



## 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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<b>Issue Date:</b>	19/03/2024	<b>Supersedes date:</b>	12/09/2022

### IDENTIFICATION

#### 1.1. Product identifier

3M™ Clinpro™ XT Varnish Durable Fluoride-Releasing Coating (12248, 12348)

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

##### Recommended use

Dental Product, Dental varnish

##### Restrictions on use

For use by dental professionals only.

#### 1.3. Supplier's details

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

#### 1.4. Emergency telephone number

**Company Emergency Hotline:** +65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

This product is a kit or a multipart product which consists of multiple, independently packaged components. An SDS for each of these components is included. Please do not separate the component SDSs from this cover page. The document numbers of the SDSs for components of this product are:

25-7222-0, 25-7233-7

### TRANSPORT INFORMATION

#### International Regulations

**UN No.:** None assigned

**UN Proper shipping name:** None assigned

**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

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## Safety Data Sheet

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<b>Document group:</b>	25-7222-0	<b>Version number:</b>	2.00
<b>Issue Date:</b>	19/03/2024	<b>Supersedes date:</b>	12/09/2022

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Clinpro™ XT Varnish Durable Fluoride-Releasing Coating, Part B

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

##### Recommended use

Dental Product, Varnish

##### Restrictions on use

For use by dental professionals only.

#### 1.3. Supplier's details

<b>Address:</b>	3M Technologies (S) Pte Ltd, 10 Ang Mo Kio Street 65, Singapore 569059
<b>Telephone:</b>	+65 6450 8888
<b>Website:</b>	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

Serious Eye Damage/Irritation: Category 2B.

Skin Sensitizer: Category 1.

#### 2.2. Label elements

##### SIGNAL WORD

WARNING!

##### Symbols

Exclamation mark |

##### Pictograms



## HAZARD STATEMENTS

H320 Causes eye irritation.  
H317 May cause an allergic skin reaction.

## PRECAUTIONARY STATEMENTS

### Prevention:

P280E Wear protective gloves.

### Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

### Disposal:

P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

## 2.3. Other hazards

None known.

## SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Copolymer of Acrylic and Itaconic Acids	25948-33-8	35 - 45
Water	7732-18-5	30 - 40
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	15 - 20
Calcium Glycerophosphate	27214-00-2	1 - 10
Diphenyliodonium Hexafluorophosphate	58109-40-3	< 1
Ethyl acetate	141-78-6	< 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

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

#### If swallowed

Rinse mouth. If you feel unwell, get medical attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

Allergic skin reaction (redness, swelling, blistering, and itching).

#### 4.3. Indication of any immediate medical attention and special treatment required

Not applicable

## SECTION 5: Fire-fighting measures

#### 5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

#### 5.2. Special hazards arising from the substance or mixture

None inherent in this product.

#### Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon 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

Contain spill. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with water. 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. Do not get in eyes.

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

Store away from heat.

## 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
Ethyl acetate	141-78-6	ACGIH	TWA:400 ppm	
Ethyl acetate	141-78-6	Singapore PELs	TWA(8 hours):1440 mg/m3(400 ppm)	

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**

None required.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	Liquid.
Color	Yellow
Odor	Slight Acrylate
Odour threshold	No data available.
pH	3.6
Melting point/Freezing point	Not applicable.
Boiling point/Initial boiling point/Boiling range	No data available.
Flash point	>=93.3 °C [Test Method:Closed Cup]
Evaporation rate	No data available.
Flammability (solid, gas)	Not applicable.
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	1.14 g/ml
Relative density	1.14 [Ref Std:WATER=1]
Water solubility	Complete
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	800 - 1,400 mm <sup>2</sup> /sec
Volatile organic compounds (VOC)	Not applicable.
Percent volatile	Not applicable.
VOC less H <sub>2</sub> O & exempt solvents	Not applicable.
Molecular weight	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 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

Heat.

### 10.5 Incompatible materials

None known.

### 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

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

### 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
Copolymer of Acrylic and Itaconic Acids	Ingestion	Rat	LD50 > 5,000 mg/kg
Copolymer of Acrylic and Itaconic Acids	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
2-Hydroxyethyl Methacrylate (HEMA)	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-Hydroxyethyl Methacrylate (HEMA)	Ingestion	Rat	LD50 5,564 mg/kg
Calcium Glycerophosphate	Ingestion	similar compounds	LD50 estimated to be 300 - 2,000 mg/kg
Ethyl acetate	Dermal	Rabbit	LD50 > 18,000 mg/kg
Ethyl acetate	Inhalation-Vapor (4 hours)	Rat	LC50 70.5 mg/l
Ethyl acetate	Ingestion	Rat	LD50 5,620 mg/kg
Diphenyliodonium Hexafluorophosphate	Ingestion	Rat	LD50 32 mg/kg

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

Name	Species	Value
2-Hydroxyethyl Methacrylate (HEMA)	Rabbit	Minimal irritation
Ethyl acetate	Rabbit	Minimal irritation
Diphenyliodonium Hexafluorophosphate	Rabbit	No significant irritation

#### Serious Eye Damage/Irritation

Name	Species	Value
2-Hydroxyethyl Methacrylate (HEMA)	Rabbit	Moderate irritant
Ethyl acetate	Rabbit	Mild irritant
Diphenyliodonium Hexafluorophosphate	Rabbit	Mild irritant

#### Sensitization:

##### Skin Sensitisation

Name	Species	Value
2-Hydroxyethyl Methacrylate (HEMA)	Human and animal	Sensitising
Ethyl acetate	Guinea pig	Not classified

#### Respiratory Sensitisation

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

**Germ Cell Mutagenicity**

Name	Route	Value
2-Hydroxyethyl Methacrylate (HEMA)	In vivo	Not mutagenic
2-Hydroxyethyl Methacrylate (HEMA)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Ethyl acetate	In Vitro	Not mutagenic
Ethyl acetate	In vivo	Not mutagenic
Diphenyliodonium Hexafluorophosphate	In Vitro	Some positive data exist, but the data are not sufficient for classification

**Carcinogenicity**

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

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
2-Hydroxyethyl Methacrylate (HEMA)	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-Hydroxyethyl Methacrylate (HEMA)	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	49 days
2-Hydroxyethyl Methacrylate (HEMA)	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation

**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Copolymer of Acrylic and Itaconic Acids	Ingestion	nervous system	Not classified	Rat	NOAEL 5,000 mg/kg	
Ethyl acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Ethyl acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Diphenyliodonium Hexafluorophosphate	Inhalation	respiratory irritation	Not classified	Not available	Irritation Equivocal	

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Copolymer of Acrylic and Itaconic Acids	Ingestion	endocrine system   hematopoietic system   liver	Not classified	Rat	NOAEL 200 mg/kg/day	28 days
Copolymer of Acrylic and Itaconic Acids	Ingestion	heart   bone, teeth, nails, and/or hair   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system	Not classified	Rat	NOAEL 2,000 mg/kg/day	28 days
Ethyl acetate	Inhalation	endocrine system   liver   nervous system	Not classified	Rat	NOAEL 0.043 mg/l	90 days

Ethyl acetate	Inhalation	hematopoietic system	Not classified	Rabbit	LOAEL 16 mg/l	40 days
Ethyl acetate	Ingestion	hematopoietic system   liver   kidney and/or bladder	Not classified	Rat	NOAEL 3,600 mg/kg/day	90 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:

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	Type	Exposure	Test endpoint	Test result
Copolymer of Acrylic and Itaconic Acids	25948-33-8	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Turbot	Analogous Compound	96 hours	LC50	833 mg/l
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Fathead minnow	Experimental	96 hours	LC50	227 mg/l
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Green algae	Experimental	72 hours	EC50	710 mg/l
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Water flea	Experimental	48 hours	EC50	380 mg/l
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Green algae	Experimental	72 hours	NOEC	160 mg/l
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Water flea	Experimental	21 days	NOEC	24.1 mg/l
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	N/A	Experimental	16 hours	EC0	>3,000 mg/l
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	N/A	Experimental	18 hours	LD50	<98 mg per kg of bodyweight
Calcium Glycerophosphate	27214-00-2	Green algae	Experimental	72 hours	EC50	>100 mg/l
Calcium	27214-00-2	Water flea	Experimental	48 hours	EC50	>100 mg/l

**3M™ Clinpro™ XT Varnish Durable Fluoride-Releasing Coating, Part B**

Glycerophosphate						
Calcium Glycerophosphate	27214-00-2	Green algae	Experimental	72 hours	NOEC	100 mg/l
Diphenyliodonium Hexafluorophosphate	58109-40-3	Water flea	Experimental	48 hours	EC50	9.5 mg/l
Ethyl acetate	141-78-6	Bacteria	Experimental	18 hours	EC10	2,900 mg/l
Ethyl acetate	141-78-6	Fish	Experimental	96 hours	LC50	212.5 mg/l
Ethyl acetate	141-78-6	Invertebrate	Experimental	48 hours	EC50	165 mg/l
Ethyl acetate	141-78-6	Green algae	Experimental	72 hours	NOEC	>100 mg/l
Ethyl acetate	141-78-6	Water flea	Experimental	21 days	NOEC	2.4 mg/l

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Copolymer of Acrylic and Itaconic Acids	25948-33-8	Data not available-insufficient	N/A	N/A	N/A	N/A
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Experimental Biodegradation	28 days	BOD	84 %BOD/COD	OECD 301D - Closed bottle test
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Experimental Hydrolysis		Hydrolytic half-life basic pH	10.9 days (t 1/2)	OECD 111 Hydrolysis func of pH
Calcium Glycerophosphate	27214-00-2	Experimental Biodegradation	28 days	BOD	90 %BOD/ThOD (< 10 day window)	OECD 301F - Manometric respirometry
Diphenyliodonium Hexafluorophosphate	58109-40-3	Data not available-insufficient	N/A	N/A	N/A	N/A
Ethyl acetate	141-78-6	Experimental Biodegradation	14 days	BOD	94 %BOD/ThOD	OECD 301C - MITI test (I)
Ethyl acetate	141-78-6	Experimental Photolysis		Photolytic half-life (in air)	20.0 days (t 1/2)	

**12.3 : Bioaccumulative potential**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Copolymer of Acrylic and Itaconic Acids	25948-33-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Experimental Bioconcentration		Log Kow	0.42	OECD 107 log Kow shke flask mtd
Calcium Glycerophosphate	27214-00-2	Experimental Bioconcentration		Log Kow	< -1.7	OECD 107 log Kow shke flask mtd
Diphenyliodonium Hexafluorophosphate	58109-40-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethyl acetate	141-78-6	Experimental Bioconcentration		Log Kow	0.68	

**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.:** None assigned

**UN Proper shipping name:** None assigned

**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.

## **SECTION 16: Other information**

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<b>Document group:</b>	25-7233-7	<b>Version number:</b>	1.00
<b>Issue Date:</b>	12/09/2022	<b>Supersedes date:</b>	Initial issue.

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Clinpro™ XT Varnish Durable Fluoride-Releasing Coating, Part A

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

##### Recommended use

Dental Product, Varnish

##### Restrictions on use

For use by dental professionals only.

#### 1.3. Supplier's details

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

#### 1.4. Emergency telephone number

+65 6591 6888 (8.15am - 5.00pm, Monday - Friday)

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

Serious Eye Damage/Irritation: Category 2B.

Skin Sensitizer: Category 1.

#### 2.2. Label elements

##### SIGNAL WORD

WARNING!

##### Symbols

Exclamation mark |

##### Pictograms

**HAZARD STATEMENTS**

H320 Causes eye irritation.  
 H317 May cause an allergic skin reaction.

**PRECAUTIONARY STATEMENTS****Prevention:**

P280E Wear protective gloves.

**Response:**

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

**Disposal:**

P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

**2.3. Other hazards**

None known.

## SECTION 3: Composition/information on ingredients

This material is a mixture.

<b>Ingredient</b>	<b>CAS Nbr</b>	<b>% by Wt</b>
Silane treated glass	None	70 - 80
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	10 - 20
Water	7732-18-5	5 - 15
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	< 2
Silane Treated Silica	68909-20-6	< 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**

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**

No critical symptoms or effects. See Section 11.1, information on toxicological effects.

**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 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.

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

Store away from heat.

## 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

Physical state	Solid.
Specific Physical Form:	Paste
Color	Off-White, Yellow
Odor	Odourless
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	1.9 g/cm <sup>3</sup>
Relative density	1.9 [Ref Std:WATER=1]
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>Not applicable.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity/Kinematic Viscosity	$\geq 300,000$ mm <sup>2</sup> /sec [Test Method:Brookfield]
Volatile organic compounds (VOC)	<i>Not applicable.</i>
Percent volatile as Text	Nil
VOC less H <sub>2</sub> O & exempt solvents	<i>Not applicable.</i>
Molecular weight	<i>No data available.</i>

## 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.

### 10.5 Incompatible materials

None known.

### 10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

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

No health effects are expected.

#### 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

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

#### 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 glass	Dermal		LD50 estimated to be > 5,000 mg/kg
Silane treated glass	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
2-Hydroxyethyl Methacrylate (HEMA)	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-Hydroxyethyl Methacrylate (HEMA)	Ingestion	Rat	LD50 5,564 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
Silane Treated Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silane Treated Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silane Treated Silica	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Silane treated glass	Professional judgement	No significant irritation
2-Hydroxyethyl Methacrylate (HEMA)	Rabbit	Minimal irritation
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Rabbit	No significant irritation
Silane Treated Silica	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Silane treated glass	Professional judgement	No significant irritation
2-Hydroxyethyl Methacrylate (HEMA)	Rabbit	Moderate irritant
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	In vitro data	No significant irritation
Silane Treated Silica	Rabbit	No significant irritation

**Sensitization:**
**Skin Sensitisation**

Name	Species	Value
2-Hydroxyethyl Methacrylate (HEMA)	Human and animal	Sensitising
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Mouse	Not classified
Silane Treated Silica	Human and animal	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
2-Hydroxyethyl Methacrylate (HEMA)	In vivo	Not mutagenic
2-Hydroxyethyl Methacrylate (HEMA)	In Vitro	Some positive data exist, but the data are not sufficient for classification
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	In Vitro	Not mutagenic
Silane Treated Silica	In Vitro	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Silane Treated Silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
2-Hydroxyethyl Methacrylate (HEMA)	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-Hydroxyethyl Methacrylate (HEMA)	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	49 days
2-Hydroxyethyl Methacrylate (HEMA)	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
(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
Silane Treated Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silane Treated Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silane Treated Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

**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
(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 Silica	Inhalation	respiratory system	Not classified	Human	NOAEL Not	occupational

		silicosis			available	exposure
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**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	Type	Exposure	Test endpoint	Test result
Silane treated glass	None		Data not available or insufficient for classification			N/A
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Turbot	Analogous Compound	96 hours	LC50	833 mg/l
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Fathead minnow	Experimental	96 hours	LC50	227 mg/l
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Green algae	Experimental	72 hours	EC50	710 mg/l
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Water flea	Experimental	48 hours	EC50	380 mg/l
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Green algae	Experimental	72 hours	NOEC	160 mg/l
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Water flea	Experimental	21 days	NOEC	24.1 mg/l

2-Hydroxyethyl Methacrylate (HEMA)	868-77-9		Experimental	16 hours	EC0	>3,000 mg/l
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9		Experimental	18 hours	LD50	<98 mg per kg of bodyweight
(1-methylethylidene)bis[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)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
Silane Treated Silica	68909-20-6	Algae or other aquatic plants	Estimated	72 hours	EC50	>100 mg/l

## 12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Silane treated glass	None	Data not available-insufficient	N/A	N/A	N/A	N/A
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Experimental Biodegradation	28 days	BOD	84 %BOD/CO D	OECD 301D - Closed bottle test
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Experimental Hydrolysis		Hydrolytic half-life basic pH	10.9 days (t 1/2)	OECD 111 Hydrolysis func of pH
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	Experimental Biodegradation	28 days	BOD	21 %BOD/ThO D	similar to OECD 301F D
(1-methylethylidene)	1565-94-2	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	29 days (t 1/2)	

ne)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate						
Silane Treated Silica	68909-20-6	Data not available-insufficient	N/A	N/A	N/A	N/A

### 12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Silane treated glass	None	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	Experimental Bioconcentration		Log Kow	0.42	OECD 107 log Kow shke flask mtd
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	Experimental Bioconcentration		Log Kow	4.63	
Silane Treated Silica	68909-20-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

### 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.: None assigned

UN Proper shipping name: None assigned

**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.

## **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.

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