



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the New Zealand, Hazardous Substances (Safety Data Sheets) Notice 2017.

SECTION 1: Identification

1.1. Product identifier

Scotchbond™ Universal Plus Vial (41294, 41295, 41296, 41307)

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, For use only by dental professionals in approved indications

Restrictions on use

Dental Adhesive

1.3. Supplier's details

Address:	KCI New Zealand Unlimited, Suite 1701, Level 17, PwC Tower 15 Customs Street West, Auckland Central, Auckland 1010 New Zealand
Telephone:	+80 080 8182
E Mail:	psops_supportteam@solventum.com
Website:	Solventum.com

1.4. Emergency telephone number

0800 425 459; (24/7) +1-703-527-3887; (24/7)

SECTION 2: Hazard identification

Classified as hazardous in accordance with the relevant criteria of the HSNO Act 1996 and the Hazardous Substances (Hazard Classification) Notice 2020.

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

2.1. Classification of the substance or mixture

Flammable Liquids: Category 2
 Skin irritation: Category 2
 Serious eye damage: Category 1
 Skin sensitisation: Category 1
 Reproductive Toxicity: Category 1
 Hazardous to the aquatic environment chronic: Category 3

2.2. Label elements

SIGNAL WORD

Danger

Symbols:

Flame | Corrosion | Exclamation mark | Health Hazard |

Pictograms



HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H360	May damage fertility or the unborn child.
H412	Harmful to aquatic life with long lasting effects.

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.
P264	Wash exposed skin thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
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 CENTER 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 via an approved hazardous waste disposal contractor.

2.3. Other hazards

May cause chemical gastrointestinal burns. This material has been tested for skin corrosion/irritation and the test results are reflected in the assigned classification.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	2305048-54-6	25 - 35
2-Hydroxyethyl methacrylate	868-77-9	15 - 25
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	1207736-18-2	< 20
2-Propenoic acid, 2-methyl-, 3-(triethoxysilyl)propyl ester, reaction products with silica and 3-(triethoxysilyl)-1-propanamine	2680625-03-8	5 - 15
Ethanol	64-17-5	5 - 15
Water	7732-18-5	5 - 15
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	< 10
METHACRYLIC ACID, 3-(TRIETHOXSILYL)PROPYL ESTER	21142-29-0	< 5
Ethyl 4-dimethylaminobenzoate	10287-53-3	< 2
Camphorquinone	10373-78-1	< 2
Copolymer of acrylic and itaconic acid	25948-33-8	< 2
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	< 0.1

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.
A product risk assessment is recommended to determine if eye wash facilities may be required when using this product in the workplace.

If swallowed

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

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

The most important symptoms and effects based on the CLP classification include:

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

<u>Substance</u>	<u>Condition</u>
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.

5.4. Hazchem code: -3WE

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 vapors in the spill area to burn or explode.

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

Refer to Section 15 - Controls for more information

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.

7.3. Certified handler

Not required

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
Copper compounds	6046-93-1	ACGIH	TWA(as Cu, fume):0.2 mg/m ³ ;TWA(as Cu dust or mist):1 mg/m ³	
Copper, inorganic compounds	6046-93-1	New Zealand WES	TWA(as Cu, respirable)(8 hours):0.01 mg/m ³	Dermal sensitizer
Ethanol	64-17-5	ACGIH	STEL:1000 ppm	A3: Confirmed animal carcinogen.
Ethanol	64-17-5	New Zealand WES	TWA(8 hours):380 mg/m ³ (200 ppm);STEL(15 minutes):1520 mg/m ³ (800 ppm)	Ototoxicant

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

New Zealand WES : New Zealand Workplace Exposure Standards.

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

ppm: parts per million

mg/m³: milligrams per cubic metre

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.

Refer AS/NZS 1336 - Recommended practices for occupational eye protection and for performance specifications AS/NZS 1337, Parts 1 - 6 - Personal eye-protection.

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	Moderate Alcohol
Odour threshold	No data available.
pH	Not applicable.
Melting point/Freezing point	No data available.
Boiling point/Initial boiling point/Boiling range	> 78 °C
Flash point	± 21 °C [Test Method: Closed Cup]
Evaporation rate	No data available.
Flammability	Flammable Liquid: Category 2.
Flammable Limits(LEL)	No data available.
Flammable Limits(UEL)	No data available.
Vapour pressure	No data available.
Relative Vapour Density	No data available.
Density	± 1.1 g/cm3
Relative density	± 1.1
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.
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.

Particle Characteristics	Not applicable.
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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>
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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

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.
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-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	Dermal	Professional	LD50 estimated to be > 5,000 mg/kg

		judgement	
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	Ingestion	Rat	LD50 > 2,000 mg/kg
2-Hydroxyethyl methacrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-Hydroxyethyl methacrylate	Ingestion	Rat	LD50 5,564 mg/kg
Ethanol	Dermal	Rabbit	LD50 > 15,800 mg/kg
Ethanol	Inhalation-Vapor (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
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
METHACRYLIC ACID, 3-(TRIETHOXSILYL)PROPYL ESTER	Dermal	Rat	LD50 > 2,000 mg/kg
METHACRYLIC ACID, 3-(TRIETHOXSILYL)PROPYL ESTER	Ingestion	Rat	LD50 > 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
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
Ethyl 4-dimethylaminobenzoate	Dermal	Rat	LD50 > 2,000 mg/kg
Ethyl 4-dimethylaminobenzoate	Ingestion	Rat	LD50 > 2,000 mg/kg
Acetic acid, copper(2+) salt, monohydrate	Dermal	Rat	LD50 > 2,000 mg/kg
Acetic acid, copper(2+) salt, monohydrate	Ingestion	Rat	LD50 > 300, < 2000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	In vitro data	Irritant
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	In vitro data	Irritant
2-Hydroxyethyl methacrylate	Rabbit	Minimal 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
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
METHACRYLIC ACID, 3-(TRIETHOXSILYL)PROPYL ESTER	Rabbit	No significant irritation
Ethyl 4-dimethylaminobenzoate	Rabbit	No significant irritation
Acetic acid, copper(2+) salt, monohydrate	In vitro data	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	In vitro data	No significant irritation
2-Hydroxyethyl methacrylate	Rabbit	Moderate irritant

Ethanol	Rabbit	Severe irritant
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	In vitro data	Corrosive
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
METHACRYLIC ACID, 3-(TRIETHOXSILYL)PROPYL ESTER	Rabbit	No significant irritation
Ethyl 4-dimethylaminobenzoate	Rabbit	No significant irritation
Acetic acid, copper(2+) salt, monohydrate	Rabbit	Corrosive

Sensitisation:

Skin Sensitisation

Name	Species	Value
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	Professional judgement	Sensitising
2-Hydroxyethyl methacrylate	Human and animal	Sensitising
Ethanol	Human	Not classified
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)	Mouse	Sensitising
Synthetic amorphous silica, fumed, crystalline-free	Human and animal	Not classified
METHACRYLIC ACID, 3-(TRIETHOXSILYL)PROPYL ESTER	similar compounds	Not classified
Ethyl 4-dimethylaminobenzoate		Not classified
Acetic acid, copper(2+) salt, monohydrate	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-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	In vivo	Not mutagenic
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	In Vitro	Some positive data exist, but the data are not sufficient for classification
2-Hydroxyethyl methacrylate	In vivo	Not mutagenic
2-Hydroxyethyl methacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
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
Synthetic amorphous silica, fumed, crystalline-free	In Vitro	Not mutagenic
METHACRYLIC ACID, 3-(TRIETHOXSILYL)PROPYL ESTER	In Vitro	Not mutagenic
Ethyl 4-dimethylaminobenzoate	In vivo	Not mutagenic
Ethyl 4-dimethylaminobenzoate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Acetic acid, copper(2+) salt, monohydrate	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Ethanol	Ingestion	Multiple animal	Some positive data exist, but the data are not sufficient for classification

		species	
Synthetic amorphous silica, fumed, crystalline-free	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-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	29 days
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
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
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
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
Ethyl 4-dimethylaminobenzoate	Ingestion	Not classified for female reproduction	Rat	NOAEL 600 mg/kg/day	premating into lactation
Ethyl 4-dimethylaminobenzoate	Ingestion	Not classified for development	Rat	NOAEL 50 mg/kg/day	premating into lactation
Ethyl 4-dimethylaminobenzoate	Ingestion	Toxic to male reproduction	Rat	NOAEL 50 mg/kg/day	53 days

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Ethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL 9.4 mg/l	not available
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	
Acetic acid, copper(2+) salt, monohydrate	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
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	Ingestion	heart endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system liver immune system muscles nervous system eyes kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 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 data are not sufficient for classification	Rat	LOAEL 8,000 mg/kg/day	4 months
Ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg/day	7 days
Synthetic amorphous silica, fumed, crystalline-free	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
Ethyl 4-dimethylaminobenzoate	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 74 mg/kg/day	28 days
Ethyl 4-dimethylaminobenzoate	Ingestion	liver heart endocrine system gastrointestinal tract bone, teeth, nails, and/or hair immune system muscles nervous	Not classified	Rat	NOAEL 900 mg/kg/day	28 days

		system eyes kidney and/or bladder respiratory system vascular system				
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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

Ecotoxic to the aquatic environment.

Acute Aquatic Toxicity: Category 2

Chronic Aquatic Toxicity: Category 3

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	2305048-54-6	Green algae	Experimental	72 hours	ErC50	>100 mg/l
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	2305048-54-6	Water flea	Experimental	48 hours	EC50	>100 mg/l
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-	2305048-54-6	Green algae	Experimental	72 hours	ErC10	>100 mg/l

(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers						
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	2305048-54-6	Water flea	Experimental	21 days	NOEC	100 mg/l
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-Hydroxyethyl methacrylate	868-77-9	Green algae	Experimental	72 hours	NOEC	160 mg/l
2-Hydroxyethyl methacrylate	868-77-9	Water flea	Experimental	21 days	NOEC	24.1 mg/l
2-Hydroxyethyl methacrylate	868-77-9	N/A	Experimental	16 hours	EC0	>3,000 mg/l
2-Hydroxyethyl methacrylate	868-77-9	N/A	Experimental	18 hours	LD50	<98 mg per kg of bodyweight
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	1207736-18-2	Water flea	Experimental	48 hours	EL50	>104 mg/l

oxide (P2O5)						
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	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
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green algae	Analogous Compound	72 hours	ErC50	>173.1 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Sediment organism	Analogous Compound	96 hours	EC50	8,500 mg/kg (Dry Weight)
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Water flea	Analogous Compound	24 hours	EL50	>10,000 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Zebra Fish	Analogous Compound	96 hours	LL50	>10,000 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green algae	Analogous Compound	72 hours	NOEC	173.1 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Water flea	Analogous Compound	21 days	NOEC	68 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
METHACRYLIC ACID, 3-(TRIETHOXY Silyl)propyl ester	21142-29-0	Green algae	Experimental	72 hours	ErC50	36.2 mg/l
METHACRYLIC ACID, 3-(TRIETHOXY Silyl)propyl ester	21142-29-0	Water flea	Experimental	48 hours	EC50	>100 mg/l
METHACRYLIC ACID, 3-(TRIETHOXY Silyl)propyl ester	21142-29-0	Green algae	Experimental	72 hours	ErC10	9.39 mg/l

IC ACID, 3-(TRIETHOXY SILYL)PROPYL ESTER						
Camphorquinone	10373-78-1	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Copolymer of acrylic and itaconic acid	25948-33-8	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Ethyl 4-dimethylamino benzoate	10287-53-3	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Ethyl 4-dimethylamino benzoate	10287-53-3	Green algae	Experimental	72 hours	EL50	2.8 mg/l
Ethyl 4-dimethylamino benzoate	10287-53-3	Rainbow trout	Experimental	96 hours	LC50	1.9 mg/l
Ethyl 4-dimethylamino benzoate	10287-53-3	Water flea	Experimental	48 hours	EC50	4.5 mg/l
Ethyl 4-dimethylamino benzoate	10287-53-3	Green algae	Experimental	72 hours	ErC10	0.71 mg/l
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Green algae	Estimated	72 hours	EC50	0.33 mg/l
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Water flea	Estimated	48 hours	EC50	0.04 mg/l
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Zebra Fish	Estimated	96 hours	LC50	0.037 mg/l
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Fathead minnow	Estimated	32 days	EC10	0.019 mg/l
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Green algae	Estimated	N/A	NOEC	0.069 mg/l
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Sediment Worm	Estimated	28 days	NOEC	57.5 mg/kg (Dry Weight)
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Water flea	Estimated	7 days	NOEC	0.01 mg/l
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Activated sludge	Estimated	N/A	EC50	22 mg/l
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Barley	Estimated	4 days	NOEC	50 mg/kg (Dry Weight)
Acetic acid,	6046-93-1	Bobwhite quail	Estimated	14 days	LD50	4,402 mg per kg of

copper(2+) salt, monohydrate						bodyweight
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Redworm	Estimated	56 days	NOEC	31 mg/kg (Dry Weight)
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Soil microbes	Estimated	4 days	NOEC	38 mg/kg (Dry Weight)
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Springtail	Estimated	28 days	NOEC	87.7 mg/kg (Dry Weight)

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	2305048-54-6	Experimental Biodegradation	28 days	CO2 evolution	3.69 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2
2-Hydroxyethyl methacrylate	868-77-9	Experimental Biodegradation	28 days	BOD	84 %BOD/CO D	OECD 301D - Closed bottle test
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-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/ThO D	OECD 301F - Manometric respirometry
2-Propenoic acid, 2-methyl-, 3-(triethoxysilyl) propyl ester, reaction products with silica and 3-(triethoxysilyl)-1-propanamine	2680625-03-8	Data not availbl- insufficient	N/A	N/A	N/A	N/A
Ethanol	64-17-5	Experimental Biodegradation	14 days	BOD	89 %BOD/ThO D	OECD 301C - MITI test (I)
Synthetic amorphous silica, fumed,	112945-52-5	Data not availbl- insufficient	N/A	N/A	N/A	N/A

crystalline-free						
METHACRYLIC ACID, 3-(TRIETHOXYSILYL)PROPYL ESTER	21142-29-0	Analogous Compound Biodegradation	28 days	BOD	69 %BOD/ThOD (< 10 day window)	OECD 301F - Manometric respirometry
METHACRYLIC ACID, 3-(TRIETHOXYSILYL)PROPYL ESTER	21142-29-0	Analogous Compound Hydrolysis		Hydrolytic half-life (pH 7)	4 hours (t 1/2)	
Camphorquinone	10373-78-1	Modeled Biodegradation	28 days	BOD	20.6 %BOD/ThOD	Catalogic™
Copolymer of acrylic and itaconic acid	25948-33-8	Data not available - insufficient	N/A	N/A	N/A	N/A
Ethyl 4-dimethylamino benzoate	10287-53-3	Experimental Biodegradation	28 days	CO2 evolution	40 %CO2 evolution/THCO2 evolution	OECD 301B - Modified Sturm or CO2
Ethyl 4-dimethylamino benzoate	10287-53-3	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	OECD 111 Hydrolysis func of pH
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Analogous Compound Biodegradation	14 days	BOD	74 %BOD/ThOD	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	2305048-54-6	Modeled Bioconcentration		Bioaccumulation factor	6	Catalogic™
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	2305048-54-6	Experimental Bioconcentration		Log Kow	4.77	OECD 107 log Kow shake flask mtd
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-	2305048-54-6	Experimental Bioconcentration		Log Kow	5.22	OECD 107 log Kow shake flask mtd

1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers						
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	2305048-54-6	Experimental Bioconcentration		Log Kow	5.36	OECD 107 log Kow shke flask mtd
2-Hydroxyethyl methacrylate	868-77-9	Experimental Bioconcentration		Log Kow	0.42	OECD 107 log Kow shke flask mtd
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™
2-Propenoic acid, 2-methyl-, 3-(triethoxysilyl) propyl ester, reaction products with silica and 3-(triethoxysilyl)-1-propanamine	2680625-03-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethanol	64-17-5	Experimental Bioconcentration		Log Kow	-0.35	
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
METHACRYLIC ACID, 3-(TRIETHOXY SILYL)PROPYL ESTER	21142-29-0	Modeled Bioconcentration		Bioaccumulation factor	3	Catalogic™
METHACRYLIC ACID, 3-(TRIETHOXY SILYL)PROPYL	21142-29-0	Modeled Bioconcentration		Log Kow	3.4	Episuite™

YL ESTER						
Camphorquinone	10373-78-1	Modeled Bioconcentration		Bioaccumulation factor	7.1	Catalogic™
Camphorquinone	10373-78-1	Experimental Bioconcentration		Log Kow	1.52	
Copolymer of acrylic and itaconic acid	25948-33-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethyl 4-dimethylamino benzoate	10287-53-3	Experimental Bioconcentration		Log Kow	3.2	OECD 117 log Kow HPLC method
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Analogous Compound Bioconcentration		Log Kow	-0.17	

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

In accordance with the Hazardous Substances (Disposal) Notice 2017 and the relevant criteria of the HSNO Act 1996.

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.

Packaging (that may or may not contain any residual substance) may be lawfully disposed of by householders or other consumers through public or commercial waste collection services.

SECTION 14: Transport Information

New Zealand Land Transport Rule: Dangerous Goods - Road/Rail Transport

UN No.: UN2924

Proper Shipping Name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. , (Ethanol, 2-Propenoic Acid, 2-Methyl-, Reaction Products with 1,10-Decanediol and Phosphorus Oxide (P2O5))

Class/Division: 3

Sub Risk: 8

Packing Group: II

Special Instructions: DANGEROUS GOODS IN EXCEPTED QUANTITIES: CLASS

Hazchem Code: -3WE

IERG: 18

International Air Transport Association (IATA) - Air Transport

UN No.: UN2924

Proper Shipping Name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. , (Ethanol, 2-Propenoic Acid, 2-Methyl-, Reaction Products with 1,10-Decanediol and Phosphorus Oxide (P2O5))

Class/Division: 3

Sub Risk: 8

Packing Group: II

Special Instructions: Dangerous goods in Excepted Quantities, Class 3

International Maritime Dangerous Goods Code (IMDG) - Marine Transport

UN No.: UN2924

Proper Shipping Name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. , (Ethanol, 2-Propenoic Acid, 2-Methyl-, Reaction Products with 1,10-Decanediol and Phosphorus Oxide (P2O5))

Class/Division: 3

Sub Risk: 8

Packing Group: II

Marine Pollutant: Not applicable.

Special Instructions: Dangerous goods in Excepted Quantities, Class 3

SECTION 15: Regulatory information

HSNO Approval number HSR002556

Group standard name Dental Products (Flammable) Group Standard 2020

HSNO Hazard classification Refer to Section 2: Hazard identification

NZ Inventory of Chemicals (NZIoC) Status

Controls in accordance with The Health and Safety at Work Act 2015, Health and Safety at Work (Hazardous Substances) Regulations 2017 and the HSNO Act 1996, Hazardous Substances (Hazardous Property Controls) Notice 2017

Certified handler	Not required
Location Compliance Certificate	100 L (closed containers greater than 5 L) 250 L (closed containers up to and including 5 L) 50 L (open containers)
Hazardous atmosphere zone	100 L (closed containers) 25 L (decanting) 5 L (open occasionally) 1 L (open containers in continuous use)
Fire extinguishers	Two required for 250 L
Emergency response plan	100 L (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L (for all other substances)
Secondary containment	100 L (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L (for all other substances)
Tracking	Not required
Warning signage	100 L (for Hazardous to the aquatic environment Category 1 substances); or 250 L (for all other substances)

SECTION 16: Other information

Revision information:

Complete document review.

Document group:	41-4437-4	Version number:	2.00
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Key to abbreviations and acronyms

GHS refers to the Globally Harmonised System of Classification and Labelling of Chemicals, 7th revised edition of 2017

HSNO means Hazardous Substances and New Organisms Act 1996

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