



## 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™ Filtek™ Z250™ Universal Restorative Shades B0.5 And B1

#### Product Identification Numbers

70-2010-2231-9      70-2010-2247-5      70-2010-2570-0

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

##### Recommended use

Dental Product, Dental restorative.

##### Restrictions on use

For use by dental professionals 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 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**

H317 May cause an allergic skin reaction.

**Precautionary statements**

**Prevention:**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P272 Contaminated work clothing should not be allowed out of the workplace.

**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**

Although titanium dioxide is classified as a carcinogen, exposures associated with this health effect are not expected during normal, intended use of this product.

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

May be harmful if swallowed.

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

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Silane Treated Ceramic	444758-98-9	75 - 85
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	1 - 10
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	41637-38-1	1 - 10
Diurethane Dimethacrylate (UDMA)	72869-86-4	1 - 10
Triethylene Glycol Dimethacrylate (TEGDMA)	109-16-0	< 5
Aluminium oxide	1344-28-1	<= 1

Titanium Oxide	13463-67-7	< 0.5
N,N-Dimethylbenzocaine	10287-53-3	< 0.3

## 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 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

#### Substance

Carbon monoxide.  
Carbon dioxide.

#### Condition

During combustion.  
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 breathe 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. Wash contaminated clothing before reuse. Do not get in eyes. Use personal protective equipment (eg. gloves, respirators...) as required.

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

No special storage requirements.

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

### **8.1 Control parameters**

#### **Occupational exposure limits**

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

<b>Ingredient</b>	<b>CAS Nbr</b>	<b>Agency</b>	<b>Limit type</b>	<b>Additional comments</b>
Aluminium oxide	1344-28-1	Australia OELs	TWA(Inspirable dust)(8 hours):10 mg/m3	
Aluminum, insoluble compounds	1344-28-1	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin
Titanium Oxide	13463-67-7	ACGIH	TWA(Respirable nanoscale particles):0.2 mg/m3;TWA(Respirable finescale particles):2.5 mg/m3	A3: Confirmed animal carcinogen.
Titanium Oxide	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

Physical state	Solid.
Specific Physical Form:	Paste
Colour	White
Odour	Slight Acrylate
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	<i>Not applicable.</i>
Flash point	No flash point
Evaporation rate	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>Not applicable.</i>
Vapor Density and/or Relative Vapor Density	<i>Not applicable.</i>
Density	2.1 g/cm <sup>3</sup>
Relative density	2.1 [Ref.Std:WATER=1]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>Not applicable.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity/Kinematic Viscosity	Approximately 300,000 mPa-s
Volatile organic compounds (VOC)	<i>No data available.</i>
Percent volatile	<i>No data available.</i>
VOC less H <sub>2</sub> O & exempt solvents	<i>No data available.</i>

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is considered to be non reactive under normal use conditions

### 10.2 Chemical stability

Stable.

### 10.3. Conditions to avoid

None known.

### 10.4. Possibility of hazardous reactions

Hazardous polymerisation will not occur.

**10.5 Incompatible materials**

None known.

**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. May cause additional health effects (see below).

**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**

May be harmful if swallowed.

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 >2,000 - =5,000 mg/kg
Silane Treated Ceramic	Dermal		LD50 estimated to be > 5,000 mg/kg

Silane Treated Ceramic	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	Dermal	Rat	LD50 > 2,000 mg/kg
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	Ingestion	Rat	LD50 > 2,000 mg/kg
Diurethane Dimethacrylate (UDMA)	Dermal	Rat	LD50 > 2,000 mg/kg
Diurethane Dimethacrylate (UDMA)	Ingestion	Rat	LD50 > 5,000 mg/kg
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Ingestion	Rat	LD50 > 11,700 mg/kg
Triethylene Glycol Dimethacrylate (TEGDMA)	Dermal	Mouse	LD50 > 2,000
Triethylene Glycol Dimethacrylate (TEGDMA)	Ingestion	Rat	LD50 10,837 mg/kg
Aluminium oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Aluminium oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Titanium Oxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Oxide	Ingestion	Rat	LD50 > 10,000 mg/kg
N,N-Dimethylbenzocaine	Dermal	Rat	LD50 > 2,000 mg/kg
N,N-Dimethylbenzocaine	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Silane Treated Ceramic	similar compounds	No significant irritation
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	In vitro data	No significant irritation
Diurethane Dimethacrylate (UDMA)	Rabbit	No significant irritation
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Rabbit	No significant irritation
Triethylene Glycol Dimethacrylate (TEGDMA)	Rabbit	No significant irritation
Aluminium oxide	Rabbit	No significant irritation
Titanium Oxide	Rabbit	No significant irritation
N,N-Dimethylbenzocaine	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Silane Treated Ceramic	similar compounds	Mild irritant
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	In vitro data	No significant irritation
Diurethane Dimethacrylate (UDMA)	Rabbit	No significant irritation
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	In vitro data	No significant irritation
Triethylene Glycol Dimethacrylate (TEGDMA)	Rabbit	No significant irritation
Aluminium oxide	Rabbit	No significant irritation
Titanium Oxide	Rabbit	No significant irritation
N,N-Dimethylbenzocaine	Rabbit	No significant irritation

**Skin Sensitisation**

Name	Species	Value
Silane Treated Ceramic	similar compounds	Not classified
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	Multiple animal species	Not classified
Diurethane Dimethacrylate (UDMA)	Multiple animal species	Sensitising
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Mouse	Not classified
Triethylene Glycol Dimethacrylate (TEGDMA)	Mouse	Sensitising
Titanium Oxide	Human and animal	Not classified
N,N-Dimethylbenzocaine		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
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	In Vitro	Not mutagenic
Diurethane Dimethacrylate (UDMA)	In Vitro	Not mutagenic
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	In Vitro	Not mutagenic
Triethylene Glycol Dimethacrylate (TEGDMA)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Aluminium oxide	In Vitro	Not mutagenic
Titanium Oxide	In Vitro	Not mutagenic
Titanium Oxide	In vivo	Not mutagenic
N,N-Dimethylbenzocaine	In vivo	Not mutagenic
N,N-Dimethylbenzocaine	In Vitro	Some positive data exist, but the data are not sufficient for classification

**Carcinogenicity**

Name	Route	Species	Value
Silane Treated Ceramic	Inhalation	similar compounds	Some positive data exist, but the data are not sufficient for classification
Triethylene Glycol Dimethacrylate (TEGDMA)	Dermal	Mouse	Not carcinogenic
Aluminium oxide	Inhalation	Rat	Not carcinogenic
Titanium Oxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Oxide	Inhalation	Rat	Carcinogenic.

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring into lactation
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	28 days
Bisphenol A	Ingestion	Not classified for	Rat	NOAEL	during gestation



Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)		development		1,000 mg/kg/day	
Diurethane Dimethacrylate (UDMA)	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring into lactation
Diurethane Dimethacrylate (UDMA)	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	56 days
Diurethane Dimethacrylate (UDMA)	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	prematuring into lactation
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during gestation
Triethylene Glycol Dimethacrylate (TEGDMA)	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring into lactation
Triethylene Glycol Dimethacrylate (TEGDMA)	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	5 weeks
Triethylene Glycol Dimethacrylate (TEGDMA)	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	prematuring into lactation
N,N-Dimethylbenzocaine	Ingestion	Not classified for female reproduction	Rat	NOAEL 600 mg/kg/day	prematuring into lactation
N,N-Dimethylbenzocaine	Ingestion	Not classified for development	Rat	NOAEL 50 mg/kg/day	prematuring into lactation
N,N-Dimethylbenzocaine	Ingestion	Toxic to male reproduction	Rat	NOAEL 50 mg/kg/day	53 days

**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
Silane Treated Ceramic	Inhalation	pulmonary fibrosis	Not classified	similar compounds	NOAEL Not available	
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	Ingestion	hematopoietic system   liver   immune system   kidney and/or bladder   endocrine system   eyes	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Diurethane Dimethacrylate (UDMA)	Ingestion	liver   kidney and/or bladder   heart   skin   endocrine system   gastrointestinal tract   bone, teeth, nails,	Not classified	Rat	NOAEL 1,000 mg/kg/day	56 days

		and/or hair   hematopoietic system   immune system   muscles   nervous system   eyes   respiratory system   vascular system				
(1-methylethylidene)bis[4,1-phenyleneoxy (2-hydroxy-3,1-propanediyl)] bismethacrylate	Ingestion	endocrine system   hematopoietic system   liver   heart   skin   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 1,000 mg/kg/day	90 days
Triethylene Glycol Dimethacrylate (TEGDMA)	Dermal	liver	Not classified	Mouse	NOAEL 2,000 mg/kg/day	13 weeks
Triethylene Glycol Dimethacrylate (TEGDMA)	Dermal	skin	Not classified	Mouse	NOAEL 100 mg/kg/day	13 weeks
Triethylene Glycol Dimethacrylate (TEGDMA)	Dermal	gastrointestinal tract   hematopoietic system   nervous system   kidney and/or bladder   respiratory system	Not classified	Mouse	NOAEL 2,000 mg/kg/day	13 weeks
Triethylene Glycol Dimethacrylate (TEGDMA)	Ingestion	hematopoietic system   liver   nervous system   kidney and/or bladder   eyes	Not classified	Rat	NOAEL 3,849 mg/kg/day	13 weeks
Aluminium oxide	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Aluminium oxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Titanium Oxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium	Inhalation	pulmonary	Not classified	Human	NOAEL Not	occupational

Oxide		fibrosis			available	exposure
N,N-Dimethylbenzocaine	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 74 mg/kg/day	28 days
N,N-Dimethylbenzocaine	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**

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
Silane Treated Ceramic	444758-98-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)]	1565-94-2	Common Carp	Analogous Compound	96 hours	No tox obs at lmt of water sol	>100 mg/l

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bismethacrylate						
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	Green algae	Endpoint not reached	96 hours	EC50	>100 mg/l
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	Green algae	Experimental	96 hours	EC10	1.1 mg/l
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	41637-38-1	Activated sludge	Analogous Compound	3 hours	EC50	>1,000 mg/l
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	41637-38-1	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	41637-38-1	Rainbow trout	Analogous Compound	96 hours	No tox obs at lmt of water sol	>100 mg/l
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	41637-38-1	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Diurethane Dimethacrylate (UDMA)	72869-86-4	Green algae	Endpoint not reached	72 hours	ErC50	>100 mg/l
Diurethane Dimethacrylate (UDMA)	72869-86-4	Water flea	Experimental	48 hours	EC50	>100 mg/l
Diurethane Dimethacrylate (UDMA)	72869-86-4	Zebra Fish	Experimental	96 hours	LC50	10.1 mg/l
Diurethane Dimethacrylate (UDMA)	72869-86-4	Green algae	Endpoint not reached	72 hours	ErC10	>100 mg/l
Triethylene Glycol Dimethacrylate (TEGDMA)	109-16-0	Green algae	Experimental	72 hours	ErC50	>100 mg/l
Triethylene Glycol Dimethacrylate (TEGDMA)	109-16-0	Zebra Fish	Experimental	96 hours	LC50	16.4 mg/l
Triethylene Glycol Dimethacrylate (TEGDMA)	109-16-0	Green algae	Experimental	72 hours	NOEC	18.6 mg/l
Triethylene Glycol Dimethacrylate (TEGDMA)	109-16-0	Water flea	Experimental	21 days	NOEC	32 mg/l
Aluminium oxide	1344-28-1	Fish	Experimental	96 hours	LC50	>100 mg/l
Aluminium oxide	1344-28-1	Green algae	Experimental	72 hours	EC50	>100 mg/l
Aluminium oxide	1344-28-1	Water flea	Experimental	48 hours	LC50	>100 mg/l
Aluminium oxide	1344-28-1	Green algae	Experimental	72 hours	NOEC	>100 mg/l
Titanium Oxide	13463-67-7	Activated sludge	Experimental	3 hours	NOEC	>=1,000 mg/l
Titanium Oxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium Oxide	13463-67-7	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium Oxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium Oxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l

N,N-Dimethylbenzocaine	10287-53-3	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
N,N-Dimethylbenzocaine	10287-53-3	Green algae	Experimental	72 hours	EL50	2.8 mg/l
N,N-Dimethylbenzocaine	10287-53-3	Rainbow trout	Experimental	96 hours	LC50	1.9 mg/l
N,N-Dimethylbenzocaine	10287-53-3	Water flea	Experimental	48 hours	EC50	4.5 mg/l
N,N-Dimethylbenzocaine	10287-53-3	Green algae	Experimental	72 hours	ErC10	0.71 mg/l

**12.2. Persistence and degradability**

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Silane Treated Ceramic	444758-98-9	Data not available-insufficient	N/A	N/A	N/A	N/A
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	Experimental Biodegradation	28 days	BOD	21 %BOD/ThOD	similar to OECD 301F
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	29 days (t 1/2)	
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	41637-38-1	Experimental Biodegradation	28 days	BOD	24 %BOD/ThOD	OECD 301D - Closed bottle test
Diurethane Dimethacrylate (UDMA)	72869-86-4	Experimental Biodegradation	28 days	CO2 evolution	22 %CO2 evolution/THCO2 evolution (does not pass 10-day window)	OECD 301B - Modified sturm or CO2
Triethylene Glycol Dimethacrylate (TEGDMA)	109-16-0	Experimental Biodegradation	28 days	CO2 evolution	85 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Aluminium oxide	1344-28-1	Data not available-insufficient	N/A	N/A	N/A	N/A
Titanium Oxide	13463-67-7	Data not available-insufficient	N/A	N/A	N/A	N/A
N,N-Dimethylbenzocaine	10287-53-3	Experimental Biodegradation	28 days	CO2 evolution	40 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
N,N-Dimethylbenzocaine	10287-53-3	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	OECD 111 Hydrolysis func of pH

**12.3 : Bioaccumulative potential**

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Silane Treated Ceramic	444758-98-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	Experimental Bioconcentration		Log Kow	4.63	
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	41637-38-1	Modeled Bioconcentration		Bioaccumulation factor	7	
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	41637-38-1	Experimental Bioconcentration		Log Kow	≥4.66	OECD 117 log Kow HPLC method
Diurethane Dimethacrylate (UDMA)	72869-86-4	Experimental Bioconcentration		Log Kow	3.39	
Triethylene Glycol Dimethacrylate (TEGDMA)	109-16-0	Experimental Bioconcentration		Log Kow	2.3	EC A.8 Partition Coefficient
Aluminium oxide	1344-28-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium Oxide	13463-67-7	Experimental BCF - Fish	42 days	Bioaccumulation factor	9.6	
N,N-Dimethylbenzocaine	10287-53-3	Experimental Bioconcentration		Log Kow	3.2	OECD 117 log Kow HPLC method

#### 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.

### 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:**

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](http://www.3m.com.au)**