

# Safety Data Sheet

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**Issue Date:** 03/03/2024 **Supersedes date:** 19/05/2022

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> RelyX<sup>™</sup> Universal Resin Cement Refill Kit A1, A3O, TR, WO (56972, 56971, 56973)

**Product Identification Numbers** 

UU-0108-9921-7 UU-0109-0317-5 UU-0109-0318-3 UU-0109-0319-1

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

### Recommended use

Dental Product, Dental Cement

#### Restrictions on use

For use only by dental professionals in approved indications.

## 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:

41-5399-5, 41-5463-9

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

This KIT and its components are NOT classified as Dangerous Goods.

## Marine Pollutant: Not applicable.

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



# Safety Data Sheet

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**Document group:** 41-5463-9 **Version number:** 2.00

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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> RelyX<sup>TM</sup> Universal Resin Cement Base Paste

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

#### Recommended use

Dental Product, Dental Cement

#### Restrictions on use

For use only by dental professionals in approved indications.

#### 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 2. Serious Eye Damage/Irritation: Category 1.

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

Danger

#### **Symbols**

Corrosion |Exclamation mark |

**Pictograms** 



#### **Hazard statements**

H315 Causes skin irritation. H318 Causes serious eye damage.

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.

P280A Wear eye/face protection.

**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.

P310 Immediately call a POISON CENTRE or doctor/physician.
P333 + P313 If skin irritation or rash occurs: 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

Harmful to aquatic life with long lasting effects.

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

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Triethylene glycol dimethacrylate	109-16-0	26.72 - 30.52
2-Propenoic acid, 2-methyl-, 3-	122334-95-6	23.84 - 27.9
(trimethoxysilyl)propyl ester, reaction		
products with vitreous silica		
7,7,9(or 7,9,9)-Trimethyl-4,13-dioxo-3,14-	72869-86-4	24.22 - 27.5

dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate		
2-Propenoic acid, 2-methyl-, 1,1'-[1-	1224866-76-5	8.14 - 9.18
(hydroxymethyl)-1,2-ethanediyl] ester,		
reaction products with 2-hydroxy-1,3-		
propanediyl dimethacrylate and phosphorus		
oxide		
Silane, trimethoxyoctyl-, hydrolysis	92797-60-9	4.99 - 8.5
products with silica		
t-Amyl Hydroperoxide	3425-61-4	1.4 - 2.34
2,6-Di-tert-butyl-p-cresol	128-37-0	0.41 - 0.56
2-hydroxyethyl methacrylate	868-77-9	<= 0.3
Methyl Methacrylate	80-62-6	<= 0.3
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	<= 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.

#### 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. 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). 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**

SubstanceConditionCarbon monoxide.During combustion.Carbon dioxide.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,

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bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

# **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.

#### 6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. 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

A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. Avoid breathing dust/fume/gas/mist/vapours/spray. 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.) Do not get in eyes.

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

Store away from heat. 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
2,6-Di-tert-butyl-p-cresol	128-37-0	ACGIH	TWA(inhalable fraction and	A4: Not class. as human
			vapour):2 mg/m3	carcin
2,6-Di-tert-butyl-p-cresol	128-37-0	Australia OELs	TWA(8 hours):10 mg/m3	
COPPER COMPOUNDS	6046-93-1	ACGIH	TWA(as Cu, fume):0.2	
			mg/m3;TWA(as Cu dust or	
			mist):1 mg/m3	
Methyl Methacrylate	80-62-6	ACGIH	TWA:50 ppm;STEL:100 ppm	A4: Not class. as human
				carcin, Dermal
				Sensitizer
Methyl Methacrylate	80-62-6	Australia OELs	TWA(8 hours):208 mg/m3(50	SKIN
-			ppm);STEL(15 minutes):416	
			mg/m3(100 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

## 3M<sup>TM</sup> RelyX<sup>TM</sup> Universal Resin Cement Base Paste

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 in a well-ventilated area.

## 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.

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

See Section 7.1 for additional information on skin protection.

## **Respiratory protection**

None required.

# **SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Paste
Colour	White
Odour	Slight Acrylic
Odour threshold	No data available.
pH	Not applicable.
Melting point/Freezing point	Not applicable.
Boiling point/Initial boiling point/Boiling range	Not applicable.
Flash point	Flash point > 93 °C (200 °F)
Evaporation rate	No data available.
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	No data available.
Flammable Limits(UEL)	No data available.
Vapour pressure	No data available.
Vapor Density and/or Relative Vapor Density	No data available.
Density	Approximately - 2 g/cm3
Relative density	Approximately - 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/Kinematic Viscosity	10 Pa-s - 100 Pa-s
Volatile organic compounds (VOC)	No data available.

Percent volatile	No data available.
VOC less H2O & exempt solvents	No data available.

# **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.

#### 10.4. Possibility of hazardous reactions

Hazardous polymerisation will not occur.

#### 10.5 Incompatible materials

Strong oxidising agents.

#### 10.6 Hazardous decomposition products

**Substance** 

None known.

**Condition** 

# 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

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

## 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 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	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapour(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Triethylene glycol dimethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Triethylene glycol dimethacrylate	Ingestion	Rat	LD50 10,837 mg/kg
2-Propenoic acid, 2-methyl-, 3- (trimethoxysilyl)propyl ester, reaction products with vitreous silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, 3- (trimethoxysilyl)propyl ester, reaction products with vitreous silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
2-Propenoic acid, 2-methyl-, 3- (trimethoxysilyl)propyl ester, reaction products with vitreous silica	Ingestion	Rat	LD50 > 5,110 mg/kg
7,7,9(or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
7,7,9(or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate	Ingestion	Rat	LD50 > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Ingestion	Rat	LD50 > 2,000 mg/kg
t-Amyl Hydroperoxide	Dermal	Rat	LD50 354 mg/kg
t-Amyl Hydroperoxide	Inhalation-Vapour (4 hours)	Rat	LC50 2.4 mg/l
t-Amyl Hydroperoxide	Ingestion	Rat	LD50 483 mg/kg
2,6-Di-tert-butyl-p-cresol	Dermal	Rat	LD50 > 2,000 mg/kg
2,6-Di-tert-butyl-p-cresol	Ingestion	Rat	LD50 > 2,930 mg/kg
2-hydroxyethyl methacrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Methyl Methacrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-hydroxyethyl methacrylate	Ingestion	Rat	LD50 5,564 mg/kg
Methyl Methacrylate	Inhalation-Vapour (4 hours)	Rat	LC50 29 mg/l
Methyl Methacrylate	Ingestion	Rat	LD50 7,900 mg/kg

ATE = acute toxicity estimate

## Skin Corrosion/Irritation

Name	Species	Value
Triethylene glycol dimethacrylate	Guinea pig	Mild irritant
2-Propenoic acid, 2-methyl-, 3-	Rabbit	No significant irritation
(trimethoxysilyl)propyl ester, reaction products with		

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vitreous silica		
2-Propenoic acid, 2-methyl-, 1,1'-[1-	Rabbit	Minimal irritation
(hydroxymethyl)-1,2-ethanediyl] ester, reaction		
products with 2-hydroxy-1,3-propanediyl		
dimethacrylate and phosphorus oxide		
t-Amyl Hydroperoxide	Rabbit	Corrosive
2,6-Di-tert-butyl-p-cresol	Human and animal	Minimal irritation
2-hydroxyethyl methacrylate	Rabbit	Minimal irritation
Methyl Methacrylate	Human and animal	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	In vitro data	Corrosive
Triethylene glycol dimethacrylate	Professional judgement	Moderate irritant
2-Propenoic acid, 2-methyl-, 3- (trimethoxysilyl)propyl ester, reaction products with vitreous silica	Rabbit	No significant irritation
2-Propenoic acid, 2-methyl-, 1,1'-[1- (hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Rabbit	Corrosive
t-Amyl Hydroperoxide	Rabbit	Corrosive
2,6-Di-tert-butyl-p-cresol	Rabbit	Mild irritant
2-hydroxyethyl methacrylate	Rabbit	Moderate irritant
Methyl Methacrylate	Rabbit	Moderate irritant

# **Skin Sensitisation**

Name	Species	Value
Triethylene glycol dimethacrylate	Human and animal	Sensitising
2-Propenoic acid, 2-methyl-, 3-	Human and animal	Not classified
(trimethoxysilyl)propyl ester, reaction products with		
vitreous silica		
7,7,9(or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxa-	Guinea pig	Sensitising
5,12-diazahexadecane-1,16-diyl bismethacrylate		
2-Propenoic acid, 2-methyl-, 1,1'-[1-	Guinea pig	Not classified
(hydroxymethyl)-1,2-ethanediyl] ester, reaction		
products with 2-hydroxy-1,3-propanediyl		
dimethacrylate and phosphorus oxide		
t-Amyl Hydroperoxide	similar compounds	Sensitising
2,6-Di-tert-butyl-p-cresol	Human	Not classified
2-hydroxyethyl methacrylate	Human and animal	Sensitising
Methyl Methacrylate	Human and animal	Sensitising

**Respiratory Sensitisation** 

Name	Species	Value
Methyl Methacrylate	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
Triethylene glycol dimethacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
2-Propenoic acid, 2-methyl-, 3- (trimethoxysilyl)propyl ester, reaction products with vitreous silica	In Vitro	Not mutagenic

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2-Propenoic acid, 2-methyl-, 1,1'-[1- (hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	In Vitro	Not mutagenic
t-Amyl Hydroperoxide	In vivo	Not mutagenic
t-Amyl Hydroperoxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,6-Di-tert-butyl-p-cresol	In Vitro	Not mutagenic
2,6-Di-tert-butyl-p-cresol	In vivo	Not mutagenic
2-hydroxyethyl methacrylate	In vivo	Not mutagenic
2-hydroxyethyl methacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methyl Methacrylate	In vivo	Not mutagenic
Methyl Methacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Triethylene glycol dimethacrylate	Dermal	Mouse	Not carcinogenic
2-Propenoic acid, 2-methyl-, 3- (trimethoxysilyl)propyl ester, reaction products with vitreous silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
2,6-Di-tert-butyl-p-cresol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Methyl Methacrylate	Ingestion	Rat	Not carcinogenic
Methyl Methacrylate	Inhalation	Human and animal	Not carcinogenic

# Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	<b>Exposure Duration</b>
Triethylene glycol	Ingestion	Not classified for	Mouse	NOAEL 1	1 generation
dimethacrylate		female reproduction		mg/kg/day	
Triethylene glycol	Ingestion	Not classified for	Mouse	NOAEL 1	1 generation
dimethacrylate		male reproduction		mg/kg/day	
Triethylene glycol	Ingestion	Not classified for	Mouse	NOAEL 1	1 generation
dimethacrylate		development		mg/kg/day	
2-Propenoic acid, 2-	Ingestion	Not classified for	Rat	NOAEL 509	1 generation
methyl-, 3-		female reproduction		mg/kg/day	
(trimethoxysilyl)prop					
yl ester, reaction					
products with					
	T	N. ( .1	D.4	NOAFI 407	1
2-Propenoic acid, 2-methyl-, 3-	Ingestion	Not classified for	Rat	NOAEL 497	1 generation
(trimethoxysilyl)prop		male reproduction		mg/kg/day	
yl ester, reaction					
products with					
vitreous silica					
2-Propenoic acid, 2-	Ingestion	Not classified for	Rat	NOAEL	during
methyl-, 3-	8	development		1,350	organogenesis
(trimethoxysilyl)prop		<b>r</b>		mg/kg/day	5 18 12
yl ester, reaction					
products with					
vitreous silica					
t-Amyl	Ingestion	Not classified for	Rat	NOAEL 100	premating into
Hydroperoxide		female reproduction		mg/kg/day	lactation
t-Amyl	Ingestion	Not classified for	Rat	NOAEL 100	5 weeks
Hydroperoxide		male reproduction		mg/kg/day	

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t-Amyl	Ingestion	Not classified for	Rat	NOAEL 100	premating into
Hydroperoxide		development		mg/kg/day	lactation
2,6-Di-tert-butyl-p-	Ingestion	Not classified for	Rat	NOAEL 500	2 generation
cresol		female reproduction		mg/kg/day	
2,6-Di-tert-butyl-p-	Ingestion	Not classified for	Rat	NOAEL 500	2 generation
cresol		male reproduction		mg/kg/day	
2,6-Di-tert-butyl-p-	Ingestion	Not classified for	Rat	NOAEL 100	2 generation
cresol		development		mg/kg/day	
2-hydroxyethyl	Ingestion	Not classified for	Rat	NOAEL	premating & during
methacrylate		female reproduction		1,000	gestation
·		_		mg/kg/day	
2-hydroxyethyl	Ingestion	Not classified for	Rat	NOAEL	49 days
methacrylate		male reproduction		1,000	
_		-		mg/kg/day	
2-hydroxyethyl	Ingestion	Not classified for	Rat	NOAEL	premating & during
methacrylate		development		1,000	gestation
·		_		mg/kg/day	
Methyl Methacrylate	Inhalation	Not classified for	Mouse	NOAEL 36.9	
		male reproduction		mg/l	
Methyl Methacrylate	Inhalation	Not classified for	Rat	NOAEL 8.3	during
·		development		mg/l	organogenesis

# Target Organ(s)

**Specific Target Organ Toxicity - single exposure** 

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
t-Amyl Hydroperoxid e	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Methyl Methacrylate	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	occupational exposure

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure <b>Duration</b>
Triethylene glycol dimethacrylat e	Dermal	kidney and/or bladder   blood	Not classified	Mouse	NOAEL 833 mg/kg/day	78 weeks
2-Propenoic acid, 2- methyl-, 3- (trimethoxysil yl)propyl ester, reaction products with vitreous silica	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure
t-Amyl Hydroperoxid e	Inhalation	endocrine system   liver   immune system   kidney and/or bladder   hematopoietic system   nervous system	Not classified	Rat	NOAEL 0.337 mg/l	28 days
t-Amyl	Ingestion	liver   kidney	Not classified	Rat	NOAEL 100	5 weeks

Hydroperoxid		and/or bladder			mg/kg/day	
e 2,6-Di-tert- butyl-p-cresol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	28 days
2,6-Di-tert- butyl-p-cresol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-Di-tert- butyl-p-cresol	Ingestion	blood	Not classified	Rat	LOAEL 420 mg/kg/day	40 days
2,6-Di-tert- butyl-p-cresol	Ingestion	endocrine system	Not classified	Rat	NOAEL 25 mg/kg/day	2 generation
2,6-Di-tert- butyl-p-cresol	Ingestion	heart	Not classified	Mouse	NOAEL 3,480 mg/kg/day	10 weeks
Methyl Methacrylate	Dermal	peripheral nervous system	Not classified	Human	NOAEL Not available	occupational exposure
Methyl Methacrylate	Inhalation	olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Methyl Methacrylate	Inhalation	kidney and/or bladder	Not classified	Multiple animal species	NOAEL Not available	14 weeks
Methyl Methacrylate	Inhalation	liver	Not classified	Mouse	NOAEL 12.3 mg/l	14 weeks
Methyl Methacrylate	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure

### **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 3: Harmful 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	Туре	Exposure	Test endpoint	Test result
Triethylene	109-16-0	Green algae	Experimental	72 hours	EC50	>100 mg/l

.11	<u> </u>	<u> </u>	1	1	<del>                                     </del>	<u> </u>
glycol						
dimethacrylate	100 16 0	7.1 F: 1	D : 1	061	1.050	1.6.4. /1
Triethylene	109-16-0	Zebra Fish	Experimental	96 hours	LC50	16.4 mg/l
glycol						
dimethacrylate						
Triethylene	109-16-0	Green algae	Experimental	72 hours	NOEC	18.6 mg/l
glycol						
dimethacrylate						
Triethylene	109-16-0	Water flea	Experimental	21 days	NOEC	32 mg/l
glycol						
dimethacrylate						
2-Propenoic	122334-95-6	Activated	Estimated	3 hours	NOEC	>=1,000  mg/l
acid, 2-methyl-,		sludge				, ,
3-						
(trimethoxysily						
l)propyl ester,						
reaction						
products with						
vitreous silica						
2-Propenoic	122334-95-6		Data not			N/A
acid, 2-methyl-,	122334-93-0		available or			IN/A
3-			insufficient for			
(trimethoxysily			classification			
l)propyl ester,						
reaction						
products with						
vitreous silica						
7,7,9(or 7,9,9)-	72869-86-4	Green algae	Endpoint not	72 hours	ErC50	>100 mg/l
Trimethyl-			reached			
4,13-dioxo-						
3,14-dioxa-						
5,12-						
diazahexadecan						
e-1,16-diyl						
bismethacrylate						
7,7,9(or 7,9,9)-	72869-86-4	Water flea	Experimental	48 hours	EC50	>100 mg/l
Trimethyl-						
4,13-dioxo-						
3,14-dioxa-						
5,12-						
diazahexadecan						
e-1,16-diyl						
bismethacrylate						
7,7,9(or 7,9,9)-	72869-86-4	Zebra Fish	Experimental	96 hours	LC50	10.1 mg/l
Trimethyl-	, 2007 00 1	2001411011		5 110 015		1 1 1115/1
4,13-dioxo-						
3,14-dioxa-						
5,12-						
diazahexadecan						
e-1,16-diyl						
bismethacrylate	72070 07 4	C 1	Dada 1 / /	72.1	F.:C10	> 100 /1
7,7,9(or 7,9,9)-	72869-86-4	Green algae	Endpoint not	72 hours	ErC10	>100 mg/l
Trimethyl-			reached			
4,13-dioxo-						
3,14-dioxa-						

5,12-						
diazahexadecan						
e-1,16-diyl						
bismethacrylate						
2-Propenoic	1224866-76-5	Green algae	Endpoint not	72 hours	EC50	>100 mg/l
acid, 2-methyl-,	122.000 70 0		reached	72 110 413		100 mg/1
1,1'-[1-						
(hydroxymethy						
1)-1,2-						
ethanediyl]						
ester, reaction						
products with						
2-hydroxy-1,3-						
propanediyl						
dimethacrylate						
and phosphorus						
oxide						
2-Propenoic	1224866-76-5	Water flea	Experimental	48 hours	EC50	>100 mg/l
acid, 2-methyl-,			1			
1,1'-[1-						
(hydroxymethy						
1)-1,2-						
ethanediyl]						
ester, reaction						
products with						
2-hydroxy-1,3-						
propanediyl						
dimethacrylate						
and phosphorus						
oxide						
2-Propenoic	1224866-76-5	Green algae	Experimental	72 hours	NOEC	56 mg/l
acid, 2-methyl-,						
1,1'-[1-						
(hydroxymethy						
1)-1,2-						
ethanediyl]						
ester, reaction						
products with						
2-hydroxy-1,3-						
propanediyl						
dimethacrylate						
and phosphorus oxide						
Silane,	92797-60-9		Data not			N/A
trimethoxyocty	74 7 -00-9 		available or			1 V / A
l-, hydrolysis			insufficient for			
products with			classification			
silica			Ciassification			
t-Amyl	3425-61-4	Activated	Estimated	3 hours	EC50	138 mg/l
Hydroperoxide	J74J-01-4	sludge	Lamateu	5 Hours	LCJU	1.50 mg/1
t-Amyl	3425-61-4	Water flea	Estimated	48 hours	EC50	6.7 mg/l
Hydroperoxide	J74J-01-4	vv atci iiea	Lamateu	TO HOUIS	LCJU	0.7 mg/1
t-Amyl	3425-61-4	Zebra Fish	Estimated	96 hours	LC50	11.3 mg/l
Hydroperoxide	3423-01-4	Zeula Fisii	Lamateu	20 HOUIS	LCJU	11.3 IIIg/I
	3425-61-4	Green algae	Experimental	72 hours	EC50	1 2 mg/l
t-Amyl	J44J-01-4	oreen argae	<sub>L</sub> Experimental	12 HOUIS	ITC30	1.2 mg/l

3425-61-4	Green algae	Experimental	72 hours	EC10	0.38 mg/l
		1			
128-37-0	Activated	Experimental	3 hours	EC50	>10,000 mg/l
		F			., 8
128-37-0		Experimental	72 hours	EC50	>0.4 mg/l
			, = ,		
128-37-0	Water flea	Experimental	48 hours	EC50	0.48 mg/l
120 57 0	, ator rica	Emperimentar	To Hours	Less	0. 10 1118/1
128-37-0	Zehra Eish	Experimental	96 hours	No tox obs at	>100 mg/l
120 37 0	2014 1 1511	Experimental	) Hours		7 100 mg/1
128-37-0	Green algae	Evnerimental	72 hours		0.4 mg/l
120 57 0	Green argue	Experimental	/2 nours	Leto	0.7 mg/1
128-37-0	Medaka	Evperimental	12 days	NOEC	0.053 mg/l
120-37-0	IVICUAKA	Experimental	42 days	NOEC	0.033 mg/1
128 27 0	Water flee	Evperimental	21 days	NOEC	0.023 mg/l
120-37-0	water fiea	Experimental	21 days	NOEC	0.023 mg/1
969 77 O	Turbot	Analogous	06 hours	I C50	833 mg/l
000-77-9	1 11001		90 Hours	LC30	055 Hig/1
060 77 0	Eath and		06 1	I C50	227/1
808-77-9	1	Experimental	96 nours	LC30	227 mg/l
0.60.77.0		F	72 1	ECSO	710 /1
868-77-9	Green algae	Experimental	/2 nours	EC30	710 mg/l
060.77.0	XX . CI	D : 1	40.1	EGEO	200 //
868-77-9	Water flea	Experimental	48 hours	EC50	380 mg/l
0.60. 77. 0		D	G0.1	NOEG	1.60 //
868-77-9	Green algae	Experimental	72 hours	NOEC	160 mg/l
868-77-9	Water flea	Experimental	21 days	NOEC	24.1 mg/l
868-77-9		Experimental	16 hours	EC0	>3,000 mg/l
868-77-9		Experimental	18 hours	LD50	<98 mg per kg of
					bodyweight
80-62-6	Green algae	Experimental	72 hours	EC50	>110 mg/l
80-62-6	Rainbow trout	Experimental	96 hours	LC50	>79 mg/l
80-62-6	Water flea	Experimental	48 hours	EC50	69 mg/l
80-62-6	Green algae	Experimental	72 hours	NOEC	110 mg/l
80-62-6	Water flea	Experimental	21 days	NOEC	37 mg/l
80-62-6	Activated	Experimental	30 minutes	EC20	150 mg/l
	sludge				
80-62-6	Soil microbes	Experimental	28 days	NOEC	>1,000 mg/kg (Dry
					Weight)
6046-93-1	Green algae	Estimated	72 hours	EC50	0.33 mg/l
6046-93-1	Water flea	Estimated	48 hours	EC50	0.04 mg/l
				1	l .
	3425-61-4 128-37-0 128-37-0 128-37-0 128-37-0 128-37-0 128-37-0 128-37-0 128-37-0 868-77-9 868-77-9 868-77-9 868-77-9 868-77-9 868-77-9 868-77-9 868-77-9 868-76-6 80-62-6 80-62-6 80-62-6 80-62-6 80-62-6 80-62-6 80-62-6	128-37-0 Activated sludge 128-37-0 Green algae 128-37-0 Water flea 128-37-0 Zebra Fish 128-37-0 Green algae 128-37-0 Medaka 128-37-0 Water flea 868-77-9 Fathead minnow 868-77-9 Green algae 868-77-9 Water flea 868-77-9 Water flea 868-77-9 Green algae 868-77-9 Water flea 868-77-9 Soriem algae 80-62-6 Green algae 80-62-6 Green algae 80-62-6 Soil microbes 80-62-6 Soil microbes	Activated sludge 128-37-0 Green algae Experimental 128-37-0 Water flea Experimental 128-37-0 Zebra Fish Experimental 128-37-0 Green algae Experimental 128-37-0 Green algae Experimental 128-37-0 Medaka Experimental 128-37-0 Water flea Experimental 128-37-0 Fathead Fathead 128-37-0 F	Activated sludge  128-37-0 Green algae Experimental 72 hours  128-37-0 Water flea Experimental 96 hours  128-37-0 Green algae Experimental 72 hours  128-37-0 Green algae Experimental 72 hours  128-37-0 Medaka Experimental 42 days  128-37-0 Medaka Experimental 21 days  128-37-0 Water flea Experimental 21 days  868-77-9 Turbot Analogous Compound 96 hours  668-77-9 Fathead Experimental 96 hours  668-77-9 Green algae Experimental 72 hours  868-77-9 Water flea Experimental 48 hours  868-77-9 Water flea Experimental 72 hours  868-77-9 Water flea Experimental 72 hours  868-77-9 Water flea Experimental 16 hours  868-77-9 Experimental 16 hours  868-77-9 Experimental 172 hours  868-77-9 Experimental 18 hours  868-77-9 Experimental 196 hours  868-77-9 Experimental 172 hours  80-62-6 Green algae Experimental 72 hours  80-62-6 Green algae Experimental 72 hours  80-62-6 Water flea Experimental 72 hours  80-62-6 Green algae Experimental 30 minutes  80-62-6 Soil microbes Experimental 28 days  6046-93-1 Green algae Experimental 28 days	128-37-0   Activated sludge   Experimental   3 hours   EC50     128-37-0   Green algae   Experimental   72 hours   EC50     128-37-0   Water flea   Experimental   48 hours   EC50     128-37-0   Zebra Fish   Experimental   96 hours   No tox obs at lmt of water sol     128-37-0   Green algae   Experimental   72 hours   EC10     128-37-0   Medaka   Experimental   42 days   NOEC     128-37-0   Water flea   Experimental   21 days   NOEC     128-37-0   Water flea   Experimental   21 days   NOEC     128-37-0   Water flea   Experimental   21 days   NOEC     128-37-0   Water flea   Experimental   96 hours   LC50     128-37-0   Green algae   Experimental   72 hours   EC50     128-37-9   Fathead   Experimental   72 hours   EC50     128-37-9   Green algae   Experimental   72 hours   EC50     128-37-9   Water flea   Experimental   72 hours   EC50     128-37-9   Water flea   Experimental   72 hours   EC50     128-37-0   Water flea   Experimental   72 hours   EC50     128-37-0   Water flea   Experimental   72 hours   EC50     128-37-0   Experimental   16 hours   EC50     128-37-0   Experimental   18 hours   EC50     128-37-0   Experimental   27 hours   EC50     128-37-0   Experimental   28 hours   EC50     128-37-0   Experimental   29 hours   EC50     128-37-0   Experimental   21 days   NOEC     128-37-0   NOEC   Experimental   21 days   NOEC     128-37-0   Experimental   22 days   NOEC     128-37-0   Experimental   23 days   NOEC     128-37-0   Experimental   24 days   NOEC     128-37-0   Experimental   28 days   NOEC     128-37-0   Experimental   Experimental   28 days   NOEC     128-37-0   Experimental   Experimental   Experimental   Experimental   Experimental

copper(2+) salt,						
monohydrate						
Acetic acid,	6046-93-1	Fathead	Estimated	22 days	EC10	0.019 mg/l
/			Estimated	32 days	EC10	0.019 mg/1
copper(2+) salt,		minnow				
monohydrate	6046 02 1	C 1	E .: . 1		NOEG	0.000 //
Acetic acid,	6046-93-1	Green algae	Estimated		NOEC	0.069 mg/l
copper(2+) salt,						
monohydrate						
Acetic acid,	6046-93-1	Water flea	Estimated	7 days	NOEC	0.01 mg/l
copper(2+) salt,						
monohydrate						
Acetic acid,	6046-93-1	Activated	Estimated		EC50	22 mg/l
copper(2+) salt,		sludge				
monohydrate						
Acetic acid,	6046-93-1	Barley	Estimated	4 days	NOEC	50 mg/kg (Dry Weight)
copper(2+) salt,						
monohydrate						
Acetic acid,	6046-93-1	Bobwhite quail	Estimated	14 days	LD50	4,402 mg per kg of
copper(2+) salt,						bodyweight
monohydrate						
Acetic acid,	6046-93-1	Redworm	Estimated	56 days	NOEC	31 mg/kg (Dry Weight)
copper(2+) salt,						
monohydrate						
Acetic acid,	6046-93-1	Sediment	Estimated	28 days	NOEC	57.5 mg/kg (Dry
copper(2+) salt,		Worm				Weight)
monohydrate						
Acetic acid,	6046-93-1	Soil microbes	Estimated	4 days	NOEC	38 mg/kg (Dry Weight)
copper(2+) salt,						
monohydrate						
Acetic acid,	6046-93-1	Springtail	Estimated	28 days	NOEC	87.7 mg/kg (Dry
copper(2+) salt,		1 5				Weight)
monohydrate						
	1					

# 12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Triethylene	109-16-0	1	28 days	CO2 evolution	85 % weight	OECD 301B - Modified
glycol		Biodegradation				sturm or CO2
dimethacrylate						
2-Propenoic	122334-95-6	Data not	N/A	N/A	N/A	N/A
acid, 2-methyl-,		available-				
3-		insufficient				
(trimethoxysily						
l)propyl ester,						
reaction						
products with						
vitreous silica						
7,7,9(or 7,9,9)-	72869-86-4	1 *	28 days	CO2 evolution	22 %CO2	OECD 301B - Modified
Trimethyl-		Biodegradation			evolution/THC	sturm or CO2
4,13-dioxo-					O2 evolution	
3,14-dioxa-					(does not pass	
5,12-					10-day	
diazahexadecan					window)	
e-1,16-diyl						
bismethacrylate						

\_\_\_\_\_

2-Propenoic acid, 2-methyl-, 1,1'-[1- (hydroxymethy	1224866-76-5	Experimental Biodegradation	28 days	BOD	82 %BOD/ThB OD	OECD 301F - Manometric respirometry
l)-1,2- ethanediyl] ester, reaction products with 2-hydroxy-1,3- propanediyl dimethacrylate and phosphorus						
oxide Silane, trimethoxyocty 1-, hydrolysis products with silica	92797-60-9	Data not available- insufficient	N/A	N/A	N/A	N/A
t-Amyl Hydroperoxide	3425-61-4	Estimated Biodegradation	28 days	BOD	0 %BOD/ThB OD	OECD 301D - Closed bottle test
2,6-Di-tert- butyl-p-cresol	128-37-0	Data not available- insufficient	N/A	N/A	N/A	N/A
2-hydroxyethyl methacrylate	868-77-9	Experimental Hydrolysis		Hydrolytic half-life basic pH	10.9 days (t 1/2)	OECD 111 Hydrolysis func of pH
2-hydroxyethyl methacrylate	868-77-9	Experimental Biodegradation	28 days	BOD	84 %BOD/CO D	OECD 301D - Closed bottle test
Methyl Methacrylate	80-62-6	Experimental Biodegradation	14 days	BOD	OD	OECD 301C - MITI test (I)
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Analogous Compound Biodegradation	14 days	BOD	74 %BOD/ThB OD	OECD 301C - MITI test (I)

# 12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Triethylene	109-16-0	Experimental		Log Kow	2.3	Non-standard method
glycol		Bioconcentrati				
dimethacrylate		on				
2-Propenoic	122334-95-6	Data not	N/A	N/A	N/A	N/A
acid, 2-methyl-,		available or				
3-		insufficient for				
(trimethoxysily		classification				
l)propyl ester,						
reaction						
products with						
vitreous silica						
7,7,9(or 7,9,9)-	72869-86-4	Experimental		Log Kow	3.39	Non-standard method
Trimethyl-		Bioconcentrati				
4,13-dioxo-		on				
3,14-dioxa-						
5,12-						
diazahexadecan						
e-1,16-diyl						

bismethacrylate						
2-Propenoic acid, 2-methyl-, 1,1'-[1- (hydroxymethy l)-1,2- ethanediyl] ester, reaction products with 2-hydroxy-1,3- propanediyl dimethacrylate and phosphorus oxide	1224866-76-5	Experimental Bioconcentrati on		Log Kow	-0.2	Non-standard method
Silane, trimethoxyocty l-, hydrolysis products with silica	92797-60-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
t-Amyl Hydroperoxide	3425-61-4	Estimated Bioconcentrati on		Log Kow	1.43	Estimated: Octanol- water partition coefficient
2,6-Di-tert- butyl-p-cresol	128-37-0	Experimental BCF - Carp	56 days	Bioaccumulatio n factor	1277	OECD 305E - Bioaccumulation flow- through fish test
2-hydroxyethyl methacrylate	868-77-9	Experimental Bioconcentrati on		Log Kow	0.42	OECD 107 log Kow shke flsk mtd
Methyl Methacrylate	80-62-6	Experimental Bioconcentrati on		Log Kow	1.38	OECD 107 log Kow shke flsk mtd
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Analogous Compound Bioconcentrati on		Log Kow	-0.17	

#### 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. 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.

## 3M<sup>TM</sup> RelyX<sup>TM</sup> Universal Resin Cement Base Paste

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:**

This product is regulated by the Therapeutics Goods Administration and is exempt from compliance with the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

## **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



# Safety Data Sheet

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**Document group:** 41-5399-5 **Version number:** 2.00

**Issue Date:** 19/05/2022 **Supersedes date:** 13/12/2020

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> RelyX<sup>TM</sup> Universal Resin Cement Catalyst Paste

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

#### Recommended use

Dental Product, Dental Cement

#### Restrictions on use

For use only by dental professionals in approved indications.

#### 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 Sensitizer: Category 1A.

#### 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**

H317 May cause an allergic skin reaction.

#### **Precautionary statements**

**Prevention:** 

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.

P333 + P313 If skin irritation or rash occurs: 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

Harmful to aquatic life with long lasting effects.

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

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Diurethanedimethacrylate	72869-86-4	20 - 40
Ytterbium (III) fluoride	13760-80-0	30 - 40
Glass powder (65997-17-3), surface	None	15 - 30
modified with 2-propenoic acid, 2		
methyl3-(trimethoxysilyl)propyl ester		
(2530-85-0) and phenyltrimethoxy silane		
(2996-92-1), bulk material		
Trithylene Glycol Dimethacrylate	109-16-0	< 10
Silane, trimethoxyoctyl-, hydrolysis	92797-60-9	< 5
products with silica		
L-Ascorbic acid, 6-hexadecanoate, hydrate	2094655-53-3	< 2
(1:2)		
Titanium dioxide	13463-67-7	< 1
Triphenyl Phosphite	101-02-0	< 1

## 3M<sup>TM</sup> RelyX<sup>TM</sup> Universal Resin Cement Catalyst Paste

2-hydroxyethyl methacrylate	868-77-9	< 0.5
Ethyl 4-dimethylaminobenzoate	10287-53-3	< 0.2

## **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

No need for first aid is anticipated.

#### 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**

SubstanceConditionCarbon monoxide.During combustion.Carbon dioxide.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.

# **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.

## 6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. 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

A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. Do not handle until all safety precautions have been read and understood. 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.) Do not get in eyes. Use personal protective equipment (eg. gloves, respirators...) as required.

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

Store away from heat. 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
Titanium dioxide	13463-67-7	ACGIH	TWA:10 mg/m <sup>3</sup>	A4: Not class. as human
				carcin
Titanium dioxide	13463-67-7	Australia OELs	TWA(Inspirable dust)(8	
			hours):10 mg/m3	

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 in a well-ventilated area.

## 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.

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

See Section 7.1 for additional information on skin protection.

## **Respiratory protection**

None required.

# **SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties

Information on basic physical and chemical properties				
Physical state	Solid.			
Specific Physical Form:	Paste			
Colour	Yellow			
Odour	Slight Acrylic			
Odour threshold	No data available.			
рН	Not applicable.			
Melting point/Freezing point	No data available.			
Boiling point/Initial boiling point/Boiling range	Not applicable.			
Flash point	Flash point > 93 °C (200 °F)			
Evaporation rate	No data available.			
Flammability (solid, gas)	Not classified			
Flammable Limits(LEL)	Not applicable.			
Flammable Limits(UEL)	Not applicable.			
Vapour pressure	No data available.			
Vapor Density and/or Relative Vapor Density	No data available.			
Density	Approximately 2.1 g/cm3 [Details:20°C]			
Relative density	Approximately - 2.1 [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/Kinematic Viscosity	10 Pa-s - 100 Pa-s			
Volatile organic compounds (VOC)	No data available.			
Percent volatile	No data available.			
VOC less H2O & exempt solvents	No data available.			

# **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.

## 10.4. Possibility of hazardous reactions

Hazardous polymerisation will not occur.

## 10.5 Incompatible materials

Strong oxidising agents.

## 10.6 Hazardous decomposition products

Substance
None known.

Condition

# **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

This product may have a characteristic odour; however, no adverse health effects are anticipated.

#### Skin contact

Contact with the skin during product use is not expected to result in significant irritation. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

#### Eye contact

Contact with the eyes during product use is not expected to result in significant irritation.

### **Ingestion**

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

#### Carcinogenicity:

Exposures needed to cause the following health effect(s) are not expected during normal, intended use:

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	Ingestion		No data available; calculated ATE >5,000 mg/kg
Ytterbium (III) fluoride	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Ytterbium (III) fluoride	Ingestion	Rat	LD50 > 5,000  mg/kg
Diurethanedimethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Diurethanedimethacrylate	Ingestion	Rat	LD50 > 5,000 mg/kg

Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material	Dermal		LD50 estimated to be > 5,000 mg/kg
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Trithylene Glycol Dimethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Trithylene Glycol Dimethacrylate	Ingestion	Rat	LD50 10,837 mg/kg
Triphenyl Phosphite	Dermal	Rabbit	LD50 > 2,000  mg/kg
Triphenyl Phosphite	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.7 mg/l
Triphenyl Phosphite	Ingestion	Rat	LD50 1,590 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
2-hydroxyethyl methacrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-hydroxyethyl methacrylate	Ingestion	Rat	LD50 5,564 mg/kg
Ethyl 4-dimethylaminobenzoate	Dermal	Rat	LD50 > 2,000  mg/kg
Ethyl 4-dimethylaminobenzoate	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

# Skin Corrosion/Irritation

Name	Species	Value
Glass powder (65997-17-3), surface modified with	Professional judgement	No significant irritation
2-propenoic acid, 2 methyl3-		
(trimethoxysilyl)propyl ester (2530-85-0) and		
phenyltrimethoxy silane (2996-92-1), bulk material		
Trithylene Glycol Dimethacrylate	Guinea pig	Mild irritant
Triphenyl Phosphite	Rabbit	Irritant
Titanium dioxide	Rabbit	No significant irritation
2-hydroxyethyl methacrylate	Rabbit	Minimal irritation
Ethyl 4-dimethylaminobenzoate	Rabbit	No significant irritation

**Serious Eye Damage/Irritation** 

Name	Species	Value
Ytterbium (III) fluoride	Professional judgement	Mild irritant
Glass powder (65997-17-3), surface modified with	Professional judgement	No significant irritation
2-propenoic acid, 2 methyl3-		
(trimethoxysilyl)propyl ester (2530-85-0) and		
phenyltrimethoxy silane (2996-92-1), bulk material		
Trithylene Glycol Dimethacrylate	Professional judgement	Moderate irritant
Triphenyl Phosphite	Rabbit	Moderate irritant
Titanium dioxide	Rabbit	No significant irritation
2-hydroxyethyl methacrylate	Rabbit	Moderate irritant
Ethyl 4-dimethylaminobenzoate	Rabbit	No significant irritation

# **Skin Sensitisation**

Name	Species	Value

Diurethanedimethacrylate	Guinea pig	Sensitising
Trithylene Glycol Dimethacrylate	Human and animal	Sensitising
Triphenyl Phosphite	Mouse	Sensitising
Titanium dioxide	Human and animal	Not classified
2-hydroxyethyl methacrylate	Human and animal	Sensitising
Ethyl 4-dimethylaminobenzoate		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
Trithylene Glycol Dimethacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
2-hydroxyethyl methacrylate	In vivo	Not mutagenic
2-hydroxyethyl methacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Ethyl 4-dimethylaminobenzoate	In vivo	Not mutagenic
Ethyl 4-dimethylaminobenzoate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Trithylene Glycol Dimethacrylate	Dermal	Mouse	Not carcinogenic
Titanium dioxide	Ingestion	Multiple animal	Not carcinogenic
		species	
Titanium dioxide	Inhalation	Rat	Carcinogenic.

# Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Trithylene Glycol	Ingestion	Not classified for	Mouse	NOAEL 1	1 generation
Dimethacrylate		female reproduction		mg/kg/day	
Trithylene Glycol	Ingestion	Not classified for	Mouse	NOAEL 1	1 generation
Dimethacrylate		male reproduction		mg/kg/day	
Trithylene Glycol	Ingestion	Not classified for	Mouse	NOAEL 1	1 generation
Dimethacrylate		development		mg/kg/day	
2-hydroxyethyl	Ingestion	Not classified for	Rat	NOAEL	premating & during
methacrylate		female reproduction		1,000	gestation
				mg/kg/day	
2-hydroxyethyl	Ingestion	Not classified for	Rat	NOAEL	49 days
methacrylate		male reproduction		1,000	
				mg/kg/day	
2-hydroxyethyl	Ingestion	Not classified for	Rat	NOAEL	premating & during
methacrylate		development		1,000	gestation
				mg/kg/day	
Ethyl 4-	Ingestion	Not classified for	Rat	NOAEL 600	premating into
dimethylaminobenzo		female reproduction		mg/kg/day	lactation
ate			<u> </u>		
Ethyl 4-	Ingestion	Not classified for	Rat	NOAEL 50	premating into
dimethylaminobenzo		development		mg/kg/day	lactation
ate					
Ethyl 4-	Ingestion	Toxic to male	Rat	NOAEL 50	53 days
dimethylaminobenzo		reproduction		mg/kg/day	

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## 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
Trithylene Glycol Dimethacrylat e	Dermal	kidney and/or bladder   blood	Not classified	Mouse	NOAEL 833 mg/kg/day	78 weeks
Triphenyl Phosphite	Ingestion	nervous system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 15 mg/kg/day	28 days
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Ethyl 4- dimethylamin obenzoate	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 74 mg/kg/day	28 days
Ethyl 4- dimethylamin obenzoate	Ingestion	liver   heart   endocrine system   gastrointestinal tract   bone, teeth, nails, and/or hair   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system	Not classified	Rat	NOAEL 900 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**

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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 3: Harmful 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	Туре	Exposure	Test endpoint	Test result
Diurethanedim	72869-86-4	Green algae	Endpoint not	72 hours	ErC50	>100 mg/l
ethacrylate			reached			
Diurethanedim	72869-86-4	Water flea	Experimental	48 hours	EC50	>100 mg/l
ethacrylate						
Diurethanedim	72869-86-4	Zebra Fish	Experimental	96 hours	LC50	10.1 mg/l
ethacrylate						
Diurethanedim	72869-86-4	Green algae	Endpoint not	72 hours	ErC10	>100 mg/l
ethacrylate			reached			
Ytterbium (III)	13760-80-0		Data not			N/A
fluoride			available or			
			insufficient for			
			classification			
Glass powder	None		Data not			N/A
(65997-17-3),			available or			
surface			insufficient for			
modified with			classification			
2-propenoic						
acid, 2 methyl3-						
(trimethoxysily						
l)propyl ester						
(2530-85-0)						
and						
phenyltrimetho						
xy silane						
(2996-92-1),						
bulk material						
Trithylene	109-16-0	Green algae	Experimental	72 hours	EC50	>100 mg/l
Glycol			1			
Dimethacrylate						
Trithylene	109-16-0	Zebra Fish	Experimental	96 hours	LC50	16.4 mg/l
Glycol			_			
Dimethacrylate						
Trithylene	109-16-0	Green algae	Experimental	72 hours	NOEC	18.6 mg/l
Glycol		_				
Dimethacrylate						
Trithylene	109-16-0	Water flea	Experimental	21 days	NOEC	32 mg/l
Glycol						

Dimethacrylate						
Silane,	92797-60-9		Data not			N/A
trimethoxyocty	22171 00-7		available or			1 1/2 1
l-, hydrolysis			insufficient for			
products with			classification			
silica			Classification			
L-Ascorbic	2094655-53-3	Green algae	Estimated	72 hours	No tox obs at	>100 mg/l
acid, 6-				, = ===================================	lmt of water sol	
hexadecanoate,						
hydrate (1:2)						
L-Ascorbic	2094655-53-3	Water flea	Estimated	48 hours	No tox obs at	>100 mg/l
acid, 6-					lmt of water sol	
hexadecanoate,						
hydrate (1:2)						
L-Ascorbic	2094655-53-3	Green algae	Estimated	72 hours	No tox obs at	100 mg/l
acid, 6-					lmt of water sol	
hexadecanoate,						
hydrate (1:2)						
Titanium	13463-67-7	Activated	Experimental	3 hours	NOEC	>=1,000 mg/l
dioxide		sludge	1			
Titanium	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
dioxide			1			
Titanium	13463-67-7	Fathead	Experimental	96 hours	LC50	>100 mg/l
dioxide		minnow	1			
Titanium	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
dioxide			1			
Titanium	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l
dioxide			1			, ,
Triphenyl	101-02-0	Green algae	Experimental	72 hours	EC50	>16 mg/l
Phosphite			1			
Triphenyl	101-02-0	Medaka	Experimental	96 hours	LC50	>4.3 mg/l
Phosphite			1			
Triphenyl	101-02-0	Water flea	Experimental	48 hours	EC50	0.45 mg/l
Phosphite			1			
Triphenyl	101-02-0	Green algae	Experimental	72 hours	NOEC	16 mg/l
Phosphite			1			
2-hydroxyethyl	868-77-9	Turbot	Analogous	96 hours	LC50	833 mg/l
methacrylate			Compound			
	868-77-9	Fathead	Experimental	96 hours	LC50	227 mg/l
methacrylate		minnow	1			
2-hydroxyethyl	868-77-9	Green algae	Experimental	72 hours	EC50	710 mg/l
methacrylate			1			
	868-77-9	Water flea	Experimental	48 hours	EC50	380 mg/l
methacrylate			1			
2-hydroxyethyl	868-77-9	Green algae	Experimental	72 hours	NOEC	160 mg/l
methacrylate			•			
2-hydroxyethyl	868-77-9	Water flea	Experimental	21 days	NOEC	24.1 mg/l
methacrylate			1			
2-hydroxyethyl	868-77-9		Experimental	16 hours	EC0	>3,000 mg/l
methacrylate						
2-hydroxyethyl	868-77-9		Experimental	18 hours	LD50	<98 mg per kg of
methacrylate		1	1			bodyweight
Ethyl 4-	10287-53-3	Activated	Experimental	3 hours	EC50	>1,000 mg/l
dimethylamino		sludge	1			
	L	-ن	1	1	1	1

benzoate						
Ethyl 4-	10287-53-3	Green algae	Experimental	72 hours	EC50	2.8 mg/l
dimethylamino						
benzoate						
Ethyl 4-	10287-53-3	Rainbow trout	Experimental	96 hours	LC50	1.9 mg/l
dimethylamino						
benzoate						
Ethyl 4-	10287-53-3	Water flea	Experimental	48 hours	EC50	4.5 mg/l
dimethylamino						
benzoate						
Ethyl 4-	10287-53-3	Green algae	Experimental	72 hours	ErC10	0.71 mg/l
dimethylamino						
benzoate						

# 12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Diurethanedim ethacrylate	72869-86-4	Experimental Biodegradation	28 days	CO2 evolution	22 %CO2 evolution/THC O2 evolution (does not pass 10-day window)	OECD 301B - Modified sturm or CO2
Ytterbium (III) fluoride	13760-80-0	Data not available-insufficient	N/A	N/A	N/A	N/A
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl3- (trimethoxysily l)propyl ester (2530-85-0) and phenyltrimetho xy silane (2996-92-1), bulk material	None	Data not available- insufficient	N/A	N/A	N/A	N/A
Trithylene Glycol Dimethacrylate	109-16-0	Experimental Biodegradation	28 days	CO2 evolution	85 % weight	OECD 301B - Modified sturm or CO2
Silane, trimethoxyocty l-, hydrolysis products with silica	92797-60-9	Data not available- insufficient	N/A	N/A	N/A	N/A
L-Ascorbic acid, 6- hexadecanoate, hydrate (1:2)	2094655-53-3	Estimated Biodegradation	28 days	CO2 evolution	93 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2
Titanium dioxide	13463-67-7	Data not available-	N/A	N/A	N/A	N/A

		insufficient				
Triphenyl	101-02-0	Experimental		Hydrolytic	0.5 hours (t	Non-standard method
Phosphite		Hydrolysis		half-life	1/2)	
Triphenyl	101-02-0	Estimated	14 days	BOD	85 %BOD/ThB	OECD 301C - MITI
Phosphite		Biodegradation			OD	test (I)
2-hydroxyethyl	868-77-9	Experimental		Hydrolytic	10.9 days (t	OECD 111 Hydrolysis
methacrylate		Hydrolysis		half-life basic	1/2)	func of pH
				pН		
2-hydroxyethyl	868-77-9	Experimental	28 days	BOD	84 %BOD/CO	OECD 301D - Closed
methacrylate		Biodegradation			D	bottle test
Ethyl 4-	10287-53-3	Experimental	28 days	CO2 evolution	40 %CO2	OECD 301B - Modified
dimethylamino		Biodegradation			evolution/THC	sturm or CO2
benzoate					O2 evolution	

# 12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Diurethanedim ethacrylate	72869-86-4	Experimental Bioconcentrati on		Log Kow	3.39	Non-standard method
Ytterbium (III) fluoride	13760-80-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl3- (trimethoxysily l)propyl ester (2530-85-0) and phenyltrimetho xy silane (2996-92-1), bulk material	None	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Trithylene Glycol Dimethacrylate	109-16-0	Experimental Bioconcentrati on		Log Kow	2.3	Non-standard method
Silane, trimethoxyocty l-, hydrolysis products with silica	92797-60-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
L-Ascorbic acid, 6- hexadecanoate, hydrate (1:2)	2094655-53-3	Estimated Bioconcentrati on		Log Kow	>6.5	Non-standard method
Titanium dioxide	13463-67-7	Experimental BCF - Carp	42 days	Bioaccumulatio n factor		Non-standard method
Triphenyl Phosphite	101-02-0	Estimated Bioconcentrati		Bioaccumulatio n factor	13800	Estimated: Bioconcentration factor

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		on			
2-hydroxyethyl	868-77-9	Experimental	Log Kow	0.42	OECD 107 log Kow
methacrylate		Bioconcentrati			shke flsk mtd
		on			
Ethyl 4-	10287-53-3	Experimental	Log Kow	3.2	Non-standard method
dimethylamino		Bioconcentrati			
benzoate		on			

### 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 waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility.

# **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:** 

## 3M<sup>TM</sup> RelyX<sup>TM</sup> Universal Resin Cement Catalyst Paste

This product is regulated by the Therapeutics Goods Administration and is exempt from compliance with the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

# **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