



Safety Data Sheet

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Document group: 41-7750-7 **Version number:** 1.00
Issue Date: 08/02/2021 **Supersedes date:** Initial issue.

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

IDENTIFICATION:

1.1. Product identifier

3M™ RelyX™ Universal Trail Kit

Product Identification Numbers

UU-0108-8516-6 UU-0109-0316-7

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Dental Cement

Restrictions on use

For use only by dental professionals in approved indications.

1.3. Supplier's details

Address: 3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland
Telephone: (09) 477 4040
E Mail: innovation@nz.mmm.com
Website: 3m.co.nz

1.4. Emergency telephone number

24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

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:

41-5399-5, 29-8286-6, 41-5463-9, 41-4437-4

One or more components of this KIT is classified as a hazardous substance in accordance with the relevant criteria of the HSNO Act 1996, the Hazardous Substances (Classification) Notice 2017 and the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017.

TRANSPORT INFORMATION

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

UN No.: UN1805

Proper shipping name: PHOSPHORIC ACID SOLUTION

Class/Division: 8

Packing Group: III

Marine Pollutant: Not applicable.

Hazchem Code: 2R

IERG: 37

Land Transport Rule: Dangerous Goods - Road/Rail Transport

Special Instructions: Excepted quantity may be applied

International Air Transport Association (IATA)- Air Transport

Special Instructions: Dangerous Goods in Excepted Quantities, Class 8

International Maritime Dangerous Goods Code (IMDG) - Marine Transport

Special Instructions: Dangerous Goods in Excepted Quantities, Class 8

Revision information:

Initial issue.

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3M New Zealand SDS are available at 3M New Zealand Website: <http://solutions.3mnz.co.nz>



Safety Data Sheet

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Document group:	29-8286-6	Version number:	5.00
Issue Date:	11/04/2024	Supersedes date:	04/03/2021

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

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 New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland

Telephone: (09) 477 4040

E Mail: innovation@nz.mmm.com

Website: 3m.co.nz

1.4. Emergency telephone number

24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

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

Corrosive to metals: Category 1

Skin corrosion: Category 1C

Serious eye damage: Category 1

2.2. Label elements

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 CENTER 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 hazards

May cause chemical gastrointestinal burns.

SECTION 3: Composition/information on ingredients

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.
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 ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

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

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

5.4. 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

Refer to Section 15 - Controls for more information

7.1. Precautions for safe handling

Avoid prolonged or repeated skin contact. Do not breathe dust/fume/gas/mist/vapours/spray. 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.

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
Aluminium Oxide	1344-28-1	New Zealand WES	TWA(8 hours):10 mg/m ³	
Aluminum, insoluble compounds	1344-28-1	ACGIH	TWA(respirable fraction):1 mg/m ³	A4: Not class. as human carcinogen
Polyethylene Glycol	25322-68-3	AIHA	TWA:10 mg/m ³	
Phosphoric Acid	7664-38-2	ACGIH	TWA: 1 mg/m ³ ; STEL: 3 mg/m ³	
Phosphoric Acid	7664-38-2	New Zealand WES	TWA(8 hours): 1 mg/m ³	

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:	Gel
Colour	Blue
Odour	Slight Odour, Characteristic Odour
Odour threshold	<i>No data available.</i>
pH	< 1
Melting point/Freezing point	<i>Not applicable.</i>
Boiling point/Initial boiling point/Boiling range	<i>No data available.</i>
Flash point	> 100 °C [Test Method: Closed Cup]
Evaporation rate	<i>No data available.</i>
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Vapor Density and/or Relative Vapor Density	<i>No data available.</i>
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	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity/Kinematic Viscosity	<i>No data available.</i>
Volatile organic compounds (VOC)	<i>No data available.</i>
Percent volatile	<i>No data available.</i>
VOC less H ₂ O & exempt solvents	<i>No data available.</i>
Molecular weight	<i>No data available.</i>

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

Strong bases.

10.6 Hazardous decomposition products**Substance****Condition**

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

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

Sensitisation:

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	Mouse	Some positive data exist, but the data are not

	specified.		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.

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 terrestrial vertebrates**

Hazardous to terrestrial vertebrates

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 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	112945-52-5	Water flea	Analogous Compound	21 days	NOEC	68 mg/l

Silica, Fumed, Crystalline Free						
Synthetic Amorphous Silica, Fumed, Crystalline Free	112945-52-5	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Polyethylene Glycol	25322-68-3	Activated sludge	Experimental	N/A	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 availbl-insufficient	N/A	N/A	N/A	N/A
Synthetic Amorphous Silica, Fumed, Crystalline Free	112945-52-5	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Polyethylene Glycol	25322-68-3	Experimental Biodegradation	28 days	BOD	53 %BOD/ThO D	OECD 301C - MITI test (I)
Aluminium Oxide	1344-28-1	Data not availbl-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, Crystalline Free	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyethylene Glycol	25322-68-3	Estimated Bioconcentration		Bioaccumulation factor	2.3	
Aluminium	1344-28-1	Data not	N/A	N/A	N/A	N/A

Oxide		available or insufficient for classification				
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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 waste product in a permitted industrial waste facility.

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.: UN1805

Proper Shipping Name: PHOSPHORIC ACID SOLUTION

Class/Division: 8

Sub Risk: Not applicable.

Packing Group: III

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 BY THIS MODE OF TRANSPORT, 3M DIVISION POLICY

SECTION 15: Regulatory information

HSNO Approval number HSR002555
 Group standard name Dental Products (Corrosive) Group Standard 2020
 HSNO Hazard classification Refer to Section 2: Hazard identification

NZ Inventory of Chemicals (NZIoC) Status

All applicable chemical ingredients in this material are in compliance with NZIoC listing requirements.

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	Not required
Hazardous atmosphere zone	Not required
Fire extinguishers	Not required
Emergency response plan	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for Acute toxicity Category 4, Skin sensitisation Category 1, Respiratory sensitisation Category 1, Skin corrosion Category 1B, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L or 10 000 kg (for all other substances)
Secondary containment	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for Acute toxicity Category 4, Skin sensitisation Category 1, Respiratory sensitisation Category 1, Skin corrosion Category 1B, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L or 10 000 kg (for all other substances)
Tracking	Not required
Warning signage	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 250 L or 250 kg (for Skin corrosion Category 1B substances); or 1 000 L or 1 000 kg (for all other substances)

SECTION 16: Other information**Revision information:**

Complete document review.

Document group:	29-8286-6	Version number:	5.00
Issue Date:	11/04/2024	Supersedes date:	04/03/2021

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

The information in this Safety Data Sheet (SDS) is believed to be correct as of the date of issue. TO THE EXTENT PERMITTED BY LAW, 3M MAKES NO WARRANTY, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluates the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. 3M provides information in electronic form as a service to customers. Due to the remote possibility of electronic transfer may have resulted in errors, omissions or alterations in this information; 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M.

3M New Zealand SDS are available at 3M New Zealand Website: <http://solutions.3mnz.co.nz>



Safety Data Sheet

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Document group:	41-4437-4	Version number:	1.02
Issue Date:	17/03/2021	Supersedes date:	08/03/2021

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

3M™ Scotchbond™ Universal Plus Vial (41294, 41295, 41296, 41307)

Product Identification Numbers

UU-0109-0661-6 UU-0109-0662-4

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: 3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland
Telephone: (09) 477 4040
E Mail: innovation@nz.mmm.com
Website: 3m.co.nz

1.4. Emergency telephone number

24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

SECTION 2: Hazard identification

Classified as hazardous in accordance with the relevant criteria of the HSNO Act 1996, the Hazardous Substances (Classification) Notice 2017 and Hazardous Substances (Minimum Degrees of Hazard) Notice 2017. Refer to Section 14 of this Safety Data Sheet for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture

GHS	HSNO
Flammable Liquid: Category 2	3.1B Flammable Liquid
Serious Eye Damage/Irritation: Category 1	8.3A Corrosive to eye
Skin Corrosion/Irritation: Category 2	6.3A Irritating to the skin

Skin Sensitiser: Category 1	6.5B Skin sensitiser
Chronic Aquatic Toxicity: Category 2	9.1B Aquatic toxicity (chronic)
Acute Aquatic Toxicity: Category 2	9.1D Aquatic toxicity (acute)

2.2. Label elements

SIGNAL WORD

DANGER!

Symbols:

Flame | Corrosion | Exclamation mark | Environment |

Pictograms



HAZARD STATEMENTS:

- H225 Highly flammable liquid and vapour.
- H318 Causes serious eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H411 Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

- P210A Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P240B Ground and bond container and receiving equipment.
- P242A Use non-sparking tools.
- P233 Keep container tightly closed.
- P243A Take action to prevent static discharges.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P280B Wear protective gloves and eye/face protection.
- P273 Avoid release to the environment.
- P264B Wash exposed skin thoroughly after handling.
- P272A Contaminated work clothing must not be allowed out of the workplace.

Response:

- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- 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 + P378G In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.
- P303 + P361 + P353A IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

Storage:

P403 + P235

Store in a well-ventilated place. Keep cool.

Disposal:

P501

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

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 and (3-aminopropyl)triethoxysilane, reaction products with vitreous silica	None	5 - 15
Ethanol	64-17-5	5 - 15
Water	7732-18-5	5 - 15
Camphorquinone	10373-78-1	< 2
Copolymer of acrylic and itaconic acid	25948-33-8	< 2
Ethyl 4-dimethylaminobenzoate	10287-53-3	< 2
3-Aminopropyltriethoxysilane	919-30-2	< 0.5
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. 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

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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Do not get in eyes.

7.2. Conditions for safe storage including any incompatibilities

Store 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		ACGIH	TWA(as Cu, fume):0.2 mg/m ³ ;TWA(as Cu dust or mist):1 mg/m ³	
Ethanol		ACGIH	STEL:1000 ppm	A3: Confirmed animal carcinogen.
Ethanol		New Zealand WES	TWA(8 hours):1880 mg/m ³ (1000 ppm)	

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	Alcohol
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	> 78 °C
Flash point	± 21 °C [Test Method: Closed Cup]
Evaporation rate	<i>No data available.</i>
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Vapor Density and/or Relative Vapor Density	<i>No data available.</i>
Density	± 1.1 g/cm ³
Relative density	± 1.1
Water solubility	Appreciable
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity/Kinematic Viscosity	<i>Not applicable.</i>
Volatile organic compounds (VOC)	<i>No data available.</i>
Percent volatile	<i>No data available.</i>
VOC less H₂O & exempt solvents	<i>No data available.</i>

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 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products**Substance****Condition**

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

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

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.

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	Professional judgement	LD50 NA mg/kg
Overall product	Ingestion	Rat	LD50 > 9,090 mg/kg
2-Propenoic acid, 2-methyl-, diesters with 4,6-dibromo-1,3-benzenediol 2-(2-hydroxyethoxy)ethyl 3-hydroxypropyl diethers	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
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
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
3-Aminopropyltriethoxysilane	Dermal	Rabbit	LD50 4,290 mg/kg
3-Aminopropyltriethoxysilane	Ingestion	Rat	LD50 1,570 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
Ethyl 4-dimethylaminobenzoate	Rabbit	No significant irritation
3-Aminopropyltriethoxysilane	Rabbit	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
Ethyl 4-dimethylaminobenzoate	Rabbit	Mild irritant
3-Aminopropyltriethoxysilane	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)	Professional judgement	Sensitising
3-Aminopropyltriethoxysilane	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
Overall product	In Vitro	Not mutagenic
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

Carcinogenicity

Name	Route	Species	Value
Ethanol	Ingestion	Multiple animal species	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	prematuring 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	prematuring into lactation
2-Hydroxyethyl methacrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & 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	prematuring & during gestation
Ethanol	Inhalation	Not classified for development	Rat	NOAEL 38 mg/l	during gestation
Ethanol	Ingestion	Not classified for development	Rat	NOAEL	prematuring &

				5,200 mg/kg/day	during gestation
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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	May cause respiratory irritation	similar health hazards	NOAEL Not available	
Copolymer of acrylic and itaconic acid	Ingestion	nervous system	Not classified	Rat	NOAEL 5,000 mg/kg	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Overall product	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 0.00212 mg/kg/day	28 days
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	Rat	LOAEL	4 months

			data are not sufficient for classification		8,000 mg/kg/day	
Ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg/day	7 days
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

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 (HSNO 9.1D Aquatic toxicity)

Chronic Aquatic Toxicity: Category 2 (HSNO 9.1B Aquatic toxicity)

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			Data not available or insufficient for classification			N/A
2-Hydroxyethyl methacrylate		Fathead minnow	Experimental	96 hours	LC50	227 mg/l
2-Hydroxyethyl methacrylate		Green algae	Experimental	72 hours	EC50	710 mg/l
2-		Water flea	Experimental	48 hours	EC50	380 mg/l

Hydroxyethyl methacrylate						
2-Hydroxyethyl methacrylate		Green Algae	Experimental	72 hours	NOEC	160 mg/l
2-Hydroxyethyl methacrylate		Water flea	Experimental	21 days	NOEC	24.1 mg/l
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)			Data not available or insufficient for classification			N/A
Ethanol		Fathead minnow	Experimental	96 hours	LC50	14,200 mg/l
Ethanol		Fish other	Experimental	96 hours	LC50	11,000 mg/l
Ethanol		Green algae	Experimental	72 hours	EC50	275 mg/l
Ethanol		Water flea	Experimental	48 hours	LC50	5,012 mg/l
Ethanol		Green algae	Experimental	72 hours	ErC10	11.5 mg/l
Ethanol		Water flea	Experimental	10 days	NOEC	9.6 mg/l
Camphorquinone			Data not available or insufficient for classification			N/A
Copolymer of acrylic and itaconic acid			Data not available or insufficient for classification			N/A
Ethyl 4-dimethylamino benzoate		Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Ethyl 4-dimethylamino benzoate		Green Algae	Experimental	72 hours	EC50	2.8 mg/l
Ethyl 4-dimethylamino benzoate		Rainbow trout	Experimental	96 hours	LC50	1.9 mg/l
Ethyl 4-dimethylamino benzoate		Water flea	Experimental	48 hours	EC50	4.5 mg/l
Ethyl 4-dimethylamino benzoate		Green Algae	Experimental	72 hours	ErC10	0.71 mg/l
3-Aminopropyltriethoxysilane		Bacteria	Experimental	5.75 hours	EC50	43 mg/l
3-Aminopropyltriethoxysilane		Crustacea other	Experimental	48 hours	LC50	580 mg/l
3-		Green algae	Experimental	72 hours	EC50	603 mg/l

Aminopropyltriethoxysilane						
3-Aminopropyltriethoxysilane		Water flea	Experimental	48 hours	EC50	331 mg/l
3-Aminopropyltriethoxysilane		Zebra Fish	Experimental	96 hours	LC50	>934 mg/l
3-Aminopropyltriethoxysilane		Green algae	Experimental	72 hours	NOEC	1.3 mg/l
Acetic acid, copper(2+) salt, monohydrate		Algae other	Experimental	72 hours	EC50	0.005 mg/l
Acetic acid, copper(2+) salt, monohydrate		Common Carp	Experimental	96 days	LC50	0.004 mg/l
Acetic acid, copper(2+) salt, monohydrate		Crustacea	Experimental	96 hours	EC50	>12.8 mg/l

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		Experimental Biodegradation	28 days	CO2 evolution	3.69 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2
2-Hydroxyethyl methacrylate		Experimental Biodegradation	14 days	BOD	95 % BOD/ThBOD	OECD 301C - MITI test (I)
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P2O5)		Estimated Biodegradation	28 days	BOD	91 % weight	OECD 301C - MITI test (I)
Ethanol		Experimental Biodegradation	14 days	BOD	89 % BOD/ThBOD	OECD 301C - MITI test (I)
Camphorquinone		Estimated Biodegradation	28 days	BOD	20.6 % BOD/ThBOD	OECD 301C - MITI test (I)
Copolymer of acrylic and itaconic acid		Data not available - insufficient			N/A	
Ethyl 4-dimethylamino		Experimental Biodegradation	28 days	CO2 evolution	40 %CO2 evolution/THC	OECD 301B - Modified sturm or CO2

benzoate					O ₂ evolution	
3-Aminopropyltriethoxysilane		Estimated Photolysis		Photolytic half-life (in air)	7.28 hours (t _{1/2})	Non-standard method
3-Aminopropyltriethoxysilane		Experimental Hydrolysis		Hydrolytic half-life	8.5 hours (t _{1/2})	Non-standard method
3-Aminopropyltriethoxysilane		Experimental Biodegradation	28 days	BOD	54 % BOD/ThBOD	OECD 301C - MITI test (I)
Acetic acid, copper(2+) salt, monohydrate		Data not available - insufficient			N/A	

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		Estimated Bioconcentration		Bioaccumulation factor	6.5	Catalogic™
2-Hydroxyethyl methacrylate		Experimental Bioconcentration		Log Kow	0.42	Non-standard method
2-Propenoic acid, 2-methyl-, reaction products with 1,10-decanediol and phosphorus oxide (P ₂ O ₅)		Estimated Bioconcentration		Bioaccumulation factor	4.5	Non-standard method
Ethanol		Experimental Bioconcentration		Log Kow	-0.35	Non-standard method
Camphorquinone		Estimated Bioconcentration		Bioaccumulation factor	7.1	Estimated: Bioconcentration factor
Copolymer of acrylic and itaconic acid		Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethyl 4-dimethylamino benzoate		Experimental Bioconcentration		Log Kow	3.2	Non-standard method
3-Aminopropyltriethoxysilane		Experimental BCF-Carp	56 days	Bioaccumulation factor	<3.4	OECD 305E - Bioaccumulation flow-through fish test

Acetic acid, copper(2+) salt, monohydrate		Data not available or insufficient for classification	N/A	N/A	N/A	N/A
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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.

Incinerate uncured product in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal 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 2017
 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 (Hazardous Substances) Regulations 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 a HSNO 9.1A substance) or 1,000 L (for all other substances)
 Secondary containment 100 L (for a HSNO 9.1A substance) or 1,000 L (for all other substances)
 Tracking Not required
 Warning signage 100 L (for a HSNO 9.1A substance), or 250 L (for all other substances)

SECTION 16: Other information**Revision information:**

Initial issue.

Document group:	41-4437-4	Version number:	1.02
Issue Date:	17/03/2021	Supersedes date:	08/03/2021

Key to abbreviations and acronyms

GHS means the Globally Harmonised System of Classification and Labelling of Chemicals, 5th revised edition 2013

HSNO means Hazardous Substances and New Organisms Act 1996

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Safety Data Sheet

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Document group: 41-5399-5 **Version number:** 1.00
Issue Date: 13/12/2020 **Supersedes date:** Initial issue.

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

3M™ RelyX™ Universal Resin Cement Catalyst Paste

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Dental Cement

Restrictions on use

For use only by dental professionals in approved indications.

1.3. Supplier's details

Address: 3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland

Telephone: (09) 477 4040

E Mail: innovation@nz.mmm.com

Website: 3m.co.nz

1.4. Emergency telephone number

24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

SECTION 2: Hazard identification

Classified as hazardous in accordance with the relevant criteria of the HSNO Act 1996, the Hazardous Substances (Classification) Notice 2017 and Hazardous Substances (Minimum Degrees of Hazard) Notice 2017. Refer to Section 14 of this Safety Data Sheet for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture

GHS	HSNO
Skin Sensitiser: Category 1	6.5B Skin sensitiser
Chronic Aquatic Toxicity: Category 3	9.1C Aquatic toxicity (chronic)
Acute Aquatic Toxicity: Category 3	9.1D Aquatic toxicity (acute)

2.2. Label elements

SIGNAL WORD

WARNING!

Symbols:

Exclamation mark |

Pictograms



HAZARD STATEMENTS:

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P280E Wear protective gloves.
 P272A Contaminated work clothing must not be allowed out of the workplace.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.
 P321 Specific treatment (see Notes to Physician on this label).

Disposal:

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

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Diurethanedimethacrylate	72869-86-4	20 - 40
Ytterbium (III) fluoride	13760-80-0	30 - 40
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material	None	15 - 30
Triethylene Glycol Dimethacrylate	109-16-0	1 - 10
Silane, trimethoxyoctyl-, hydrolysis products with silica	92797-60-9	< 5
L-Ascorbic acid, 6-hexadecanoate, hydrate (1:2)	2094655-53-3	< 2
Titanium dioxide	13463-67-7	< 1
Triphenyl Phosphite	101-02-0	< 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

No need for first aid is anticipated.

If swallowed

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

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

See Section 11.1 Information on toxicological effects

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide.

Carbon dioxide.

Irritant vapours or gases.

Condition

During combustion.

During combustion.

During combustion.

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

5.4. Hazchem code: Not applicable.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

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 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.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. 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
Titanium dioxide	13463-67-7	ACGIH	TWA:10 mg/m ³	A4: Not class. as human carcinogen
Titanium dioxide	13463-67-7	New Zealand WES	TWA(8 hours):10 mg/m ³	

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	Solid.
Specific Physical Form:	Paste
Colour	Yellow
Odour	Slight Acrylic
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	<i>Not applicable.</i>
Flash point	Flash point > 93 °C (200 °F)
Evaporation rate	<i>No data available.</i>
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>No data available.</i>
Vapor Density and/or Relative Vapor Density	<i>No data available.</i>
Density	± 2.1 g/cm ³ [Details:20°C]
Relative density	± - 2.1 [Ref Std:WATER=1]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity/Kinematic Viscosity	10 Pa-s - 100 Pa-s
Volatile organic compounds (VOC)	
Percent volatile	
VOC less H ₂ O & exempt solvents	

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 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products**Substance**

None known.

Condition

Refer to Section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects**Signs and Symptoms of Exposure**

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

Inhalation

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

Skin contact

Contact with the skin during product use is not expected to result in significant irritation. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact

Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

Additional Health Effects:**Carcinogenicity:**

Exposures needed to cause the following health effect(s) are not expected during normal, intended use:

Contains a chemical or chemicals which can cause cancer.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Ytterbium (III) fluoride	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Ytterbium (III) fluoride	Ingestion	Rat	LD50 > 5,000 mg/kg
Diurethanedimethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Diurethanedimethacrylate	Ingestion	Rat	LD50 > 5,000 mg/kg

3M™ RelyX™ Universal Resin Cement Catalyst Paste

Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material	Dermal		LD50 estimated to be > 5,000 mg/kg
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Trithylene Glycol Dimethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Trithylene Glycol Dimethacrylate	Ingestion	Rat	LD50 10,837 mg/kg
Triphenyl Phosphite	Dermal	Rabbit	LD50 > 2,000 mg/kg
Triphenyl Phosphite	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.7 mg/l
Triphenyl Phosphite	Ingestion	Rat	LD50 1,590 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material	Professional judgement	No significant irritation
Trithylene Glycol Dimethacrylate	Guinea pig	Mild irritant
Triphenyl Phosphite	Rabbit	Irritant
Titanium dioxide	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Ytterbium (III) fluoride	Professional judgement	Mild irritant
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material	Professional judgement	No significant irritation
Trithylene Glycol Dimethacrylate	Professional judgement	Moderate irritant
Triphenyl Phosphite	Rabbit	Moderate irritant
Titanium dioxide	Rabbit	No significant irritation

Sensitisation:**Skin Sensitisation**

Name	Species	Value
Diurethanedimethacrylate	Guinea pig	Sensitising
Trithylene Glycol Dimethacrylate	Human and animal	Sensitising
Triphenyl Phosphite	Mouse	Sensitising

Titanium dioxide	Human and animal	Not classified
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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
Triethylene Glycol Dimethacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Triethylene Glycol Dimethacrylate	Dermal	Mouse	Not carcinogenic
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.

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

Name	Route	Value	Species	Test result	Exposure Duration
Triethylene Glycol Dimethacrylate	Ingestion	Not classified for female reproduction	Mouse	NOAEL 1 mg/kg/day	1 generation
Triethylene Glycol Dimethacrylate	Ingestion	Not classified for male reproduction	Mouse	NOAEL 1 mg/kg/day	1 generation
Triethylene Glycol Dimethacrylate	Ingestion	Not classified for development	Mouse	NOAEL 1 mg/kg/day	1 generation

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

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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Triethylene Glycol Dimethacrylate	Dermal	kidney and/or bladder blood	Not classified	Mouse	NOAEL 833 mg/kg/day	78 weeks
Triphenyl Phosphite	Ingestion	nervous system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 15 mg/kg/day	28 days
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium dioxide	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.

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 3 (HSNO 9.1D Aquatic toxicity)

Chronic Aquatic Toxicity: Category 3 (HSNO 9.1C Aquatic toxicity)

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Diurethanedimethacrylate	72869-86-4	Green algae	Endpoint not reached	72 hours	Effect Growth Rate Conc 50%	>100 mg/l
Diurethanedimethacrylate	72869-86-4	Water flea	Experimental	48 hours	EC50	>100 mg/l
Diurethanedimethacrylate	72869-86-4	Zebra Fish	Experimental	96 hours	LC50	10.1 mg/l
Diurethanedimethacrylate	72869-86-4	Green algae	Endpoint not reached	72 hours	Effect Conc. 10% - Growth Rate	>100 mg/l
Ytterbium (III) fluoride	13760-80-0		Data not available or insufficient for classification			
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2-methyl-3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material	None		Data not available or insufficient for classification			
Trithylene Glycol Dimethacrylate	109-16-0	Green Algae	Experimental	72 hours	EC50	>100 mg/l
Trithylene Glycol Dimethacrylate	109-16-0	Zebra Fish	Experimental	96 hours	LC50	16.4 mg/l
Trithylene Glycol Dimethacrylate	109-16-0	Green algae	Experimental	72 hours	NOEC	18.6 mg/l
Trithylene Glycol	109-16-0	Water flea	Experimental	21 days	NOEC	32 mg/l

Dimethacrylate						
Silane, trimethoxyoctyl-, hydrolysis products with silica	92797-60-9		Data not available or insufficient for classification			
L-Ascorbic acid, 6-hexadecanoate, hydrate (1:2)	2094655-53-3	Green Algae	Estimated	72 hours	No tox obs at lmt of water sol	>100 mg/l
L-Ascorbic acid, 6-hexadecanoate, hydrate (1:2)	2094655-53-3	Water flea	Estimated	48 hours	No tox obs at lmt of water sol	>100 mg/l
L-Ascorbic acid, 6-hexadecanoate, hydrate (1:2)	2094655-53-3	Green Algae	Estimated	72 hours	No tox obs at lmt of water sol	100 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium dioxide	13463-67-7	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l
Triphenyl Phosphite	101-02-0	Green Algae	Experimental	72 hours	EC50	>16 mg/l
Triphenyl Phosphite	101-02-0	Ricefish	Experimental	96 hours	LC50	>4.3 mg/l
Triphenyl Phosphite	101-02-0	Water flea	Experimental	48 hours	EC50	0.45 mg/l
Triphenyl Phosphite	101-02-0	Green Algae	Experimental	72 hours	NOEC	16 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Diurethanedimethacrylate	72869-86-4	Experimental Biodegradation	28 days	CO2 evolution	22 %CO2 evolution/THC O2 evolution (does not pass 10-day window)	OECD 301B - Modified sturm or CO2
Ytterbium (III) fluoride	13760-80-0	Data not availbl- insufficient			N/A	
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2-methyl-3-(trimethoxysilyl	None	Data not availbl- insufficient			N/A	

l)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material						
Trithylene Glycol Dimethacrylate	109-16-0	Experimental Biodegradation	28 days	CO2 evolution	85 % weight	OECD 301B - Modified sturm or CO2
Silane, trimethoxyoctyl-, hydrolysis products with silica	92797-60-9	Data not availbl- insufficient			N/A	
L-Ascorbic acid, 6-hexadecanoate, hydrate (1:2)	2094655-53-3	Estimated Biodegradation	28 days	CO2 evolution	93 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2
Titanium dioxide	13463-67-7	Data not availbl- insufficient			N/A	
Triphenyl Phosphite	101-02-0	Experimental Hydrolysis		Hydrolytic half-life	0.5 hours (t 1/2)	Other methods
Triphenyl Phosphite	101-02-0	Estimated Biodegradation	14 days	BOD	85 % BOD/ThBOD	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Diurethanedim ethacrylate	72869-86-4	Experimental Bioconcentration		Log Kow	3.39	Other methods
Ytterbium (III) fluoride	13760-80-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-.3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material	None	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Trithylene Glycol Dimethacrylate	109-16-0	Experimental Bioconcentration		Log Kow	2.3	Other methods

Silane, trimethoxyoctyl-, hydrolysis products with silica	92797-60-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
L-Ascorbic acid, 6-hexadecanoate, hydrate (1:2)	2094655-53-3	Estimated Bioconcentration		Log Kow	>6.5	Other methods
Titanium dioxide	13463-67-7	Experimental BCF-Carp	42 days	Bioaccumulation factor	9.6	Other methods
Triphenyl Phosphite	101-02-0	Estimated Bioconcentration		Bioaccumulation factor	13800	Estimated: Bioconcentration factor

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 waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility.

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.: Not applicable.

Proper Shipping Name: Not applicable.

Class/Division: Not applicable.

Sub Risk: Not applicable.

Packing Group: Not applicable.

Hazchem Code: Not applicable.

IERG: Not applicable.

International Air Transport Association (IATA) - Air Transport

UN No.: Not applicable.

Proper Shipping Name: Not applicable.

Class/Division: Not applicable.

Sub Risk: Not applicable.

Packing Group: Not applicable.

International Maritime Dangerous Goods Code (IMDG) - Marine Transport

UN No.: Not applicable.

Proper Shipping Name: Not applicable.

Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.
Marine Pollutant: Not applicable.

SECTION 15: Regulatory information

HSNO Approval number HSR002558
 Group standard name Dental Products (Subsidiary Hazard) Group Standard 2017
 HSNO Hazard classification Refer to Section 2: Hazard identification

NZ Inventory of Chemicals (NZIoC) Status

All applicable chemical ingredients in this material are in compliance with NZIoC listing requirements.

Controls in accordance with the Health and Safety at Work (Hazardous Substances) Regulations 2017

Certified handler	Not required
Location Compliance Certificate	Not required
Hazardous atmosphere zone	Not required
Fire extinguishers	Not required
Emergency response plan	1,000 L or 1,000 kg (for a HSNO 6.1D, 6.5A, 6.5B, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for a HSNO 6.6A, 6.8A, 6.9A, 8.3A, 9.1D substance)
Secondary containment	1,000 L or 1,000 kg (for a HSNO 6.1D, 6.5A, 6.5B, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for a HSNO 6.6A, 6.8A, 6.9A, 8.3A, 9.1D substance)
Tracking	Not required
Warning signage	1,000 L or 1,000 kg (for a HSNO 8.3A, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for a HSNO 6.1D or 9.1D substance)

SECTION 16: Other information

Revision information:

Initial issue.

Document group:	41-5399-5	Version number:	1.00
Issue Date:	13/12/2020	Supersedes date:	Initial issue.

Key to abbreviations and acronyms

GHS means the Globally Harmonised System of Classification and Labelling of Chemicals, 5th revised edition 2013

HSNO means Hazardous Substances and New Organisms Act 1996

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Safety Data Sheet

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Document group: 41-5463-9 **Version number:** 1.00
Issue Date: 13/12/2020 **Supersedes date:** Initial issue.

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

3M™ RelyX™ Universal Resin Cement Base Paste

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Dental Cement

Restrictions on use

For use only by dental professionals in approved indications.

1.3. Supplier's details

Address: 3M New Zealand Ltd, 94 Apollo Drive, Rosedale 0632, Auckland
Telephone: (09) 477 4040
E Mail: innovation@nz.mmm.com
Website: 3m.co.nz

1.4. Emergency telephone number

24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

SECTION 2: Hazard identification

Classified as hazardous in accordance with the relevant criteria of the HSNO Act 1996, the Hazardous Substances (Classification) Notice 2017 and Hazardous Substances (Minimum Degrees of Hazard) Notice 2017. Refer to Section 14 of this Safety Data Sheet for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture

GHS	HSNO
Serious Eye Damage/Irritation: Category 1	8.3A Corrosive to eye
Skin Corrosion/Irritation: Category 2	6.3A Irritating to the skin
Skin Sensitiser: Category 1	6.5B Skin sensitiser
Chronic Aquatic Toxicity: Category 3	9.1C Aquatic toxicity (chronic)
Acute Aquatic Toxicity: Category 3	9.1D Aquatic toxicity (acute)

2.2. Label elements

SIGNAL WORD

DANGER!

Symbols:

Corrosion | Exclamation mark |

Pictograms



HAZARD STATEMENTS:

- H318 Causes serious eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.

- H412 Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P280A Wear eye/face protection.
- P280B Wear protective gloves and eye/face protection.
- P280E Wear protective gloves.
- P264B Wash exposed skin thoroughly after handling.
- P272A Contaminated work clothing must not be allowed out of the workplace.

Response:

- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P332 + P313 If skin irritation occurs: Get medical advice/attention.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
- P362 + P364 Take off contaminated clothing and wash it before reuse.
- P321 Specific treatment (see Notes to Physician on this label).

Disposal:

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

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Triethylene Glycol Dimethacrylate	109-16-0	26.7 - 30.5
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	122334-95-6	23.8 - 27.9
7,7,9(or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate	72869-86-4	24.2 - 27.5
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and	1224866-76-5	8.1 - 9.2

phosphorus oxide		
Silane, trimethoxyoctyl-, hydrolysis products with silica	92797-60-9	5.0 - 8.5
t-Amyl Hydroperoxide	3425-61-4	1.4 - 2.3
2,6-Di-tert-butyl-p-cresol	128-37-0	0.4 - 0.6
2-hydroxyethyl methacrylate	868-77-9	<= 0.3
Methyl Methacrylate	80-62-6	<= 0.3
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	<= 0.02

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. If you feel unwell, get medical attention.

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

See Section 11.1 Information on toxicological effects

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide.
Carbon dioxide.
Irritant vapours or gases.

Condition

During combustion.
During combustion.
During combustion.

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

5.4. Hazchem code: Not applicable.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

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. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Do not get in eyes.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from oxidising agents.

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
2,6-Di-tert-butyl-p-cresol	128-37-0	ACGIH	TWA(inhalable fraction and vapor):2 mg/m ³	A4: Not class. as human carcinogen
2,6-Di-tert-butyl-p-cresol	128-37-0	New Zealand WES	TWA(8 hours):10 mg/m ³	
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	
Methyl Methacrylate	80-62-6	ACGIH	TWA:50 ppm;STEL:100 ppm	A4: Not class. as human carcin, Dermal Sensitizer
Methyl Methacrylate	80-62-6	New Zealand WES	TWA(8 hours):208 mg/m ³ (50 ppm);STEL(15 minutes):416 mg/m ³ (100 ppm)	Capable of csng resp/skin sens, SKIN

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	Solid.
Specific Physical Form:	Paste
Colour	White
Odour	Slight Acrylic
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Melting point/Freezing point	<i>Not applicable.</i>
Boiling point/Initial boiling point/Boiling range	<i>Not applicable.</i>
Flash point	Flash point > 93 °C (200 °F)
Evaporation rate	<i>No data available.</i>
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Vapor Density and/or Relative Vapor Density	<i>No data available.</i>
Density	± - 2 g/cm ³
Relative density	± - 2 [Ref Std: WATER=1]
Water solubility	Negligible
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>

Viscosity/Kinematic Viscosity	10 Pa-s - 100 Pa-s
Volatile organic compounds (VOC)	
Percent volatile	
VOC less H ₂ O & exempt solvents	

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 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products**Substance****Condition**

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

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

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 irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Triethylene Glycol Dimethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Triethylene Glycol Dimethacrylate	Ingestion	Rat	LD50 10,837 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
7,7,9(or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
7,7,9(or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate	Ingestion	Rat	LD50 > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Ingestion	Rat	LD50 > 2,000 mg/kg
t-Amyl Hydroperoxide	Dermal	Rat	LD50 354 mg/kg
t-Amyl Hydroperoxide	Inhalation-Vapor (4 hours)	Rat	LC50 2.4 mg/l
t-Amyl Hydroperoxide	Ingestion	Rat	LD50 483 mg/kg
2,6-Di-tert-butyl-p-cresol	Dermal	Rat	LD50 > 2,000 mg/kg
2,6-Di-tert-butyl-p-cresol	Ingestion	Rat	LD50 > 2,930 mg/kg
2-hydroxyethyl methacrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Methyl Methacrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-hydroxyethyl methacrylate	Ingestion	Rat	LD50 5,564 mg/kg
Methyl Methacrylate	Inhalation-Vapor (4 hours)	Rat	LC50 29 mg/l
Methyl Methacrylate	Ingestion	Rat	LD50 7,900 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Triethylene Glycol Dimethacrylate	Guinea pig	Mild irritant
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	Rabbit	No significant irritation

2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Rabbit	Minimal irritation
t-Amyl Hydroperoxide	Rabbit	Corrosive
2,6-Di-tert-butyl-p-cresol	Human and animal	Minimal irritation
2-hydroxyethyl methacrylate	Rabbit	Minimal irritation
Methyl Methacrylate	Human and animal	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	In vitro data	Corrosive
Triethylene Glycol Dimethacrylate	Professional judgement	Moderate irritant
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	Rabbit	No significant irritation
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Rabbit	Corrosive
t-Amyl Hydroperoxide	Rabbit	Corrosive
2,6-Di-tert-butyl-p-cresol	Rabbit	Mild irritant
2-hydroxyethyl methacrylate	Rabbit	Moderate irritant
Methyl Methacrylate	Rabbit	Moderate irritant

Sensitisation:
Skin Sensitisation

Name	Species	Value
Triethylene Glycol Dimethacrylate	Human and animal	Sensitising
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	Human and animal	Not classified
7,7,9(or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate	Guinea pig	Sensitising
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Guinea pig	Not classified
t-Amyl Hydroperoxide	similar compounds	Sensitising
2,6-Di-tert-butyl-p-cresol	Human	Not classified
2-hydroxyethyl methacrylate	Human and animal	Sensitising
Methyl Methacrylate	Human and animal	Sensitising

Respiratory Sensitisation

Name	Species	Value
Methyl Methacrylate	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
Triethylene Glycol Dimethacrylate	In Vitro	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	In Vitro	Not mutagenic
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	In Vitro	Not mutagenic
t-Amyl Hydroperoxide	In vivo	Not mutagenic
t-Amyl Hydroperoxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,6-Di-tert-butyl-p-cresol	In Vitro	Not mutagenic
2,6-Di-tert-butyl-p-cresol	In vivo	Not mutagenic
2-hydroxyethyl methacrylate	In vivo	Not mutagenic
2-hydroxyethyl methacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methyl Methacrylate	In vivo	Not mutagenic
Methyl Methacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Triethylene Glycol Dimethacrylate	Dermal	Mouse	Not carcinogenic
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
2,6-Di-tert-butyl-p-cresol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Methyl Methacrylate	Ingestion	Rat	Not carcinogenic
Methyl Methacrylate	Inhalation	Human and animal	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Triethylene Glycol Dimethacrylate	Ingestion	Not classified for female reproduction	Mouse	NOAEL 1 mg/kg/day	1 generation
Triethylene Glycol Dimethacrylate	Ingestion	Not classified for male reproduction	Mouse	NOAEL 1 mg/kg/day	1 generation
Triethylene Glycol Dimethacrylate	Ingestion	Not classified for development	Mouse	NOAEL 1 mg/kg/day	1 generation
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
t-Amyl Hydroperoxide	Ingestion	Not classified for female reproduction	Rat	NOAEL 100 mg/kg/day	premating into lactation
t-Amyl Hydroperoxide	Ingestion	Not classified for male reproduction	Rat	NOAEL 100 mg/kg/day	5 weeks
t-Amyl Hydroperoxide	Ingestion	Not classified for development	Rat	NOAEL 100 mg/kg/day	premating into lactation
2,6-Di-tert-butyl-p-cresol	Ingestion	Not classified for female reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-Di-tert-butyl-p-cresol	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-Di-tert-butyl-p-cresol	Ingestion	Not classified for development	Rat	NOAEL 100	2 generation

				mg/kg/day	
2-hydroxyethyl methacrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & 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	prematuring & during gestation
Methyl Methacrylate	Inhalation	Not classified for male reproduction	Mouse	NOAEL 36.9 mg/l	
Methyl Methacrylate	Inhalation	Not classified for development	Rat	NOAEL 8.3 mg/l	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
t-Amyl Hydroperoxide	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Methyl Methacrylate	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	occupational exposure

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Triethylene Glycol Dimethacrylate	Dermal	kidney and/or bladder blood	Not classified	Mouse	NOAEL 833 mg/kg/day	78 weeks
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
t-Amyl Hydroperoxide	Inhalation	endocrine system liver immune system kidney and/or bladder hematopoietic system nervous system	Not classified	Rat	NOAEL 0.337 mg/l	28 days
t-Amyl Hydroperoxide	Ingestion	liver kidney and/or bladder	Not classified	Rat	NOAEL 100 mg/kg/day	5 weeks
2,6-Di-tert-butyl-p-cresol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	28 days
2,6-Di-tert-butyl-p-cresol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-Di-tert-butyl-p-cresol	Ingestion	blood	Not classified	Rat	LOAEL 420 mg/kg/day	40 days
2,6-Di-tert-butyl-p-cresol	Ingestion	endocrine system	Not classified	Rat	NOAEL 25 mg/kg/day	2 generation
2,6-Di-tert-butyl-p-cresol	Ingestion	heart	Not classified	Mouse	NOAEL 3,480 mg/kg/day	10 weeks
Methyl Methacrylate	Dermal	peripheral nervous system	Not classified	Human	NOAEL Not available	occupational exposure
Methyl Methacrylate	Inhalation	olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Methyl Methacrylate	Inhalation	kidney and/or bladder	Not classified	Multiple animal species	NOAEL Not available	14 weeks
Methyl Methacrylate	Inhalation	liver	Not classified	Mouse	NOAEL 12.3 mg/l	14 weeks

Methyl Methacrylate	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
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Aspiration Hazard

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

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

SECTION 12: Ecological information

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

12.1. Toxicity**Ecotoxic to the aquatic environment.**

Acute Aquatic Toxicity: Category 3 (HSNO 9.1D Aquatic toxicity)

Chronic Aquatic Toxicity: Category 3 (HSNO 9.1C Aquatic toxicity)

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Triethylene Glycol Dimethacrylate	109-16-0	Green Algae	Experimental	72 hours	EC50	>100 mg/l
Triethylene Glycol Dimethacrylate	109-16-0	Zebra Fish	Experimental	96 hours	LC50	16.4 mg/l
Triethylene Glycol Dimethacrylate	109-16-0	Green algae	Experimental	72 hours	NOEC	18.6 mg/l
Triethylene Glycol Dimethacrylate	109-16-0	Water flea	Experimental	21 days	NOEC	32 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			
7,7,9(or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate	72869-86-4	Green algae	Endpoint not reached	72 hours	Effect Growth Rate Conc 50%	>100 mg/l
7,7,9(or 7,9,9)-Trimethyl-	72869-86-4	Water flea	Experimental	48 hours	EC50	>100 mg/l

4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate						
7,7,9(or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate	72869-86-4	Zebra Fish	Experimental	96 hours	LC50	10.1 mg/l
7,7,9(or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate	72869-86-4	Green algae	Endpoint not reached	72 hours	Effect Conc. 10% - Growth Rate	>100 mg/l
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	1224866-76-5	Green algae	Endpoint not reached	72 hours	EC50	>100 mg/l
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	1224866-76-5	Water flea	Experimental	48 hours	EC50	>100 mg/l
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction	1224866-76-5	Green algae	Experimental	72 hours	NOEC	56 mg/l

3M™ RelyX™ Universal Resin Cement Base Paste

products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide						
Silane, trimethoxyoctyl-, hydrolysis products with silica	92797-60-9		Data not available or insufficient for classification			
t-Amyl Hydroperoxide	3425-61-4	Water flea	Estimated	48 hours	EC50	6.7 mg/l
t-Amyl Hydroperoxide	3425-61-4	Zebra Fish	Estimated	96 hours	LC50	11.3 mg/l
t-Amyl Hydroperoxide	3425-61-4	Green algae	Experimental	72 hours	EC50	1.2 mg/l
t-Amyl Hydroperoxide	3425-61-4	Green algae	Experimental	72 hours	Effect Concentration 10%	0.38 mg/l
2,6-Di-tert-butyl-p-cresol	128-37-0	Green algae	Experimental	72 hours	EC50	>0.4 mg/l
2,6-Di-tert-butyl-p-cresol	128-37-0	Water flea	Experimental	48 hours	EC50	0.48 mg/l
2,6-Di-tert-butyl-p-cresol	128-37-0	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
2,6-Di-tert-butyl-p-cresol	128-37-0	Green algae	Experimental	72 hours	Effect Concentration 10%	0.4 mg/l
2,6-Di-tert-butyl-p-cresol	128-37-0	Ricefish	Experimental	42 days	NOEC	0.053 mg/l
2,6-Di-tert-butyl-p-cresol	128-37-0	Water flea	Experimental	21 days	NOEC	0.023 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
Methyl Methacrylate	80-62-6	Green Algae	Experimental	72 hours	EC50	>110 mg/l
Methyl Methacrylate	80-62-6	Rainbow trout	Experimental	96 hours	LC50	>79 mg/l
Methyl Methacrylate	80-62-6	Water flea	Experimental	48 hours	EC50	69 mg/l
Methyl Methacrylate	80-62-6	Green algae	Experimental	72 hours	NOEC	110 mg/l
Methyl Methacrylate	80-62-6	Water flea	Experimental	21 days	NOEC	37 mg/l
Acetic acid,	6046-93-1	Algae other	Experimental	72 hours	EC50	0.005 mg/l

copper(2+) salt, monohydrate						
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Common Carp	Experimental	96 days	LC50	0.004 mg/l
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Crustacea	Experimental	96 hours	EC50	>12.8 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Triethylene Glycol Dimethacrylate	109-16-0	Experimental Biodegradation	28 days	CO2 evolution	85 % weight	OECD 301B - Modified sturm or CO2
2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, reaction products with vitreous silica	122334-95-6	Data not availbl-insufficient			N/A	
7,7,9(or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate	72869-86-4	Experimental Biodegradation	28 days	CO2 evolution	22 %CO2 evolution/THC O2 evolution (does not pass 10-day window)	OECD 301B - Modified sturm or CO2
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	1224866-76-5	Experimental Biodegradation	28 days	BOD	82 % BOD/ThBOD	OECD 301F - Manometric respirometry
Silane, trimethoxyoctyl-, hydrolysis products with silica	92797-60-9	Data not availbl-insufficient			N/A	
t-Amyl Hydroperoxide	3425-61-4	Estimated Biodegradation	28 days	BOD	0 % BOD/ThBOD	OECD 301D - Closed bottle test
2,6-Di-tert-butyl-p-cresol	128-37-0	Data not availbl-insufficient			N/A	
2-hydroxyethyl	868-77-9	Experimental	14 days	BOD	95 %	OECD 301C - MITI

methacrylate		Biodegradation			BOD/ThBOD	test (I)
Methyl Methacrylate	80-62-6	Experimental Biodegradation	14 days	BOD	94 % BOD/ThBOD	OECD 301C - MITI test (I)
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	Data not availbl- insufficient			N/A	

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Triethylene Glycol Dimethacrylate	109-16-0	Experimental Bioconcentration		Log Kow	2.3	Other methods
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
7,7,9(or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate	72869-86-4	Experimental Bioconcentration		Log Kow	3.39	Other methods
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	1224866-76-5	Experimental Bioconcentration		Log Kow	-0.2	Other methods
Silane, trimethoxyoctyl-, hydrolysis products with silica	92797-60-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
t-Amyl Hydroperoxide	3425-61-4	Estimated Bioconcentration		Log Kow	1.43	Estimated: Octanol-water partition coefficient
2,6-Di-tert-butyl-p-cresol	128-37-0	Experimental BCF-Carp	56 days	Bioaccumulation factor	1277	OECD 305E - Bioaccumulation flow-through fish test
2-hydroxyethyl methacrylate	868-77-9	Experimental Bioconcentration		Log Kow	0.42	Other methods

		on				
Methyl Methacrylate	80-62-6	Experimental Bioconcentration		Log Kow	1.38	Other methods
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	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

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility.

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.: Not applicable.

Proper Shipping Name: Not applicable.

Class/Division: Not applicable.

Sub Risk: Not applicable.

Packing Group: Not applicable.

Hazchem Code: Not applicable.

IERG: Not applicable.

International Air Transport Association (IATA) - Air Transport

UN No.: Not applicable.

Proper Shipping Name: Not applicable.

Class/Division: Not applicable.

Sub Risk: Not applicable.

Packing Group: Not applicable.

International Maritime Dangerous Goods Code (IMDG) - Marine Transport

UN No.: Not applicable.

Proper Shipping Name: Not applicable.

Class/Division: Not applicable.

Sub Risk: Not applicable.

Packing Group: Not applicable.

Marine Pollutant: Not applicable.

SECTION 15: Regulatory information

HSNO Approval number HSR002558
Group standard name Dental Products (Subsidiary Hazard) Group Standard 2017
HSNO Hazard classification Refer to Section 2: Hazard identification

NZ Inventory of Chemicals (NZIoC) Status

All applicable chemical ingredients in this material are in compliance with NZIoC listing requirements.

Controls in accordance with the Health and Safety at Work (Hazardous Substances) Regulations 2017

Certified handler	Not required
Location Compliance Certificate	Not required
Hazardous atmosphere zone	Not required
Fire extinguishers	Not required
Emergency response plan	1,000 L or 1,000 kg (for a HSNO 6.1D, 6.5A, 6.5B, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for a HSNO 6.6A, 6.8A, 6.9A, 8.3A, 9.1D substance)
Secondary containment	1,000 L or 1,000 kg (for a HSNO 6.1D, 6.5A, 6.5B, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for a HSNO 6.6A, 6.8A, 6.9A, 8.3A, 9.1D substance)
Tracking	Not required
Warning signage	1,000 L or 1,000 kg (for a HSNO 8.3A, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for a HSNO 6.1D or 9.1D substance)

SECTION 16: Other information**Revision information:**

Initial issue.

Document group:	41-5463-9	Version number:	1.00
Issue Date:	13/12/2020	Supersedes date:	Initial issue.

Key to abbreviations and acronyms

GHS means the Globally Harmonised System of Classification and Labelling of Chemicals, 5th revised edition 2013

HSNO means Hazardous Substances and New Organisms Act 1996

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