

## **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<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive DP420 Off-White

### **Product Identification Numbers**

62-3280-1436-0 62-3280-3830-2

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

### Recommended use

Structural 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:

22-0528-4, 11-2409-8

One or more components of this KIT is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011, in accordance with applicable State and Territory legislation.

### TRANSPORT INFORMATION

The Dangerous Goods Classification for the complete Kit is provided below.

**UN No.:** UN2735

**Proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S., (4,7,10-TRIOXATRIDECANE-1,13-DIAMINE)

Class/Division: 8
Packing Group: II

Marine Pollutant: Not applicable.

Hazchem Code: 2X

**IERG:** 36

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

**Special Instructions:** Limited quantity may apply

International Maritime Dangerous Goods Code (IMDG)- Marine Transport

**Special Instructions:** Limited quantity may apply

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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



## 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)

## **SECTION 1: Identification**

#### 1.1. Product identifier

3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive DP420 Off-White, Part B

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

#### Recommended use

Structural 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, in accordance with applicable State and Territory legislation.

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**

**Prevention:** 

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280E Wear protective gloves.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P337 + P313 IF eye irritation persists: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

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 with long lasting effects.

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

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Epoxy Resin	25068-38-6	80 - 95
Acrylic Polymer	Trade Secret	1 - 20

### **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

### **3M<sup>TM</sup> Scotch-Weld<sup>TM</sup> Epoxy Adhesive DP420 Off-White, Part B**

#### 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

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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.

### **Hazardous Decomposition or By-Products**

<u>Substance</u>	<u>Condition</u>
Aldehydes.	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	During combustion.
Irritant vapours or gases.	During combustion.

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

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

Hazchem Code: •3Z

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

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

For industrial/occupational use only. Not for consumer sale or use. 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.)

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

Store away from oxidising agents.

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

### 8.1 Control parameters

### Occupational exposure limits

No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

### 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:

Safety glasses with side shields.

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

information on basic physical and chemical propertie			
Physical state	Liquid.		
Specific Physical Form:	Paste		
Colour	White		
Odour	Mild Epoxy		
Odour threshold	No data available.		
pH	Not applicable.		
Melting point/Freezing point	No data available.		
Boiling point/Initial boiling point/Boiling range	>=260 °C		
Flash point	248.9 °C [Test Method:Closed Cup]		
Evaporation rate	Not applicable.		
Flammability	Not applicable.		
Flammable Limits(LEL)	Not applicable.		
Flammable Limits(UEL)	Not applicable.		
Vapour pressure	Not applicable.		
Vapor Density and/or Relative Vapor Density	Not applicable.		
Density	1.14 g/ml		
Relative density	1.14 [Ref Std:WATER=1]		
Water solubility	Nil		
Solubility- non-water	No data available.		
Partition coefficient: n-octanol/water	No data available.		
Autoignition temperature	No data available.		
Decomposition temperature	No data available.		
Kinematic Viscosity	30,702 mm <sup>2</sup> /sec		
Volatile organic compounds (VOC)	No data available.		
Percent volatile	No data available.		
VOC less H2O & exempt solvents	0 g/l [Test Method:calculated SCAQMD rule 443.1]		
_	[Details: when used as intended with Part A]		
VOC less H2O & exempt solvents	5 g/l [Test Method:calculated SCAQMD rule 443.1] [Details:as		
	supplied]		
VOC less H2O & exempt solvents	0 % [Test Method:calculated SCAQMD rule 443.1]		
	[Details: when used as intended with Part A]		
Molecular weight	No data available.		

Particle Characteristics	Not applicable.
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#### 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

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

### 10.4. Possibility of hazardous reactions

Hazardous polymerisation will not occur.

#### 10.5 Incompatible materials

Strong oxidising agents.

### 10.6 Hazardous decomposition products

**Substance** 

**Condition** 

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.

#### 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.

#### Eve contact

Moderate eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

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

### **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	Ingestion		No data available; calculated ATE >5,000

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## 3M™ Scotch-Weld™ Epoxy Adhesive DP420 Off-White, Part B

			mg/kg
Epoxy Resin	Dermal	Rat	LD50 > 1,600 mg/kg
Epoxy Resin	Ingestion	Rat	LD50 > 1,000  mg/kg
Acrylic Polymer	Dermal	Rabbit	LD50 > 5,000 mg/kg
Acrylic Polymer	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
Epoxy Resin	Rabbit	Mild irritant
Acrylic Polymer	Professional judgement	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Epoxy Resin	Rabbit	Moderate irritant
Acrylic Polymer	Professional judgement	Mild irritant

### **Skin Sensitisation**

Name	Species	Value
Epoxy Resin	Human and animal	Sensitising

**Respiratory Sensitisation** 

Name	Species	Value
Epoxy Resin	Human	Not classified

**Germ Cell Mutagenicity** 

Name	Route	Value
Epoxy Resin	In vivo	Not mutagenic
Epoxy Resin	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Epoxy Resin	Dermal	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
Epoxy Resin	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
Epoxy Resin	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation

## Target Organ(s)

\_\_\_\_\_

### Specific Target Organ Toxicity - single exposure

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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Epoxy Resin	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
Epoxy Resin	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Epoxy Resin	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

### **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 2: Toxic to aquatic life with long lasting effects.

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Epoxy Resin	25068-38-6	Activated sludge	Estimated	3 hours	IC50	>100 mg/l
Epoxy Resin	25068-38-6	Green algae	Estimated	72 hours	EC50	>11 mg/l
Epoxy Resin	25068-38-6	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
Epoxy Resin	25068-38-6	Water flea	Estimated	48 hours	EC50	1.8 mg/l
Epoxy Resin	25068-38-6	Green algae	Estimated	72 hours	NOEC	4.2 mg/l
Epoxy Resin	25068-38-6	Water flea	Estimated	21 days	NOEC	0.3 mg/l
Acrylic Polymer	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

### 12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Epoxy Resin	25068-38-6	Estimated Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
Epoxy Resin	25068-38-6	Estimated Hydrolysis		Hydrolytic half-life	117 hours (t 1/2)	
Acrylic Polymer	Trade Secret	Data not available- insufficient	N/A	N/A	N/A	N/A

### 12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Epoxy Resin	25068-38-6	Estimated		Log Kow	3.242	
		Bioconcentration				
Acrylic Polymer	Trade Secret	Data not available or insufficient for	N/A	N/A	N/A	N/A
		classification				

#### 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. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials.

## **SECTION 14: Transport Information**

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

UN No.: UN3082

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (Epoxy Resin)

Class/Division: 9

**Sub Risk:** Not applicable. **Packing Group:** III

Hazchem Code: •3Z

**IERG:** 47

International Air Transport Association (IATA) - Air Transport

UN No.: UN3082

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (Epoxy Resin)

Class/Division: 9

**Sub Risk:** Not applicable. **Packing Group:** III

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

UN No.: UN3082

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (Epoxy Resin)

Class/Division: 9

**Sub Risk:** Not applicable. **Packing Group:** III

Marine Pollutant: Epoxy Resin

## **SECTION 15: Regulatory information**

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

### **Australian Inventory Status:**

All components of this product are listed on or exempt from the Australian Inventory of Industrial Chemicals (AIIC). Conditions may apply prior to introduction for direct importers of this product, Please contact 3M Australia on 136 136 for further details.

**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:**

Complete document review.

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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



## 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)

## **SECTION 1: Identification**

#### 1.1. Product identifier

3M<sup>TM</sup> Scotch-Weld<sup>TM</sup> Epoxy Adhesive DP420 Off-White, Part A

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

#### Recommended use

Structural 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, in accordance with applicable State and Territory legislation.

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

### 2.1. Classification of the substance or mixture

Skin Corrosion/Irritation: Category 1. Serious Eye Damage/Irritation: 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

Danger

**Symbols** 

Corrosion |

**Pictograms** 



Hazard statements

H314 Causes severe skin burns and eye damage.

**Precautionary statements** 

**Prevention:** 

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P280D Wear protective gloves, protective clothing, and eye/face protection.

**Response:** 

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P301 + P330 + P331

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin

with water or shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. P304 + P340P305 + P351 + P338

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. P310

P363 Wash contaminated clothing before reuse.

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

- May cause chemical gastrointestinal burns.

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

None known.

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

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Modified Epoxy Resin	Trade Secret	40 - 80
4,7,10-Trioxatridecane-1,13-Diamine	4246-51-9	10 - 50
2,4,6-tris((Dimethylamino)Methyl)Phenol	90-72-2	1 - 5
Silane, trimethoxyoctyl-, hydrolysis	67762-90-7	1 - 5
products with silica		

### 3M<sup>™</sup> Scotch-Weld<sup>™</sup> Epoxy Adhesive DP420 Off-White, Part A

Coloium tuifloto	55120 75 7	1 5
Calcium triffate	55120-75-7	1 - 3

### **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.

#### Eve 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

Skin burns (localized redness, swelling, itching, intense pain, blistering, and tissue destruction). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision).

### 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**

<b>Substance</b>	<u>Condition</u>
Aldehydes.	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Fluoride	During combustion.
Irritant vapours or gases.	During combustion.
Oxides of nitrogen.	During combustion.

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

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

Hazchem Code: 3WE

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

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

For industrial/occupational use only. Not for consumer sale or use. 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. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

### 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**

No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

#### 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: Fluoroelastomer 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.
·	•
Specific Physical Form:	Paste
Colour	Amber
Odour	Very Mild Odour, Pungent Odour
Odour threshold	No data available.
pH	Not applicable.
Melting point/Freezing point	No data available.
Boiling point/Initial boiling point/Boiling range	>=175 °C
	>=171.1 °C [Test Method:Closed Cup]
Flash point	. 13
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	Not applicable.
Flammable Limits(UEL)	Not applicable.
Vapour pressure	Not applicable.
Vapor Density and/or Relative Vapor Density	Not applicable.
Density	1.12 g/ml
Relative density	1.12 [ <i>Ref Std</i> :WATER=1]
Water solubility	Slight (less than 10%)
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	8,000 - 14,000 mPa-s [@ 23 °C ]
Volatile organic compounds (VOC)	
Percent volatile	
VOC less H2O & exempt solvents	0 g/l [Test Method:calculated SCAQMD rule 443.1]
•	[Details: when used as intended with Part B]
VOC less H2O & exempt solvents	0 g/l [Test Method:calculated SCAQMD rule 443.1] [Details:as
,	supplied]
VOC less H2O & exempt solvents	0 % [Test Method:calculated SCAQMD rule 443.1]
,	[Details: when used as intended with Part B]
Molecular weight	No data available.

### Nanoparticles

This material contains nanoparticles.

## **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

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

### 10.4. Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.5 Incompatible materials

Strong oxidising agents.

## 10.6 Hazardous decomposition products

**Substance** 

Condition

None known.

Dust created by grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

## **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.

#### Skin contact

Corrosive (skin burns): Signs/symptoms may include localised redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

#### 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

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.

### **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
4,7,10-Trioxatridecane-1,13-Diamine	Dermal	Rabbit	LD50 2,500 mg/kg
4,7,10-Trioxatridecane-1,13-Diamine	Ingestion	Rat	LD50 3,160 mg/kg
Silane, trimethoxyoctyl-, hydrolysis products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silane, trimethoxyoctyl-, hydrolysis products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
2,4,6- tris((Dimethylamino)Methyl)Phenol	Dermal	Rat	LD50 1,280 mg/kg
2,4,6- tris((Dimethylamino)Methyl)Phenol	Ingestion	Rat	LD50 1,000 mg/kg
Calcium triflate	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Calcium triflate	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
4,7,10-Trioxatridecane-1,13-Diamine	Rabbit	Corrosive
Silane, trimethoxyoctyl-, hydrolysis products with	Rabbit	No significant irritation
silica		
2,4,6-tris((Dimethylamino)Methyl)Phenol	Rabbit	Corrosive
Calcium triflate	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
4,7,10-Trioxatridecane-1,13-Diamine	similar health hazards	Corrosive
Silane, trimethoxyoctyl-, hydrolysis products with silica	Rabbit	No significant irritation
2,4,6-tris((Dimethylamino)Methyl)Phenol	Rabbit	Corrosive
Calcium triflate	Rabbit	Corrosive

### **Skin Sensitisation**

Name	Species	Value
Silane, trimethoxyoctyl-, hydrolysis products with silica	Human and animal	Not classified
2,4,6-tris((Dimethylamino)Methyl)Phenol	Guinea pig	Not classified
Calcium triflate	Guinea pig	Not classified

## **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
Silane, trimethoxyoctyl-, hydrolysis products with silica	In Vitro	Not mutagenic
2,4,6-tris((Dimethylamino)Methyl)Phenol	In Vitro	Not mutagenic
Calcium triflate	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Silane, trimethoxyoctyl-, hydrolysis	Not specified.	Mouse	Some positive data exist, but the data
products with silica			are not sufficient for classification

## **Reproductive Toxicity**

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	<b>Exposure Duration</b>
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

## Target Organ(s)

**Specific Target Organ Toxicity - single exposure** 

Name	Route	Target	Value	Species	Test result	Exposure
		Organ(s)				Duration
4,7,10-	Inhalation	respiratory	Some positive		NOAEL Not	
Trioxatrideca		irritation	data exist, but the		available	
ne-1,13-			data are not			
Diamine			sufficient for			
			classification			
2,4,6-	Inhalation	respiratory	Some positive		NOAEL Not	
tris((Dimethyl		irritation	data exist, but the		available	
amino)Methyl			data are not			
)Phenol			sufficient for			
			classification			
Calcium	Inhalation	respiratory	Some positive	similar health	NOAEL not	
triflate		irritation	data exist, but the	hazards	available	
			data are not			
			sufficient for			
			classification			

**Specific Target Organ Toxicity - repeated exposure** 

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Silane, trimethoxyoct yl-, hydrolysis	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure

products with silica						
2,4,6- tris((Dimethyl amino)Methyl )Phenol	Dermal	skin   liver   nervous system   auditory system   hematopoietic system   eyes	Not classified	Rat	NOAEL 125 mg/kg/day	28 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:

Not acutely toxic to aquatic life by GHS criteria.

### 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
4,7,10-	4246-51-9	Bacteria	Experimental	17 hours	EC50	4,000 mg/l
Trioxatridecane						
-1,13-Diamine						
4,7,10-	4246-51-9	Golden Orfe	Experimental	96 hours	LC50	>1,000 mg/l
Trioxatridecane						
-1,13-Diamine						
4,7,10-	4246-51-9	Green algae	Experimental	72 hours	EC50	>500 mg/l
Trioxatridecane						
-1,13-Diamine						
4,7,10-	4246-51-9	Water flea	Experimental	48 hours	EC50	218.16 mg/l
Trioxatridecane						
-1,13-Diamine						
4,7,10-	4246-51-9	Green algae	Experimental	72 hours	EC10	5.4 mg/l
Trioxatridecane						
-1,13-Diamine						
2,4,6-	90-72-2		Experimental	96 hours	LC50	718 mg/l
tris((Dimethyla						
mino)Methyl)P						
henol						

2,4,6- tris((Dimethyla mino)Methyl)P henol	90-72-2	Common Carp	Experimental	96 hours	LC50	>100 mg/l
2,4,6- tris((Dimethyla mino)Methyl)P henol	90-72-2	Green algae	Experimental	72 hours	EC50	46.7 mg/l
2,4,6- tris((Dimethyla mino)Methyl)P henol	90-72-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
2,4,6- tris((Dimethyla mino)Methyl)P henol	90-72-2	Green algae	Experimental	72 hours	NOEC	6.44 mg/l
Silane, trimethoxyocty l-, hydrolysis products with silica	67762-90-7		Data not available or insufficient for classification			N/A
Calcium triflate	55120-75-7	Green Algae	Estimated	72 hours	EC50	54 mg/l
Calcium triflate		Rainbow trout	Estimated	96 hours	LC50	>100 mg/l
Calcium triflate		Water flea	Estimated	48 hours	EC50	>100 mg/l
Calcium triflate	55120-75-7	Green Algae	Estimated	72 hours	NOEC	6.4 mg/l

## 12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
4,7,10-	4246-51-9	Estimated		Photolytic half-	2.96 hours (t	Non-standard method
Trioxatridecane		Photolysis		life (in air)	1/2)	
-1,13-Diamine						
, ,	4246-51-9	Experimental	25 days	CO2 evolution	-8 %CO2	OECD 301B - Modified
Trioxatridecane		Biodegradation			evolution/THC	sturm or CO2
-1,13-Diamine					O2 evolution	
2,4,6-	90-72-2	Experimental	28 days	BOD	4 %	OECD 301D - Closed
tris((Dimethyla		Biodegradation			BOD/ThBOD	bottle test
mino)Methyl)P						
henol						
Silane,	67762-90-7	Data not			N/A	
trimethoxyocty		available-				
l-, hydrolysis		insufficient				
products with						
silica						
Calcium triflate	55120-75-7	Estimated	28 days	BOD	0 %	OECD 301D - Closed
		Biodegradation			BOD/ThBOD	bottle test

## 12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
4,7,10-	4246-51-9	Experimental		Log Kow	-1.25	Non-standard method
Trioxatridecane		Bioconcentrati				
-1,13-Diamine		on				
2,4,6-	90-72-2	Experimental		Log Kow	-0.66	830.7550 Part.Coef

tris((Dimethyla		Bioconcentrati				Shake Flask
mino)Methyl)P		on				
henol						
Silane,	67762-90-7	Data not	N/A	N/A	N/A	N/A
trimethoxyocty		available or				
l-, hydrolysis		insufficient for				
products with		classification				
silica						
Calcium triflate	55120-75-7	Estimated	35 days	Bioaccumulatio	0.03	OECD 305E -
		Bioconcentrati		n factor		Bioaccumulation flow-
		on				through fish test

#### 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. Combustion products will include HF. Facility must be capable of handling halogenated materials.

## **SECTION 14: Transport Information**

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

**UN No.:** UN2735

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S., (4,7,10-TRIOXATRIDECANE-1,13-DIAMINE)

Class/Division: 8

**Sub Risk:** Not applicable. **Packing Group:** II

**Special Instructions:** Limited quantity may apply

**Hazchem Code: 3WE** 

**IERG: 26** 

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

UN No.: UN2735

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S., (4,7,10-TRIOXATRIDECANE-1,13-DIAMINE)

Class/Division: 8

Sub Risk: Not applicable. Packing Group: II

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

UN No.: UN2735

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S., (4,7,10-TRIOXATRIDECANE-1,13-DIAMINE)

Class/Division: 8

**Sub Risk:** Not applicable. **Packing Group:** II

Marine Pollutant: Not applicable.

**Special Instructions:** Limited quantity may apply

## **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 a Low Volume Chemical Permit granted under Section 21U 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:**

Complete document review.

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