

Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

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SECTION 1: Identification

1.1. Product identifier

3M[™] Filtek[™] Z350 XT Universal Restorative (7018, 7019)

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Restorative

Restrictions on use

For use by dental professionals only.

1.3. Supplier's details

Address:3M Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059Telephone:+65 6450 8888Website:www.3m.com.sg

1.4. Emergency telephone number

+65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture Skin Sensitizer: Category 1.

Skin Sensitizer. Category

2.2. Label elements SIGNAL WORD WARNING!

Symbols Exclamation mark |

Pictograms



HAZARD STATEMENTS H317

May cause an allergic skin reaction.

PRECAUTIONARY STATEMENTS Prevention:

P280E

Wear protective gloves.

Response: P333 + P313

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

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Silane Treated Ceramic	444758-98-9	60 - 80
Silane Treated Silica	248596-91-0	1 - 10
(1-methylethylidene)bis[4,1-	1565-94-2	1 - 10
phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate		
Bisphenol A Polyethylene Glycol Diether	41637-38-1	1 - 10
Dimethacrylate (BISEMA-6)		
Diurethane Dimethacrylate (UDMA)	72869-86-4	1 - 10
Polyethylene Glycol Dimethacrylate	25852-47-5	< 5
(PEGDMA)		
Silane Treated Zirconia	Non-Material	1 - 5
Triethylene Glycol Dimethacrylate	109-16-0	<1
(TEGDMA)		

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

SubstanceConditionCarbon monoxide.During combustion.Carbon dioxide.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. 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. 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

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

8.2. Exposure controls

8.2.1. Engineering controls

Use 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.

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

Specific Physical Form:PasteColorToothOdorSlight AcrylateOdour thresholdNo data available.pHNot applicable.Melting point/Freezing pointNo data available.Boiling point/Initial boiling point/Boiling rangeNot applicable.Flash pointNo flash pointEvaporation rateNot applicable.FlammabilityNot applicable.Flammable Limits(LEL)Not applicable.Flammable Limits(UEL)Not applicable.Vapour pressureNot applicable.	
Color Tooth Odor Slight Acrylate Odour threshold No data available. pH Not applicable. Melting point/Freezing point No data available. Boiling point/Initial boiling point/Boiling range Not applicable. Flash point No flash point Evaporation rate Not applicable. Flammability Not applicable. Flammable Limits(LEL) Not applicable. Flammable Limits(UEL) Not applicable.	
Odor Slight Acrylate Odour threshold No data available. pH Not applicable. Melting point/Freezing point No data available. Boiling point/Initial boiling point/Boiling range Not applicable. Flash point No flash point Evaporation rate Not applicable. Flammability Not applicable. Flammable Limits(LEL) Not applicable. Flammable Limits(UEL) Not applicable.	
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Flammability Not applicable. Flammable Limits(LEL) Not applicable. Flammable Limits(UEL) Not applicable.	
Flammable Limits(LEL) Not applicable. Flammable Limits(UEL) Not applicable.	
Flammable Limits(UEL) Not applicable.	
Flammable Limits(UEL) Not applicable.	
Vapour pressure Not applicable.	
Vapor Density and/or Relative Vapor DensityNot applicable.	
Density 1.9 g/cm3	
Relative density 1.9 [Ref Std:WATER=1]	
Water solubilityNo data available.	
Solubility- non-waterNo data available.	
Partition coefficient: n-octanol/waterNot applicable.	
Autoignition temperatureNo data available.	
Decomposition temperature <i>No data available.</i>	
Kinematic ViscosityNo data available.	
Volatile organic compounds (VOC) Not applicable.	
VOC less H2O & exempt solventsNot applicable.	
Molecular weightNo data available.	

Particle Characteristics

Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid Heat.

10.5 Incompatible materials Strong oxidising agents.

10.6 Hazardous decomposition products

Substance None known. **Condition**

Refer to section 5.2 for hazardous decomposition products during combustion.

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

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.

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
Silane Treated Silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Silane Treated Silica	Ingestion		LD50 estimated to be > 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 > 35,000 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	Professio nal judgeme nt	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
Silane Treated Zirconia	Dermal		LD50 estimated to be > 5,000 mg/kg
Silane Treated Zirconia	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Polyethylene Glycol Dimethacrylate (PEGDMA)	Dermal	Rabbit	LD50 15,500 mg/kg
Polyethylene Glycol Dimethacrylate (PEGDMA)	Ingestion	Rat	LD50 9,400 mg/kg
Triethylene Glycol Dimethacrylate (TEGDMA)	Dermal	Mouse	LD50 > 2,000
Triethylene Glycol Dimethacrylate (TEGDMA)	Ingestion	Rat	LD50 10,837 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Silane Treated Ceramic	similar compoun ds	No significant irritation
Silane Treated Silica	Professio nal judgemen t	No significant irritation
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	Rabbit	Minimal irritation
Diurethane Dimethacrylate (UDMA)	Rabbit	No significant irritation
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Rabbit	No significant irritation
Silane Treated Zirconia	Rabbit	No significant irritation
Polyethylene Glycol Dimethacrylate (PEGDMA)	Rabbit	Mild irritant
Triethylene Glycol Dimethacrylate (TEGDMA)	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Silane Treated Ceramic	similar	Mild irritant
	compoun	
	ds	
Silane Treated Silica	Professio	No significant irritation
	nal	
	judgemen	
	t	
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	Rabbit	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
Silane Treated Zirconia	Rabbit	Mild irritant
Polyethylene Glycol Dimethacrylate (PEGDMA)	Rabbit	Moderate irritant
Triethylene Glycol Dimethacrylate (TEGDMA)	Rabbit	No significant irritation

Sensitization:

Skin Sensitisation

Name	Species	Value
Silane Treated Ceramic	similar compoun ds	Not classified
Bisphenol A Polyethylene Glycol Diether Dimethacrylate (BISEMA-6)	Guinea pig	Not classified
Diurethane Dimethacrylate (UDMA)	Multiple animal species	Sensitising
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Mouse	Not classified
Polyethylene Glycol Dimethacrylate (PEGDMA)	Guinea pig	Not classified
Triethylene Glycol Dimethacrylate (TEGDMA)	Mouse	Sensitising

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		
Silane Treated Zirconia	In Vitro	Some positive data exist, but the data are not sufficient for classification		
Triethylene Glycol Dimethacrylate (TEGDMA)	In Vitro	Some positive data exist, but the data are not sufficient for classification		

Carcinogenicity

Name	Route	Species	Value
Silane Treated Ceramic	Inhalation	similar compoun ds	Some positive data exist, but the data are not sufficient for classification
Silane Treated Zirconia	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Triethylene Glycol Dimethacrylate (TEGDMA)	Dermal	Mouse	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Diurethane Dimethacrylate (UDMA)	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating 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	premating into lactation

				mg/kg/day	
(1-methylethylidene)bis[4,1-	Ingestion	Not classified for development	Rat	NOAEL	during
phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate				1,000 mg/kg/day	gestation
Triethylene Glycol Dimethacrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL	premating
(TEGDMA)	mgestion			1,000	into lactation
				mg/kg/day	
Triethylene Glycol Dimethacrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL	5 weeks
(TEGDMA)				1,000	
	× .•			mg/kg/day	
Triethylene Glycol Dimethacrylate	Ingestion	Not classified for development	Rat	NOAEL	premating
(TEGDMA)				1,000	into lactation
				mg/kg/day	

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Polyethylene Glycol Dimethacrylate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for	similar health	NOAEL Not available	
(PEGDMA)			classification	hazards		

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 compoun ds	NOAEL Not available	
Diurethane Dimethacrylate (UDMA)	Ingestion	liver kidney and/or bladder heart skin endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system immune system muscles nervous system eyes respiratory system vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	56 days
(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
Silane Treated Zirconia	Inhalation	pulmonary fibrosis	Not classified	Multiple animal species	NOAEL Not available	
Silane Treated Zirconia	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
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

Aspiration Hazard

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

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

SECTION 12: Ecological information

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 Nbr	Organism	Туре	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)b is[4,1- phenyleneoxy(2- hydroxy-3,1- propanediyl)] bismethacrylate	1565-94-2	Common Carp	Analogous Compound	96 hours	No tox obs at lmt of water sol	>100 mg/l
(1- methylethylidene)b is[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)b is[4,1- phenyleneoxy(2- hydroxy-3,1- propanediyl)] bismethacrylate	1565-94-2	Green algae	Experimental	96 hours	EC10	1.1 mg/l
Bisphenol A	41637-38-1	Activated sludge	Estimated	3 hours	EC50	>1,000 mg/l

Polyethylene				1		
Polyethylene						
Glycol Diether						
Dimethacrylate						
(BISEMA-6)						
Bisphenol A	41637-38-1	Green algae	Estimated	72 hours	EL50	>100 mg/l
Polyethylene						
Glycol Diether						
Dimethacrylate						
(BISEMA-6)						
Bisphenol A	41637-38-1	Water flea	Estimated	48 hours	EL50	>100 mg/l
Polyethylene	41057 50 1	water neu	Estimated	40 110013	LLSU	- 100 mg/1
Glycol Diether						
Dimethacrylate						
(BISEMA-6)				0.61		. 100 //
Bisphenol A	41637-38-1	Zebra Fish	Estimated	96 hours	LL50	>100 mg/l
Polyethylene						
Glycol Diether						
Dimethacrylate						
(BISEMA-6)						
Diurethane	72869-86-4	Green algae	Endpoint not	72 hours	ErC50	>100 mg/l
Dimethacrylate		011111110001	reached			
(UDMA)			reaction			
Diurethane	72869-86-4	Water flea	Experimental	48 hours	EC50	>100 mg/l
Dimethacrylate	72809-80-4	water fiea	Experimental	48 110015	LC30	>100 mg/1
(UDMA)	50 060.06.4			0.61		
Diurethane	72869-86-4	Zebra Fish	Experimental	96 hours	LC50	10.1 mg/l
Dimethacrylate						
(UDMA)						
Diurethane	72869-86-4	Green algae	Endpoint not	72 hours	ErC10	>100 mg/l
Dimethacrylate		-	reached			_
(UDMA)						
Silane Treated	248596-91-0	N/A	Data not available	N/A	N/A	N/A
Silica	2100000000		or insufficient for	1.0.1	1.011	
Silica			classification			
Polyethylene	25852-47-5	N/A	Data not available	N/A	N/A	N/A
	23832-47-3	IN/A		IN/A	IN/A	IN/A
Glycol			or insufficient for			
Dimethacrylate			classification			
(PEGDMA)						
Silane Treated	Non-Material	N/A	Data not available	N/A	N/A	N/A
Zirconia			or insufficient for			
			classification			
Triethylene Glycol	109-16-0	Green algae	Experimental	72 hours	ErC50	>100 mg/l
Dimethacrylate		011111110001	r			
(TEGDMA)						
Triethylene Glycol	109-16-0	Zebra Fish	Experimental	96 hours	LC50	16.4 mg/l
	109-10-0		Experimental	Jo nours		10.4 mg/1
Dimethacrylate						
(TEGDMA)						
Triethylene Glycol	109-16-0	Green algae	Experimental	72 hours	NOEC	18.6 mg/l
Dimethacrylate						
(TEGDMA)						
Triethylene Glycol	109-16-0	Water flea	Experimental	21 days	NOEC	32 mg/l
Dimethacrylate			r · · · · ·			6
(TEGDMA)						
(ILODMA)		1	1	1	1	1

12.2. Persistence and degradability

Material	CAS Nbr	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)b is[4,1-	1565-94-2	Experimental Biodegradation	28 days	BOD	21 %BOD/ThOD	similar to OECD 301F

phenyleneoxy(2- hydroxy-3,1- propanediyl)] bismethacrylate						
(1- methylethylidene)b is[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	Percent degraded	24 %degraded	
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
Silane Treated Silica	248596-91-0	Data not available- insufficient	N/A	N/A	N/A	N/A
Polyethylene Glycol Dimethacrylate (PEGDMA)	25852-47-5	Data not available- insufficient	N/A	N/A	N/A	N/A
Silane Treated Zirconia	Non-Material	Data not available- insufficient	N/A	N/A	N/A	N/A
Triethylene Glycol Dimethacrylate (TEGDMA)	109-16-0	Experimental Biodegradation	28 days	CO2 evolution	85 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2

12.3 : Bioaccumulative potential

Material	CAS Nbr	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)b is[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	Estimated Bioconcentration		Bioaccumulation factor	6.6	
Diurethane Dimethacrylate (UDMA)	72869-86-4	Experimental Bioconcentration		Log Kow	3.39	
Silane Treated Silica	248596-91-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyethylene Glycol Dimethacrylate (PEGDMA)	25852-47-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silane Treated Zirconia	Non-Material	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Triethylene Glycol	109-16-0	Experimental		Log Kow	2.3	EC A.8 Partition Coefficient

Dimethacrylate	Bioconcentration		
(TEGDMA)			

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. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste.

SECTION 14: Transport Information

International Regulations

UN No.: Not restricted for transport. UN Proper shipping name: Not restricted for transport.

Transportation Class (IMO): None assigned Transportation Class (IATA): None assigned Other Dangerous Goods Descriptions (IMO): None assigned Other Dangerous Goods Descriptions (IATA): None assigned Packing Group: None assigned Marine pollutant: None assigned

SECTION 15: Regulatory information

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

Global inventory status

Contact 3M for more information.

This product may contain component(s) that are regulated by the following:

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.

Fire Safety (Petroleum and Flammable Materials) Regulations: This product is subject to the requirements in the Regulations Environmental Protection and Management (Hazardous Substances) Regulations: This product is subject to the requirements in the Regulations

SECTION 16: Other information

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 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.

3M Singapore SDSs are available at www.3m.com.sg