4	Data not	N/A	N/A	N/A	N/A

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Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated		available or insufficient for classification				
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Experimental Biodegradation	28 days	BOD	4 % weight	OECD 301D - Closed bottle test
Imidazole	288-32-4	Experimental Biodegradation	18 days	Dissolv. Organic Carbon Deplet	98 % weight	OECD 301A - DOC Die Away Test
2-Piperazin-1-ylethylamine	140-31-8	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Toluene	108-88-3	Experimental Biodegradation	14 days	BOD	100 % weight	OECD 301C - MITI test (I)

**12.3 : Bioaccumulative potential**

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Inorganic Salt	10124-37-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silica, vitreous	60676-86-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica (nanomaterial)	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Bis[(dimethylamino)methyl]phenol	71074-89-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2-Propenenitrile, polymer with 1,3-butadiene,	68683-29-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

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1-cyano-1-methyl-4-oxo-4-[[2-(1-piperaziny)ethyl]amino]butyl-terminated						
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Estimated Bioconcentration		Log Kow	-1.46	Estimated: Octanol-water partition coefficient
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Experimental Bioconcentration		Log Kow	-0.66	Other methods
Imidazole	288-32-4	Experimental Bioconcentration		Log Kow	-0.08	Other methods
2-Piperazine-1-ylethylamine	140-31-8	Experimental Bioconcentration		Log Kow	0.3	Other methods
Toluene	108-88-3	Experimental Bioconcentration		Log Kow	2.73	Other methods

**12.4. Mobility in soil**

Please contact manufacturer for more details

**12.5 Other adverse effects**

No information 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.

**SECTION 14: Transport Information****Australian Dangerous Goods Code (ADG) - Road/Rail Transport**

UN No.: UN3267

**Proper shipping name:** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. , ( BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL AND AMINE EPOXY CURING AGENT )

**Class/Division:** 8

**Sub Risk:** Not applicable.

**Packing Group:** II

**Hazchem Code:** 2X

**IERG:** 37

**International Air Transport Association (IATA) - Air Transport**

UN No.: UN3267

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

**Proper shipping name:** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. , ( BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL AND AMINE EPOXY CURING AGENT )

**Class/Division:** 8

**Sub Risk:** Not applicable.

**Packing Group:** II

**International Maritime Dangerous Goods Code (IMDG)- Marine Transport**

**UN No.:** UN3267

**Proper shipping name:** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. , ( BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL AND AMINE EPOXY CURING AGENT )

**Class/Division:** 8

**Sub Risk:** Not applicable.

**Packing Group:** II

**Marine Pollutant:** Not applicable.

## **SECTION 15: Regulatory information**

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

**Australian Inventory Status:**

An ingredient(s) in this product is being introduced under Section 39 of the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

**Poison Schedule:** This product is intended for Industrial or Professional Use only and therefore is not packaged and labelled in accordance with the requirements of the Standard for the Uniform Scheduling of Medicines and Poisons.

## **SECTION 16: Other information**

**Revision information:**

Conversion to GHS format SDS.

**DISCLAIMER:** The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Safety Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

Greenguard ® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

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



## Safety Data Sheet

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<b>Issue Date:</b>	10/07/2016	<b>Supersedes date:</b>	Initial issue.

This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

### SECTION 1: Identification

#### 1.1. Product identifier

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

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

##### Recommended use

Automotive., Structural Panel Bonding Adhesive

For Industrial or Professional use only.

#### 1.3. Supplier's details

**Address:** 3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113  
**Telephone:** 136 136  
**E Mail:** productinfo.au@mmm.com  
**Website:** www.3m.com.au

#### 1.4. Emergency telephone number

EMERGENCY: 1800 097 146 (Australia only)

### SECTION 2: Hazard identification

This product is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011.

Refer to Section 14 of this Safety Data Sheets for product Dangerous Goods Classification.

#### 2.1. Classification of the substance or mixture

Serious Eye Damage/Irritation: Category 2.

Skin Sensitizer: Category 1.

#### 2.2. Label elements

The label elements below were prepared in accordance with the Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (Safe Work Australia, December 2011). This information may be different from the actual product label.

#### Signal word

WARNING!

**Symbols**

Exclamation mark |

**Pictograms**



**Hazard statements**

H319 Causes serious eye irritation.  
H317 May cause an allergic skin reaction.

**Precautionary statements**

**General:**

P102 Keep out of reach of children.  
P103 Read label before use.  
P101 If medical advice is needed, have product container or label at hand.

**Prevention:**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280A Wear eye/face protection.  
P280E Wear protective gloves.  
P264 Wash thoroughly after handling.  
P272 Contaminated work clothing should not be allowed out of the workplace.

**Response:**

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 If eye irritation persists: Get medical advice/attention.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
P363 Wash contaminated clothing before reuse.  
P321 Specific treatment (see Notes to Physician on this label).

**Disposal:**

P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

**2.3. Other assigned/identified product hazards**

None known.

**2.4. Other hazards which do not result in classification**

Causes mild skin irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

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

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	25068-38-6	30 - 60
Oxide Glass Chemicals	65997-17-3	10 - 30

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1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	7 - 13
Silica, vitreous	60676-86-0	7 - 13
Acrylate Polymer	Trade Secret	5 - 10
Silicon dioxide	7631-86-9	1 - 5
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	0.5 - 1.5
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7	0.5 - 1.5
Carbon black	1333-86-4	< 0.5
Epichlorohydrin	106-89-8	< 0.02

**SECTION 4: First aid measures****4.1. Description of first aid measures****Inhalation**

Remove person to fresh air. If you feel unwell, get medical attention.

**Skin contact**

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

**Eye contact**

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

**If swallowed**

Rinse mouth. If you feel unwell, get medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**

See Section 11.1. Information on toxicological effects.

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

Not applicable

**SECTION 5: Fire-fighting measures****5.1. Suitable extinguishing media**

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

**5.2. Special hazards arising from the substance or mixture**

None inherent in this product.

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

No special protective actions for fire-fighters are anticipated.

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

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment. For larger spills, cover drains and build dykes 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 authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. 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/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. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators...) as required.

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

Store away from acids. Store away from strong bases. Store away from oxidising agents. Store away from amines.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational exposure limits**

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

<b>Ingredient</b>	<b>CAS Nbr</b>	<b>Agency</b>	<b>Limit type</b>	<b>Additional comments</b>
Epichlorohydrin	106-89-8	ACGIH	TWA:0.5 ppm	A3: Confirmed animal carcin., SKIN
Epichlorohydrin	106-89-8	Australia OELs	TWA(8 hours):7.6 mg/m3(2 ppm)	SKIN
Carbon black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	A3: Confirmed animal carcinogen.
Carbon black	1333-86-4	Australia OELs	TWA(8 hours): 3 mg/m3	
Carbon black	1333-86-4	CMRG	TWA: 0.5 mg/m <sup>3</sup>	
[3-(2,3-epoxypropoxy)propyl]trimethoxy silane	2530-83-8	CMRG	TWA:5 ppm	
Silica, vitreous	60676-86-0	Australia OELs	Limit value not established:	
Silicon dioxide	60676-86-0	Australia OELs	TWA(respirable fraction)(8 hours):2 mg/m3	
Glass filaments	65997-17-3	Australia OELs	TWA(8 hours):0.5 fibers/ml;TWA(as fiber)(8 hours):0.5 fibers/ml	
Oxide Glass Chemicals	65997-17-3	Manufacturer determined	TWA(as dust):10 mg/m3	
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7	CMRG	CEIL:5 mg/m3	
Silicon dioxide	7631-86-9	Australia OELs	TWA(respirable fraction)(8	

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			hours):2 mg/m <sup>3</sup>	
Silicon dioxide	7631-86-9	CMRG	TWA(as respirable dust):3 mg/m <sup>3</sup>	
Silica gel, precipitated, crystalline-free	7631-86-9	Australia OELs	TWA(Inspirable fraction)(8 hours):10 mg/m <sup>3</sup>	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

Australia OELs : Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment

CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Sen: Sensitiser

Sk: Absorption through the skin may be a significant source of exposure.

## 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.

Select and use eye protection in accordance with AS/NZS 1336. Eye protection should comply with the performance specifications of AS/NZS 1337.

#### 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

Select and use gloves according to AS/NZ 2161.

#### 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.

Select and use respirators according to AS/NZS 1715. Respirators should comply with AS/NZS 1716 performance specifications. For information about respirators, call 3M on 1800 024 464.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Appearance/Odour	Black, Viscous Liquid.
Odour threshold	No data available.
pH	No data available.
Melting point/Freezing point	No data available.
Boiling point/Initial boiling point/Boiling range	>= 35 °C
Flash point	>= 104.4 °C [Test Method:Closed Cup]
Evaporation rate	<= 1 Units not available or not applicable. [Ref Std:BUOAC=1]
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	No data available.
Flammable Limits(UEL)	No data available.
Vapour pressure	<= 186,140.2 Pa
Vapour density	No data available.
Density	1.2 kg/l
Relative density	1.2 [Ref Std:WATER=1]
Water solubility	Negligible
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Autoignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	100,000 mPa-s - 225,000 mPa-s [Test Method:Brookfield]
Molecular weight	No data available.
Volatile organic compounds (VOC)	15 g/l [Test Method:calculated SCAQMD rule 443.1]
Volatile organic compounds (VOC)	1.6 % weight [Test Method:calculated per CARB title 2]
Percent volatile	1.6 % weight
VOC less H2O & exempt solvents	15 g/l [Test Method:calculated SCAQMD rule 443.1]

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

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

### 10.2 Chemical stability

Stable.

### 10.3. Conditions to avoid

Sparks and/or flames.

### 10.4. Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.5 Incompatible materials

Amines.  
Strong acids.  
Strong bases.  
Strong oxidising agents.

### 10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Aldehydes.	Not specified.

Carbon monoxide.  
Carbon dioxide.

Not specified.  
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 labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

### 11.1 Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

#### Inhalation

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

#### Skin contact

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

#### Eye contact

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

#### Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

#### Additional Health Effects:

#### Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

#### Toxicological Data

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

#### Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE >12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Rat	LD50 > 1,600 mg/kg
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Rat	LD50 > 1,000 mg/kg
Oxide Glass Chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Oxide Glass Chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
1,4-Bis[(2,3-	Dermal	Rabbit	LD50 2,500 mg/kg

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Epoxypropoxy)Methyl]Cyclohexane			
Silica, vitreous	Dermal	Rabbit	LD50 > 5,000 mg/kg
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Ingestion	Rat	LD50 2,450 mg/kg
Silica, vitreous	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silica, vitreous	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
Silicon dioxide	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silicon dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silicon dioxide	Ingestion	Rat	LD50 > 5,110 mg/kg
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Dermal	Rabbit	LD50 4,000 mg/kg
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.3 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	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-Vapour (4 hours)	Rat	LC50 1.7 mg/l
Epichlorohydrin	Ingestion	Rat	LD50 260 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Rabbit	Mild irritant
Oxide Glass Chemicals	Professional judgement	No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Professional judgement	Mild irritant
Silica, vitreous	Rabbit	No significant irritation
Acrylate Polymer	Professional judgement	Minimal irritation
Silicon dioxide	Rabbit	No significant irritation
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Rabbit	Mild irritant
Dimethyl Siloxane, Reaction Product With Silica	Rabbit	No significant irritation
Carbon black	Rabbit	No significant irritation
Epichlorohydrin	Human and animal	Corrosive

**Serious Eye Damage/Irritation**

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

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Silica, vitreous	Rabbit	No significant irritation
Acrylate Polymer	Professional judgement	Mild irritant
Silicon dioxide	Rabbit	No significant irritation
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Rabbit	Corrosive
Dimethyl Siloxane, Reaction Product With Silica	Rabbit	No significant irritation
Carbon black	Rabbit	No significant irritation
Epichlorohydrin	Rabbit	Corrosive

**Skin Sensitisation**

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

**Respiratory Sensitisation**

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

**Germ Cell Mutagenicity**

Name	Route	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	In vivo	Not mutagenic
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Oxide Glass Chemicals	In Vitro	Some positive data exist, but the data are not sufficient for classification
Silica, vitreous	In Vitro	Not mutagenic
Silicon dioxide	In Vitro	Not mutagenic
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	In vivo	Not mutagenic
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Dimethyl Siloxane, Reaction Product With Silica	In Vitro	Not mutagenic
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification
Epichlorohydrin	In Vitro	Some positive data exist, but the data are not sufficient for classification
Epichlorohydrin	In vivo	Mutagenic

**Carcinogenicity**

Name	Route	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Oxide Glass Chemicals	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Silica, vitreous	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Silicon dioxide	Not specified.	Mouse	Some positive data exist, but the data

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			are not sufficient for classification
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	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
Silica, vitreous	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica, vitreous	Inhalation	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica, vitreous	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Silicon dioxide	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silicon dioxide	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silicon dioxide	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	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	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation

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With Silica					
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Epichlorohydrin	Inhalation	Not toxic to female reproduction	Rat	NOAEL 0.2 mg/l	10 weeks
Epichlorohydrin	Inhalation	Not toxic to development	Multiple animal species	NOAEL 0.09 mg/l	during organogenesis
Epichlorohydrin	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 160 mg/kg/day	during gestation
Epichlorohydrin	Ingestion	Toxic to male reproduction	Rat	LOAEL 6.25 mg/kg/day	23 days
Epichlorohydrin	Inhalation	Toxic to male reproduction	Rat	NOAEL 0.02 mg/l	10 weeks

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

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

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
4,4'-Isopropylidene diphenol-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'-Isopropylidene diphenol-Epichlorohydrin Polymer	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4,4'-Isopropylidene diphenol-Epichlorohydrin Polymer	Ingestion	auditory system   heart   endocrine system   hematopoietic system   liver   eyes   kidney	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days

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		and/or bladder				
Oxide Glass Chemicals	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure
Silica, vitreous	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Silicon dioxide	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
[3-(2,3- epoxypropoxy )propyl]trimet hoxysilane	Ingestion	heart   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   nervous system   kidney and/or bladder   respiratory system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
Dimethyl Siloxane, Reaction Product With Silica	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Carbon black	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Epichlorohydr in	Inhalation	liver	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.21 mg/l	19 days
Epichlorohydr in	Inhalation	kidney and/or bladder	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 0.04 mg/l	136 weeks
Epichlorohydr in	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.377 mg/l	4 weeks
Epichlorohydr in	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.211 mg/l	4 weeks
Epichlorohydr in	Inhalation	heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.02 mg/l	98 days
Epichlorohydr in	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.002 mg/l	98 days

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Epichlorohydrin	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.02 mg/l	13 weeks
Epichlorohydrin	Inhalation	blood	All data are negative	Rat	NOAEL 0.189 mg/l	90 days
Epichlorohydrin	Ingestion	heart   blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 80 mg/kg/day	12 weeks
Epichlorohydrin	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 25 mg/kg/day	90 days

**Aspiration Hazard**

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

**Exposure Levels**

Refer Section 8.1 Control Parameters of this Safety Data Sheet.

**Interactive Effects**

Not determined.

**SECTION 12: Ecological 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. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

**12.1. Toxicity**

**Acute aquatic hazard:**

GHS Acute 2: Toxic to aquatic life.

**Chronic aquatic hazard:**

GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Oxide Glass Chemicals	65997-17-3		Data not available or insufficient for classification			
Silica, vitreous	60676-86-0	Common Carp	Experimental	72 hours	LC50	>10,000 mg/l
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7		Data not available or insufficient for classification			
Silicon dioxide	7631-86-9		Data not			

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			available or insufficient for classification			
Carbon black	1333-86-4		Data not available or insufficient for classification			
Epichlorohydrin	106-89-8	Water flea	Experimental	48 hours	EC50	21 mg/l
Epichlorohydrin	106-89-8	Green Algae	Experimental	96 hours	IC50	16 mg/l
Epichlorohydrin	106-89-8	Fathead minnow	Experimental	96 hours	LC50	10.6 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Common Carp	Experimental	96 hours	LC50	55 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Water flea	Experimental	48 hours	EC50	473 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Green algae	Experimental	96 hours	EC50	350 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Water flea	Experimental	21 days	NOEC	>=100 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Green algae	Experimental	96 hours	NOEC	130 mg/l
4,4'-Isopropylidene diphenol-Epichlorohydrin Polymer	25068-38-6	Ricefish	Experimental	96 hours	LC50	1.41 mg/l
4,4'-Isopropylidene diphenol-Epichlorohydrin Polymer	25068-38-6	Water flea	Experimental	21 days	NOEC	0.3 mg/l
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	Water flea	Estimated	48 hours	EC50	22 mg/l
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	Ricefish	Estimated	96 hours	LC50	13 mg/l
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	Green algae	Estimated	72 hours	EC50	>93 mg/l

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1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	Green algae	Estimated	72 hours	NOEC	29 mg/l
Acrylate Polymer	Trade Secret		Data not available or insufficient for classification			

**12.2. Persistence and degradability**

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	Estimated Hydrolysis		Hydrolytic half-life	7 days (t 1/2)	Other methods
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Hydrolysis		Hydrolytic half-life	6.5 hours (t 1/2)	Other methods
Epichlorohydrin	106-89-8	Experimental Hydrolysis		Hydrolytic half-life	8.2 days (t 1/2)	Other methods
4,4'-Isopropylidene diphenol-Epichlorohydrin Polymer	25068-38-6	Laboratory Hydrolysis		Hydrolytic half-life	<2 days (t 1/2)	Other methods
Acrylate Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Oxide Glass Chemicals	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Epichlorohydrin	106-89-8	Experimental Biodegradation	14 days	BOD	67.9 % weight	OECD 301C - MITI test (I)
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	Estimated Biodegradation	28 days	BOD	4 % weight	OECD 301C - MITI test (I)
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	37 % weight	Other methods
Silicon dioxide	7631-86-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silica, vitreous	60676-86-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	Data not available or	N/A	N/A	N/A	N/A

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		insufficient for classification				
4,4'-Isopropylidene diphenol-Epichlorohydrin Polymer	25068-38-6	Laboratory Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

**12.3 : Bioaccumulative potential**

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Silica, vitreous	60676-86-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Oxide Glass Chemicals	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Acrylate Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silicon dioxide	7631-86-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	Estimated BCF - Other		Bioaccumulation factor	3	Estimated: Bioconcentration factor
4,4'-Isopropylidene diphenol-Epichlorohydrin Polymer	25068-38-6	Laboratory BCF - Other	28 days	Bioaccumulation factor	<42	Other methods
Epichlorohydrin	106-89-8	Experimental		Log Kow	0.45	Other methods

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n		Bioconcentrati on				
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#### 12.4. Mobility in soil

Please contact manufacturer for more details

#### 12.5 Other adverse effects

No information available.

## SECTION 13: Disposal considerations

#### 13.1. Disposal methods

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

Incinerate in a permitted waste incineration facility. Dispose of waste product in a permitted industrial waste facility. Proper destruction may require the use of additional fuel during incineration processes.

## SECTION 14: Transport Information

#### Australian Dangerous Goods Code (ADG) - Road/Rail Transport

UN No.: Not applicable.

Proper shipping name: Not applicable.

Class/Division: Not applicable.

Sub Risk: Not applicable.

Packing Group: Not applicable.

Hazchem Code: Not applicable

IERG: Not applicable.

#### International Air Transport Association (IATA) - Air Transport

UN No.: Not applicable.

Proper shipping name: Not applicable.

Class/Division: Not applicable.

Sub Risk: Not applicable.

Packing Group: Not applicable.

#### International Maritime Dangerous Goods Code (IMDG)- Marine Transport

UN No.: Not applicable.

Proper shipping name: Not applicable.

Class/Division: Not applicable.

Sub Risk: Not applicable.

Packing Group: Not applicable.

Marine Pollutant: Not applicable.

## SECTION 15: Regulatory information

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

##### Australian Inventory Status:

The chemical components contained within this product are listed on the Australian Inventory of Chemical Substances and are in compliance with the requirements of the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

**Poison Schedule:** This product has not been assessed for poisons scheduling as the product is intended for industrial and professional use only.

## **SECTION 16: Other information**

**Revision information:**

Conversion to GHS format SDS.

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Greenguard® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

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