Safety Data Sheet

Document group:	29-8481-3	**Version number:**	4.00
Issue Date:	17/05/2022	**Supersedes date:**	10/03/2021

This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

IDENTIFICATION:

1.1. Product identifier
3M™ Scotchbond™ Universal Kit (41255, 41256, 41257, 41292)

Product Identification Numbers
70-2011-3900-6 70-2011-3901-4 70-2011-3902-2

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Dental adhesive.

Restrictions on use
For use by dental professionals only.

1.3. Supplier's details

Address:	3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113
Telephone:	136 136
E Mail:	productinfo.au@mmm.com
Website:	www.3m.com.au

1.4. Emergency telephone number
Company Emergency Hotline:EMERGENCY: 1800 097 146 (Australia only)

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

29-8286-6, 29-8287-4

One or more components of this KIT is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011, in accordance with applicable State and Territory legislation.

TRANSPORT INFORMATION

The Dangerous Goods Classification for the complete Kit is provided below.

UN No.: UN1133; UN1805
Proper shipping name: ADHESIVES; PHOSPHORIC ACID SOLUTION
Class/Division: 3, 8
Packing Group: III
Marine Pollutant: Not applicable.

Hazchem Code: 3Y; 2YE
IERG: 14; 37

Land Transport Rule: Dangerous Goods - Road/Rail Transport
Special Instructions: Dangerous goods in Excepted Quantities, Class 3, 8

International Air Transport Association (IATA)- Air Transport
Special Instructions: Dangerous goods in Excepted Quantities, Class 3, 8

International Maritime Dangerous Goods Code (IMDG) - Marine Transport
Special Instructions: FORBIDDEN BY THIS MODE OF TRANSPORT, 3M DIVISION POLICY

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Safety Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.
Greenguard ® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

3M Australia SDSs are available at www.3m.com.au

Safety Data Sheet

Document group:	29-8287-4	**Version number:**	4.00
Issue Date:	27/04/2022	**Supersedes date:**	28/02/2021

This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

SECTION 1: Identification

1.1. Product identifier
3M™ Scotchbond™ Universal (41258)

Product Identification Numbers
70-2011-3903-0

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Adhesive

Restrictions on use
For use by dental professionals only.

1.3. Supplier's details

Address:	3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113
Telephone:	136 136
E Mail:	productinfo.au@mmm.com
Website:	www.3m.com.au

1.4. Emergency telephone number
EMERGENCY: 1800 097 146 (Australia only)

SECTION 2: Hazard identification

This product is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011, in accordance with applicable State and Territory legislation.

Refer to Section 14 of this Safety Data Sheets for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture
Flammable liquid: Category 3.
Serious Eye Damage/Irritation: Category 1.
Skin Sensitizer: Category 1.
Reproductive Toxicity: Category 1.

2.2. Label elements
The label elements below were prepared in accordance with the Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (Safe Work Australia, December 2011). This information may be different from the actual product label.

Signal word
Danger

Symbols
Flame |Corrosion |Exclamation mark |Health Hazard |

Pictograms

Hazard statements

H226	Flammable liquid and vapour.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H360	May damage fertility or the unborn child.

Precautionary statements

Prevention:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280B	Wear protective gloves and eye/face protection.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE or doctor/physician.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:

P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Disposal:

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

2.3. Other assigned/identified product hazards

- May cause chemical gastrointestinal burns. This material has been tested for eye damage/irritation and the test results are reflected in the assigned classification. Skin corrosion/irritation class. not applied based on test data This material has been tested for skin corrosion/irritation and the test results do not meet the criteria for classification.

2.4. Other hazards which do not result in classification

Toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
2-Hydroxyethyl methacrylate	868-77-9	15 - 25
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	15 - 25
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	1207736-18-2	15 - 20
Ethanol	64-17-5	10 - 15
Water	7732-18-5	10 - 15
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	122334-95-6	7 - 13
Copolymer of acrylic and itaconic acid	25948-33-8	1 - 5
Camphorquinone	10373-78-1	< 2
Dimethylaminobenzoat(-4)	10287-53-3	< 2
(Dimethylamino)Ethyl Methacrylate	2867-47-2	< 1

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
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If swallowed
Rinse mouth. Do not induce vomiting. Get immediate medical attention.

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

Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing,

ulcerations, and significantly impaired or loss of vision).

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

Substance	Condition
Formaldehyde	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Irritant vapours or gases.	During combustion.
Oxides of nitrogen.	During combustion.

5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. 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.

Hazchem Code: •3Y

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. 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. WARNING ! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. 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. Cover spill area with a fire extinguishing foam that is resistant to polar solvents. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with detergent and 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. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharge. 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.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. 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
Ethanol	64-17-5	ACGIH	STEL:1000 ppm	A3: Confirmed animal carcinogen.
Ethanol	64-17-5	Australia OELs	TWA(8 hours):1880 mg/m3(1000 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
Australia OELs : Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment
CMRG : Chemical Manufacturer's Recommended Guidelines
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling
Sen: Sensitiser
Sk: Absorption through the skin may be a significant source of exposure.

8.2. Exposure controls

8.2.1. Engineering controls
Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety glasses with side shields.

Select and use eye protection in accordance with AS/NZS 1336. Eye protection should comply with the performance specifications of AS/NZS 1337.

Skin/hand protection
See Section 7.1 for additional information on skin protection.

Respiratory protection
None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.

Specific Physical Form:	Viscous Liquid
Colour	Yellow
Odour	Characteristic Odour
Odour threshold	*No data available.*
pH	*Not applicable.*
Melting point/Freezing point	*No data available.*
Boiling point/Initial boiling point/Boiling range	>= 78 ºC
Flash point	30.5 ºC [*Test Method:*Closed Cup]
Evaporation rate	*No data available.*
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	*No data available.*
Vapor Density and/or Relative Vapor Density	*No data available.*
Density	1 g/cm3 - 1.2 g/cm3
Relative density	1 - 1.2 [*Ref Std:*WATER=1]
Water solubility	Appreciable
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	*Not applicable.*
Volatile organic compounds (VOC)	*No data available.*
Percent volatile	*No data available.*
VOC less H2O & exempt solvents	*No data available.*
Molecular weight	*No data available.*

SECTION 10: Stability and reactivity

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

10.2 Chemical stability
Stable.

10.3. Conditions to avoid
Heat.

10.4. Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.5 Incompatible materials
None known.

10.6 Hazardous decomposition products

Substance	**Condition**
None known.	

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be

reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
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
Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion
Gastrointestinal corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea; blood in the faeces and/or vomitus may also be seen. 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.

Additional information:
This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
2-Hydroxyethyl methacrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-Hydroxyethyl methacrylate	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
Ethanol	Dermal	Rabbit	LD50 > 15,800 mg/kg
Ethanol	Inhalation-Vapour (4 hours)	Rat	LC50 124.7 mg/l

Ethanol	Ingestion	Rat	LD50 17,800 mg/kg
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	Ingestion	Rat	LD50 > 2,000 mg/kg
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Copolymer of acrylic and itaconic acid	Ingestion	Rat	LD50 > 5,000 mg/kg
Copolymer of acrylic and itaconic acid	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
Camphorquinone	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Camphorquinone	Ingestion	Rat	LD50 > 2,000 mg/kg
Dimethylaminobenzoat(-4)	Dermal	Rat	LD50 > 2,000 mg/kg
Dimethylaminobenzoat(-4)	Ingestion	Rat	LD50 > 2,000 mg/kg
(Dimethylamino)Ethyl Methacrylate	Dermal	Rat	LD50 > 2,000 mg/kg
(Dimethylamino)Ethyl Methacrylate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.436 mg/l
(Dimethylamino)Ethyl Methacrylate	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Rabbit	No significant irritation
2-Hydroxyethyl methacrylate	Rabbit	Minimal irritation
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Rabbit	No significant irritation
Ethanol	Rabbit	No significant irritation
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	In vitro data	Corrosive
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	Rabbit	No significant irritation
Dimethylaminobenzoat(-4)	Rabbit	No significant irritation
(Dimethylamino)Ethyl Methacrylate	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	In vitro data	Corrosive
2-Hydroxyethyl methacrylate	Rabbit	Moderate irritant
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	In vitro data	No significant irritation
Ethanol	Rabbit	Severe irritant
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	In vitro data	Corrosive
2-Propenoic acid, 2-methyl-, 3-	Rabbit	No significant irritation

(trimethoxysilyl)propyl ester, reaction products with vitreous silica		
Dimethylaminobenzoat(-4)	Rabbit	No significant irritation
(Dimethylamino)Ethyl Methacrylate	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
2-Hydroxyethyl methacrylate	Human and animal	Sensitising
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Mouse	Not classified
Ethanol	Human	Not classified
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	Mouse	Sensitising
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	Human and animal	Not classified
Dimethylaminobenzoat(-4)		Not classified
(Dimethylamino)Ethyl Methacrylate	Guinea pig	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
2-Hydroxyethyl methacrylate	In vivo	Not mutagenic
2-Hydroxyethyl methacrylate	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
Ethanol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Ethanol	In vivo	Some positive data exist, but the data are not sufficient for classification
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	In Vitro	Not mutagenic
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	In Vitro	Not mutagenic
Dimethylaminobenzoat(-4)	In vivo	Not mutagenic
Dimethylaminobenzoat(-4)	In Vitro	Some positive data exist, but the data are not sufficient for classification
(Dimethylamino)Ethyl Methacrylate	In vivo	Not mutagenic
(Dimethylamino)Ethyl Methacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Ethanol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	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	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-Hydroxyethyl methacrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	49 days
2-Hydroxyethyl methacrylate	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
Ethanol	Inhalation	Not classified for development	Rat	NOAEL 38 mg/l	during gestation
Ethanol	Ingestion	Not classified for development	Rat	NOAEL 5,200 mg/kg/day	premating & during gestation
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Dimethylaminobenzoat(-4)	Ingestion	Not classified for female reproduction	Rat	NOAEL 600 mg/kg/day	premating into lactation
Dimethylaminobenzoat(-4)	Ingestion	Not classified for development	Rat	NOAEL 50 mg/kg/day	premating into lactation
Dimethylaminobenzoat(-4)	Ingestion	Toxic to male reproduction	Rat	NOAEL 50 mg/kg/day	53 days
(Dimethylamino)Ethyl Methacrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
(Dimethylamino)Ethyl Methacrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	43 days
(Dimethylamino)Ethyl Methacrylate	Ingestion	Not classified for development	Rat	NOAEL 200 mg/kg/day	premating into lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Ethanol	Inhalation	respiratory	Some positive	Human	LOAEL 9.4 mg/l	not available

		irritation	data exist, but the data are not sufficient for classification			
Ethanol	Inhalation	central nervous system depression	Not classified	Human and animal	NOAEL not available	
Ethanol	Ingestion	central nervous system depression	Not classified	Multiple animal species	NOAEL not available	
Ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg	
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Copolymer of acrylic and itaconic acid	Ingestion	nervous system	Not classified	Rat	NOAEL 5,000 mg/kg	
(Dimethylamino)Ethyl Methacrylate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

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
Ethanol	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 124 mg/l	365 days
Ethanol	Inhalation	hematopoietic system | immune system	Not classified	Rat	NOAEL 25 mg/l	14 days
Ethanol	Ingestion	liver	Some positive data exist, but the	Rat	LOAEL 8,000 mg/kg/day	4 months

			data are not sufficient for classification			
Ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg/day	7 days
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Copolymer of acrylic and itaconic acid	Ingestion	endocrine system | hematopoietic system | liver	Not classified	Rat	NOAEL 200 mg/kg/day	28 days
Copolymer of acrylic and itaconic acid	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
Dimethylaminobenzoat(-4)	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 74 mg/kg/day	28 days
Dimethylaminobenzoat(-4)	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
(Dimethylamino)Ethyl Methacrylate	Inhalation	heart | endocrine system | gastrointestinal tract | hematopoietic system | liver | immune system | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 1.6 mg/l	21 days
(Dimethylamino)Ethyl	Ingestion	gastrointestinal tract | immune	Not classified	Rat	NOAEL 500 mg/kg/day	13 weeks

Methacrylate		system | nervous system | heart | skin | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | liver | muscles | eyes | kidney and/or bladder | respiratory system | vascular system				

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

Exposure Levels
Refer Section **8.1 Control Parameters** of this Safety Data Sheet.

Interactive Effects
Not determined.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:
GHS Acute 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 Number	Organism	Type	Exposure	Test endpoint	Test result
2-Hydroxyethyl methacrylate	868-77-9	Turbot	Analogous Compound	96 hours	LC50	833 mg/l
2-Hydroxyethyl methacrylate	868-77-9	Fathead minnow	Experimental	96 hours	LC50	227 mg/l
2-Hydroxyethyl methacrylate	868-77-9	Green algae	Experimental	72 hours	EC50	710 mg/l
2-Hydroxyethyl methacrylate	868-77-9	Water flea	Experimental	48 hours	EC50	380 mg/l
2-	868-77-9	Green Algae	Experimental	72 hours	NOEC	160 mg/l

Hydroxyethyl methacrylate						
2-Hydroxyethyl methacrylate	868-77-9	Water flea	Experimental	21 days	NOEC	24.1 mg/l
2-Hydroxyethyl methacrylate	868-77-9		Experimental	16 hours	EC0	>3,000 mg/l
2-Hydroxyethyl methacrylate	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	Analogous Compound	96 hours	EC10	1.1 mg/l
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	Activated sludge	Analogous Compound	3 hours	EC50	>100 mg/l
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	1207736-18-2	Green Algae	Experimental	72 hours	EC50	0.718 mg/l
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	1207736-18-2	Water flea	Experimental	48 hours	EL50	>104 mg/l

2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	1207736-18-2	Green Algae	Experimental	72 hours	NOEC	0.1 mg/l
Ethanol	64-17-5	Fathead minnow	Experimental	96 hours	LC50	14,200 mg/l
Ethanol	64-17-5	Fish other	Experimental	96 hours	LC50	11,000 mg/l
Ethanol	64-17-5	Green algae	Experimental	72 hours	EC50	275 mg/l
Ethanol	64-17-5	Water flea	Experimental	48 hours	LC50	5,012 mg/l
Ethanol	64-17-5	Green algae	Experimental	72 hours	ErC10	11.5 mg/l
Ethanol	64-17-5	Water flea	Experimental	10 days	NOEC	9.6 mg/l
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	122334-95-6	Activated sludge	Estimated	3 hours	NOEC	>=1,000 mg/l
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	122334-95-6		Data not available or insufficient for classification			N/A
Copolymer of acrylic and itaconic acid	25948-33-8		Data not available or insufficient for classification			N/A
Camphorquinone	10373-78-1		Data not available or insufficient for classification			N/A
Dimethylamino benzoat(-4)	10287-53-3	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Dimethylamino benzoat(-4)	10287-53-3	Green Algae	Experimental	72 hours	EC50	2.8 mg/l
Dimethylamino benzoat(-4)	10287-53-3	Rainbow trout	Experimental	96 hours	LC50	1.9 mg/l
Dimethylamino benzoat(-4)	10287-53-3	Water flea	Experimental	48 hours	EC50	4.5 mg/l
Dimethylamino benzoat(-4)	10287-53-3	Green Algae	Experimental	72 hours	ErC10	0.71 mg/l
(Dimethylamino)Ethyl Methacrylate	2867-47-2	Bacteria	Experimental	18 hours	EC10	42.7 mg/l
(Dimethylamino)Ethyl Methacrylate	2867-47-2	Green Algae	Experimental	72 hours	EC50	69.7 mg/l

(Dimethylamino)Ethyl Methacrylate	2867-47-2	Medaka	Experimental	96 hours	LC50	19 mg/l
(Dimethylamino)Ethyl Methacrylate	2867-47-2	Water flea	Experimental	48 hours	EC50	33 mg/l
(Dimethylamino)Ethyl Methacrylate	2867-47-2	Green Algae	Experimental	72 hours	NOEC	32 mg/l
(Dimethylamino)Ethyl Methacrylate	2867-47-2	Water flea	Experimental	21 days	NOEC	4.35 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
2-Hydroxyethyl methacrylate	868-77-9	Experimental Hydrolysis		Hydrolytic half-life basic pH	10.9 days (t 1/2)	OECD 111 Hydrolysis func of pH
2-Hydroxyethyl methacrylate	868-77-9	Experimental Biodegradation	28 days	BOD	84 %BOD/COD	OECD 301D - Closed bottle test
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	Analogous Compound Biodegradation	28 days	BOD	21 % BOD/ThOD	similar to OECD 301F
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	1207736-18-2	Experimental Biodegradation	28 days	BOD	77-80 % BOD/ThOD	OECD 301F - Manometric respirometry
Ethanol	64-17-5	Experimental Biodegradation	14 days	BOD	89 % BOD/ThOD	OECD 301C - MITI test (I)
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	122334-95-6	Data not available-insufficient	N/A	N/A	N/A	N/A
Copolymer of acrylic and itaconic acid	25948-33-8	Data not available-insufficient	N/A	N/A	N/A	N/A
Camphorquinone	10373-78-1	Estimated Biodegradation	28 days	BOD	20.6 % BOD/ThOD	OECD 301C - MITI test (I)
Dimethylamino benzoat(-4)	10287-53-3	Experimental Biodegradation	28 days	CO2 evolution	40 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2

(Dimethylamino)Ethyl Methacrylate	2867-47-2	Estimated Photolysis		Photolytic half-life (in air)	3.88 hours (t 1/2)	Non-standard method
(Dimethylamino)Ethyl Methacrylate	2867-47-2	Experimental Hydrolysis		Hydrolytic half-life	4.5 days (t 1/2)	Non-standard method
(Dimethylamino)Ethyl Methacrylate	2867-47-2	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	95.3 % weight	OECD 301E - Modif. OECD Screen

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
2-Hydroxyethyl methacrylate	868-77-9	Experimental Bioconcentration		Log Kow	0.42	OECD 107 log Kow shke flsk mtd
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	Modeled Bioconcentration		Bioaccumulation factor	5.8	Catalogic™
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	Analogous Compound Bioconcentration		Log Kow	4.63	OECD 117 log Kow HPLC method
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	1207736-18-2	Modeled Bioconcentration		Log Kow	-2.02	ACD/Labs ChemSketch™
Ethanol	64-17-5	Experimental Bioconcentration		Log Kow	-0.35	Non-standard method
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	122334-95-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Copolymer of acrylic and itaconic acid	25948-33-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Camphorquinone	10373-78-1	Estimated Bioconcentrati		Bioaccumulation factor	7.1	Estimated: Bioconcentration factor

		on				
Dimethylamino benzoat(-4)	10287-53-3	Experimental Bioconcentration		Log Kow	3.2	Non-standard method
(Dimethylamino)Ethyl Methacrylate	2867-47-2	Experimental Bioconcentration		Log Kow	1.13	Non-standard 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.

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. As a disposal alternative, utilize an acceptable permitted waste disposal facility.

SECTION 14: Transport Information

Australian Dangerous Goods Code (ADG) - Road/Rail Transport
UN No.: UN1133
Proper shipping name: ADHESIVES
Class/Division: 3
Sub Risk: Not applicable.
Packing Group: III
Special Instructions: Dangerous goods in Excepted Quantities, Class 3
Hazchem Code: •3Y
IERG: 14

International Air Transport Association (IATA) - Air Transport
UN No.: UN1133
Proper shipping name: ADHESIVES
Class/Division: 3
Sub Risk: Not applicable.
Packing Group: III
Special Instructions: Dangerous goods in Excepted Quantities, Class 3

International Maritime Dangerous Goods Code (IMDG)- Marine Transport
UN No.: UN1133
Proper shipping name: ADHESIVES
Class/Division: 3
Sub Risk: Not applicable.
Packing Group: III
Marine Pollutant: Not applicable.
Special Instructions: Forbidden due to internal policy

SECTION 15: Regulatory information

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

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

Poison Schedule: This product is intended for Industrial or Professional Use only and therefore is not packaged and labelled in accordance with the requirements of the Standard for the Uniform Scheduling of Medicines and Poisons.

SECTION 16: Other information

Revision information:
Complete document review.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Safety Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.
Greenguard ® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

3M Australia SDSs are available at www.3m.com.au

Safety Data Sheet

Document group:	29-8286-6	**Version number:**	5.00
Issue Date:	22/03/2022	**Supersedes date:**	03/03/2021

This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

SECTION 1: Identification

1.1. Product identifier
3M™ Scotchbond™ Universal Etchant (41263)

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Etching gel

Restrictions on use
For use by dental professionals only.

1.3. Supplier's details

Address:	3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113
Telephone:	136 136
E Mail:	productinfo.au@mmm.com
Website:	www.3m.com.au

1.4. Emergency telephone number
EMERGENCY: 1800 097 146 (Australia only)

SECTION 2: Hazard identification

This product is classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011, in accordance with applicable State and Territory legislation.

Refer to Section 14 of this Safety Data Sheets for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture
Corrosive to metal: Category 1.
Skin Corrosion/Irritation: Category 1.
Serious Eye Damage/Irritation: Category 1.

2.2. Label elements
The label elements below were prepared in accordance with the Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (Safe Work Australia, December 2011). This information may be different from the actual product label.

Signal word
Danger

Symbols
Corrosion |

Pictograms

Hazard statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.

Precautionary statements

Prevention:

P234	Keep only in original packaging.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P280D	Wear protective gloves, protective clothing, and eye/face protection.

Response:

P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE or doctor/physician.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.

Storage:

P405	Store locked up.
P406	Store in a corrosion-resistant container with a resistant inner liner.

Disposal:

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

2.3. Other assigned/identified product hazards
- May cause chemical gastrointestinal burns.

2.4. Other hazards which do not result in classification
May be harmful if swallowed.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Water	7732-18-5	50 - 65
Phosphoric Acid	7664-38-2	30 - 40
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	5 - 10
Polyethylene Glycol	25322-68-3	1 - 5
Aluminium oxide	1344-28-1	< 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 flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

Eye contact
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If swallowed
Rinse mouth. Do not induce vomiting. Get immediate medical attention.

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

Skin burns (localized redness, swelling, itching, intense pain, blistering, and tissue destruction). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision).

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

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

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
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.

Hazchem Code: 2R

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 metal container approved for use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. Clean up residue with water. Cover, but do not seal for 48 hours. 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 prolonged or repeated skin contact. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. 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. Keep only in original container. Store in a corrosive resistant container with a resistant inner liner. Store away from strong bases.

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
Silicon dioxide	112945-52-5	Australia OELs	TWA(respirable fraction)(8 hours):2 mg/m3	
Aluminium oxide	1344-28-1	Australia OELs	TWA(Inspirable dust)(8 hours):10 mg/m3	
Aluminum, insoluble compounds	1344-28-1	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin
Polyethylene Glycol	25322-68-3	AIHA	TWA:10 mg/m³	
Phosphoric Acid	7664-38-2	ACGIH	TWA: 1 mg/m³; STEL: 3 mg/m³	
Phosphoric Acid	7664-38-2	Australia OELs	TWA(8 hours):1 mg/m3;STEL(15 minutes):3 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
Australia OELs : Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment
CMRG : Chemical Manufacturer's Recommended Guidelines
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling
Sen: Sensitiser
Sk: Absorption through the skin may be a significant source of exposure.

8.2. Exposure controls

8.2.1. Engineering controls
Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety glasses with side shields.

Select and use eye protection in accordance with AS/NZS 1336. Eye protection should comply with the performance specifications of AS/NZS 1337.

Skin/hand protection
See Section 7.1 for additional information on skin protection.

Respiratory protection
None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Gel
Colour	Blue
Odour	Slight Odour, Characteristic Odour
Odour threshold	*No data available.*
pH	< 1
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	*No data available.*
Flash point	> 100 ºC [*Test Method:*Closed Cup]
Evaporation rate	*No data available.*
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	*No data available.*
Vapor Density and/or Relative Vapor Density	*No data available.*
Density	1.1 g/ml - 1.2 g/ml
Relative density	1.1 - 1.2 [*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	*No data available.*
Volatile organic compounds (VOC)	*No data available.*
Percent volatile	*No data available.*
VOC less H2O & exempt solvents	*No data available.*
Molecular weight	*No data available.*

Nanoparticles

This material contains nanoparticles.

SECTION 10: Stability and reactivity

10.1 Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability
Stable.

10.3. Conditions to avoid
Heat.

10.4. Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.5 Incompatible materials
Strong bases.

10.6 Hazardous decomposition products

Substance	Condition
None known.	

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

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

Skin contact
Corrosive (skin burns): Signs/symptoms may include localised redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Eye contact
Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion
May be harmful if swallowed.
Gastrointestinal corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea; blood in the faeces and/or vomitus may also be seen.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >2,000 - ≤5,000 mg/kg
Phosphoric Acid	Dermal	Rabbit	LD50 2,740 mg/kg
Phosphoric Acid	Ingestion	Rat	LD50 1,530 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Dermal	Rabbit	LD50 > 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Rat	LD50 > 5,110 mg/kg
Polyethylene Glycol	Dermal	Rabbit	LD50 > 20,000 mg/kg
Polyethylene Glycol	Ingestion	Rat	LD50 32,770 mg/kg
Aluminium oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Aluminium oxide	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Phosphoric Acid	Rabbit	Corrosive
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
Polyethylene Glycol	Rabbit	Minimal irritation
Aluminium oxide	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Phosphoric Acid	official classification	Corrosive
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
Polyethylene Glycol	Rabbit	Mild irritant
Aluminium oxide	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Phosphoric Acid	Human	Not classified
Synthetic amorphous silica, fumed, crystalline-free	Human and animal	Not classified
Polyethylene Glycol	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
Phosphoric Acid	In Vitro	Not mutagenic
Synthetic amorphous silica, fumed, crystalline-free	In Vitro	Not mutagenic

Polyethylene Glycol	In Vitro	Not mutagenic
Polyethylene Glycol	In vivo	Not mutagenic
Aluminium oxide	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Synthetic amorphous silica, fumed, crystalline-free	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Polyethylene Glycol	Ingestion	Rat	Not carcinogenic
Aluminium oxide	Inhalation	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Phosphoric Acid	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Phosphoric Acid	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Phosphoric Acid	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Polyethylene Glycol	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,125 mg/kg/day	during gestation
Polyethylene Glycol	Ingestion	Not classified for male reproduction	Rat	NOAEL 5699 +/-1341 mg/kg/day	5 days
Polyethylene Glycol	Not specified.	Not classified for reproduction and/or development		NOEL N/A	
Polyethylene Glycol	Ingestion	Not classified for development	Mouse	NOAEL 562 mg/animal/day	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Phosphoric Acid	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Polyethylene Glycol	Inhalation	respiratory irritation	Not classified	Rat	NOAEL 1.008 mg/l	2 weeks

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration

Synthetic amorphous silica, fumed, crystalline-free	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Polyethylene Glycol	Inhalation	respiratory system	Not classified	Rat	NOAEL 1.008 mg/l	2 weeks
Polyethylene Glycol	Ingestion	kidney and/or bladder | heart | endocrine system | hematopoietic system | liver | nervous system	Not classified	Rat	NOAEL 5,640 mg/kg/day	13 weeks
Aluminium oxide	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Aluminium oxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure

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

Exposure Levels
Refer Section **8.1 Control Parameters** of this Safety Data Sheet.

Interactive Effects
Not determined.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:
Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:
Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Phosphoric Acid	7664-38-2	Green algae	Experimental	72 hours	EC50	>100 mg/l
Phosphoric Acid	7664-38-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
Phosphoric Acid	7664-38-2	Green algae	Experimental	72 hours	NOEC	100 mg/l
Synthetic	112945-52-5	Green Algae	Experimental	72 hours	EC50	>100 mg/l

amorphous silica, fumed, crystalline-free						
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Water flea	Experimental	24 hours	EC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green Algae	Experimental	72 hours	NOEC	60 mg/l
Polyethylene Glycol	25322-68-3	Activated sludge	Experimental		EC50	>1,000 mg/l
Polyethylene Glycol	25322-68-3	Atlantic Salmon	Experimental	96 hours	LC50	>1,000 mg/l
Aluminium oxide	1344-28-1	Fish	Experimental	96 hours	LC50	>100 mg/l
Aluminium oxide	1344-28-1	Green Algae	Experimental	72 hours	EC50	>100 mg/l
Aluminium oxide	1344-28-1	Water flea	Experimental	48 hours	LC50	>100 mg/l
Aluminium oxide	1344-28-1	Green Algae	Experimental	72 hours	NOEC	>100 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Phosphoric Acid	7664-38-2	Data not available-insufficient	N/A	N/A	N/A	N/A
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Data not available-insufficient	N/A	N/A	N/A	N/A
Polyethylene Glycol	25322-68-3	Experimental Biodegradation	28 days	BOD	53 % BOD/ThOD	OECD 301C - MITI test (I)
Aluminium oxide	1344-28-1	Data not available-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Phosphoric Acid	7664-38-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Synthetic amorphous silica, fumed,	112945-52-5	Data not available or insufficient for	N/A	N/A	N/A	N/A

crystalline-free		classification				
Polyethylene Glycol	25322-68-3	Estimated Bioconcentration		Bioaccumulation factor	2.3	Estimated: Bioconcentration factor
Aluminium oxide	1344-28-1	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.

Incinerate in a permitted waste incineration facility.

SECTION 14: Transport Information

Australian Dangerous Goods Code (ADG) - Road/Rail Transport
UN No.: UN1805
Proper shipping name: PHOSPHORIC ACID SOLUTION
Class/Division: 8
Sub Risk: Not applicable.
Packing Group: III
Special Instructions: Dangerous Goods in Excepted Quantities, Class 8
Hazchem Code: 2R
IERG: 37

International Air Transport Association (IATA) - Air Transport
UN No.: UN1805
Proper shipping name: PHOSPHORIC ACID SOLUTION
Class/Division: 8
Sub Risk: Not applicable.
Packing Group: III
Special Instructions: Dangerous Goods in Excepted Quantities, Class 8

International Maritime Dangerous Goods Code (IMDG)- Marine Transport
UN No.: UN1805
Proper shipping name: PHOSPHORIC ACID SOLUTION
Class/Division: 8
Sub Risk: Not applicable.
Packing Group: III
Marine Pollutant: Not applicable.
Special Instructions: Forbidden due to internal policy

SECTION 15: Regulatory information

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

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

SECTION 16: Other information

Revision information:
Complete document review.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Safety Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.
Greenguard ® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

3M Australia SDSs are available at www.3m.com.au