

# **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<sup>TM</sup> Filtek<sup>TM</sup> Bulk Fill Posterior Restorative

#### 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 - 70
AROMATIC URETHANE	1431303-59-1	10 - 20
DIMETHACRYLATE		
DIURETHANE DIMETHACRYLATE	72869-86-4	1 - 10
(UDMA)		
SILANE TREATED SILICA	248596-91-0	1 - 10
YTTERBIUM FLUORIDE (YbF3)	13760-80-0	1 - 10
Silane treated zirconia	None	< 5
Water	7732-18-5	< 5
1,12-DODECANE DIMETHYCRYLATE	72829-09-5	< 2.5
(DDDMA)		
MODIFIED METHACRYLATE	1429648-13-4	< 1
MONOMER		
ETHYL 4-DIMETHYL	10287-53-3	< 0.3
AMINOBENZOATE (EDMAB)		

# **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

<u>Substance</u> Carbon monoxide. Carbon dioxide. <u>Condition</u> 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

Avoid breathing of dust created by cutting, sanding, grinding or machining. 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. 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. A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove.

#### 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
Fluorides	13760-80-0	ACGIH	TWA(as F):2.5 mg/m3	A4: Not class. as human
				carcin
Fluorides	13760-80-0	Singapore PELs	TWA(as F)(8 hours):2.5	
			mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

#### 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**

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

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

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

Physical state	Solid.	
Specific Physical Form:	Paste	
Color	Tooth	
Odor	Slight Acrylate	
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	No flash point	
Evaporation rate	Not applicable.	

Flammability	Not applicable.	
Flammable Limits(LEL)	Not applicable.	
Flammable Limits(UEL)	Not applicable.	
Vapour pressure	Not applicable.	
Vapor Density and/or Relative Vapor Density	Not applicable.	
Density	1.9 g/cm3	
Relative density	1.9 [ <i>Ref Std</i> :WATER=1]	
Water solubility	Negligible	
Solubility- non-water	No data available.	
Partition coefficient: n-octanol/water	Not applicable.	
Autoignition temperature	No data available.	
Decomposition temperature	No data available.	
Kinematic Viscosity	No data available.	
Volatile organic compounds (VOC)	No data available.	
VOC less H2O & exempt solvents	No data available.	
Molecular weight	No data available.	

#### Particle Characteristics

Not applicable.

# **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 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

#### 10.4 Conditions to avoid

Heat. High shear and high temperature conditions

#### **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

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

#### Eye contact

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.

#### **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	Rat	LD50 > 2,000 mg/kg
Overall product	Dermal	similar health hazards	LD50 Not available
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
AROMATIC URETHANE DIMETHACRYLATE	Dermal	Professio nal judgeme nt	LD50 estimated to be 2,000 - 5,000 mg/kg
AROMATIC URETHANE DIMETHACRYLATE	Ingestion	Rat	LD50 > 2,000 mg/kg
YTTERBIUM FLUORIDE (YbF3)	Dermal	Professio nal judgeme nt	LD50 estimated to be > 5,000 mg/kg
YTTERBIUM FLUORIDE (YbF3)	Ingestion	Rat	LD50 > 5,000 mg/kg
DIURETHANE DIMETHACRYLATE (UDMA)	Dermal	Rat	LD50 > 2,000 mg/kg
DIURETHANE DIMETHACRYLATE (UDMA)	Ingestion	Rat	LD50 > 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
1,12-DODECANE DIMETHYCRYLATE (DDDMA)	Dermal	similar compoun ds	LD50 > 2,000 mg/kg
1,12-DODECANE DIMETHYCRYLATE (DDDMA)	Ingestion	similar compoun ds	LD50 > 2,000 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

ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB)	Dermal	Rat	LD50 > 2,000 mg/kg
ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB)	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
SILANE TREATED CERAMIC	similar compoun ds	No significant irritation
AROMATIC URETHANE DIMETHACRYLATE	In vitro data	No significant irritation
DIURETHANE DIMETHACRYLATE (UDMA)	Rabbit	No significant irritation
SILANE TREATED SILICA	Professio	No significant irritation
	nal	
	judgemen	
1,12-DODECANE DIMETHYCRYLATE (DDDMA)	similar compoun ds	No significant irritation
Silane treated zirconia	Rabbit	No significant irritation
ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB)	Rabbit	No significant irritation

## Serious Eye Damage/Irritation

Name	Species	Value
SILANE TREATED CERAMIC	similar compoun ds	Mild irritant
AROMATIC URETHANE DIMETHACRYLATE	In vitro data	No significant irritation
YTTERBIUM FLUORIDE (YbF3)	Professio nal judgemen t	Mild irritant
DIURETHANE DIMETHACRYLATE (UDMA)	Rabbit	No significant irritation
SILANE TREATED SILICA	Professio nal judgemen t	No significant irritation
1,12-DODECANE DIMETHYCRYLATE (DDDMA)	similar compoun ds	Mild irritant
Silane treated zirconia	Rabbit	Mild irritant
ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB)	Rabbit	No significant irritation

#### Sensitization:

#### **Skin Sensitisation**

Name	Species	Value
SILANE TREATED CERAMIC	similar compoun ds	Not classified
AROMATIC URETHANE DIMETHACRYLATE	Professio nal judgemen t	Sensitising
DIURETHANE DIMETHACRYLATE (UDMA)	Multiple animal species	Sensitising
1,12-DODECANE DIMETHYCRYLATE (DDDMA)	similar compoun ds	Sensitising

MODIFIED METHACRYLATE MONOMER	similar compoun ds	Some positive data exist, but the data are not sufficient for classification
ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB)		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
AROMATIC URETHANE DIMETHACRYLATE	In Vitro	Not mutagenic
DIURETHANE DIMETHACRYLATE (UDMA)	In Vitro	Not mutagenic
1,12-DODECANE DIMETHYCRYLATE (DDDMA)	In Vitro	Not mutagenic
Silane treated zirconia	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB)	In vivo	Not mutagenic
ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB)	In Vitro	Some positive data exist, but the data are not
		sufficient for classification

#### Carcinogenicity

Name	Route	Species	Value
SILANE TREATED CERAMIC	Inhalation	similar	Some positive data exist, but the data are not
		compoun	sufficient for classification
		ds	
Silane treated zirconia	Inhalation	Multiple	Some positive data exist, but the data are not
		animal	sufficient for classification
		species	

#### **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 mg/kg/day	premating into lactation
ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB)	Ingestion	Not classified for female reproduction	Rat	NOAEL 600 mg/kg/day	premating into lactation
ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB)	Ingestion	Not classified for development	Rat	NOAEL 50 mg/kg/day	premating into lactation
ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB)	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	Inhalation	pulmonary fibrosis	Not classified	similar	NOAEL Not				
CERAMIC				compoun	available				
				ds					
DIURETHANE	Ingestion	liver   kidney and/or	Not classified	Rat	NOAEL	56 days			

### Specific Target Organ Toxicity - repeated exposure

DIMETHACRYLATE (UDMA)		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			1,000 mg/kg/day	
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
ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB)	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-DIMETHYL AMINOBENZOATE (EDMAB)	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.

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: GHS Acute 2: Toxic to aquatic life.

#### Chronic aquatic hazard:

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

No product test data available.

Material	CAS Nbr	Organism	Туре	Exposure	Test endpoint	Test result
SILANE	444758-98-9	N/A	Data not available	N/A	N/A	N/A
TREATED			or insufficient for			
CERAMIC			classification			
AROMATIC	1431303-59-1	Green algae	Experimental	72 hours	ErC50	>100 mg/l

					-	
URETHANE						
DIMETHACRYL						
ATE						
AROMATIC	1431303-59-1	Water flea	Experimental	48 hours	EC50	>100 mg/l
URETHANE						
DIMETHACRYL ATE						
AROMATIC	1431303-59-1	Carran alara	E	72 hours	ErC10	> 100
URETHANE	1431303-59-1	Green algae	Experimental	/2 nours	ErC10	>100 mg/l
DIMETHACRYL						
ATE						
AROMATIC	1431303-59-1	Water flea	Experimental	21 days	NOEC	800 mg/l
URETHANE	1451505-59-1	water nea	Experimental	21 days	NOLC	800 mg/1
DIMETHACRYL						
ATE						
DIURETHANE	72869-86-4	Green algae	Endpoint not	72 hours	ErC50	>100 mg/l
DIMETHACRYL	12009 00 1	Citer ungue	reached	, = nouro	21000	100 mg 1
ATE (UDMA)						
DIURETHANE	72869-86-4	Water flea	Experimental	48 hours	EC50	>100 mg/l
DIMETHACRYL	12009 00 1	in alor nou	Liperinentai	io nouio	2000	100 1191
ATE (UDMA)						
DIURETHANE	72869-86-4	Zebra Fish	Experimental	96 hours	LC50	10.1 mg/l
DIMETHACRYL	12009 00 1		Laporniona	y o nouro	2000	1011 mg/1
ATE (UDMA)						
DIURETHANE	72869-86-4	Green algae	Endpoint not	72 hours	ErC10	>100 mg/l
DIMETHACRYL			reached			
ATE (UDMA)						
SILANE	248596-91-0	N/A	Data not available	N/A	N/A	N/A
TREATED			or insufficient for			
SILICA			classification			
YTTERBIUM	13760-80-0	Water flea	Experimental	48 hours	No tox obs at lmt	>100 mg/l
FLUORIDE			r · · · ·		of water sol	
(YbF3)						
Silane treated	None	N/A	Data not available	N/A	N/A	N/A
zirconia			or insufficient for			
			classification			
1,12-DODECANE	72829-09-5	Green algae	Experimental	72 hours	ErC50	0.017 mg/l
DIMETHYCRYL						
ATE (DDDMA)						
1,12-DODECANE	72829-09-5	Water flea	Experimental	48 hours	EC50	>100 mg/l
DIMETHYCRYL						
ATE (DDDMA)						
1,12-DODECANE	72829-09-5	Green algae	Experimental	72 hours	ErC10	0.0064 mg/l
DIMETHYCRYL						
ATE (DDDMA)						
MODIFIED	1429648-13-4	N/A	Data not available	N/A	N/A	N/A
METHACRYLAT			or insufficient for			
E MONOMER						1
			classification			
ETHYL 4-	10287-53-3	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
DIMETHYL	10287-53-3	Activated sludge		3 hours	EC50	>1,000 mg/l
DIMETHYL AMINOBENZOA	10287-53-3	Activated sludge		3 hours	EC50	>1,000 mg/l
DIMETHYL AMINOBENZOA TE (EDMAB)			Experimental			
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4-	10287-53-3 10287-53-3	Activated sludge Green algae		3 hours 72 hours	EC50 EL50	>1,000 mg/l 2.8 mg/l
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL			Experimental			
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA			Experimental			
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB)	10287-53-3	Green algae	Experimental Experimental	72 hours	EL50	2.8 mg/l
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4-			Experimental			
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL	10287-53-3	Green algae	Experimental Experimental	72 hours	EL50	2.8 mg/l
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA	10287-53-3	Green algae	Experimental Experimental	72 hours	EL50	2.8 mg/l
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB)	10287-53-3 10287-53-3	Green algae Rainbow trout	Experimental Experimental Experimental	72 hours 96 hours	EL50 LC50	2.8 mg/l 1.9 mg/l
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4-	10287-53-3	Green algae	Experimental Experimental	72 hours	EL50	2.8 mg/l
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL	10287-53-3 10287-53-3	Green algae Rainbow trout	Experimental Experimental Experimental	72 hours 96 hours	EL50 LC50	2.8 mg/l 1.9 mg/l
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA	10287-53-3 10287-53-3	Green algae Rainbow trout	Experimental Experimental Experimental	72 hours 96 hours	EL50 LC50	2.8 mg/l 1.9 mg/l
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB)	10287-53-3 10287-53-3 10287-53-3	Green algae Rainbow trout Water flea	Experimental Experimental Experimental Experimental	72 hours 96 hours 48 hours	EL50 LC50 EC50	2.8 mg/l 1.9 mg/l 4.5 mg/l
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4-	10287-53-3 10287-53-3	Green algae Rainbow trout	Experimental Experimental Experimental	72 hours 96 hours	EL50 LC50	2.8 mg/l 1.9 mg/l
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA	10287-53-3 10287-53-3 10287-53-3	Green algae Rainbow trout Water flea	Experimental Experimental Experimental Experimental	72 hours 96 hours 48 hours	EL50 LC50 EC50	2.8 mg/l 1.9 mg/l 4.5 mg/l
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA	10287-53-3 10287-53-3 10287-53-3	Green algae Rainbow trout Water flea	Experimental Experimental Experimental Experimental	72 hours 96 hours 48 hours	EL50 LC50 EC50	2.8 mg/l 1.9 mg/l 4.5 mg/l
DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB) ETHYL 4- DIMETHYL	10287-53-3 10287-53-3 10287-53-3	Green algae Rainbow trout Water flea	Experimental Experimental Experimental Experimental	72 hours 96 hours 48 hours	EL50 LC50 EC50	2.8 mg/l 1.9 mg/l 4.5 mg/l

# 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
AROMATIC URETHANE DIMETHACRYL ATE	1431303-59-1	Experimental Biodegradation	28 days	CO2 evolution	4.88 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
DIURETHANE DIMETHACRYL ATE (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
YTTERBIUM FLUORIDE (YbF3)	13760-80-0	Data not available- insufficient	N/A	N/A	N/A	N/A
Silane treated zirconia	None	Data not available- insufficient	N/A	N/A	N/A	N/A
1,12-DODECANE DIMETHYCRYL ATE (DDDMA)	72829-09-5	Experimental Biodegradation	28 days	CO2 evolution	97.3 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
MODIFIED METHACRYLAT E MONOMER	1429648-13-4	Data not available- insufficient	N/A	N/A	N/A	N/A
ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB)	10287-53-3	Experimental Biodegradation	28 days	CO2 evolution	40 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB)	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 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
AROMATIC URETHANE DIMETHACRYL ATE	1431303-59-1	Experimental Bioconcentration		Log Kow	6.9	OECD 117 log Kow HPLC method
DIURETHANE DIMETHACRYL ATE (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
YTTERBIUM FLUORIDE (YbF3)	13760-80-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silane treated zirconia	None	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

1,12-DODECANE DIMETHYCRYL ATE (DDDMA)	72829-09-5	Modeled Bioconcentration		Bioaccumulation factor	6.6	Catalogic™
1,12-DODECANE DIMETHYCRYL ATE (DDDMA)	72829-09-5	Experimental Bioconcentration		Log Kow	>6.5	830.7570 Part. Coef by LC
MODIFIED METHACRYLAT E MONOMER	1429648-13-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
ETHYL 4- DIMETHYL AMINOBENZOA TE (EDMAB)	10287-53-3	Experimental Bioconcentration		Log Kow		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 waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility.

# **SECTION 14: Transport Information**

#### **International Regulations**

UN No.: None assigned UN Proper shipping name: None assigned

Transportation Class (IMO): None assignedTransportation Class (IATA): None assignedOther Dangerous Goods Descriptions (IMO):None assignedOther Dangerous Goods Descriptions (IATA):None assignedPacking Group: None assignedMarine 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