



Safety Data Sheet

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

IDENTIFICATION:

1.1. Product identifier

3M™ RelyX™ Ultimate Trial kit (56892)

Product Identification Numbers

70-2011-3871-9

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Adhesive Resin cement

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)

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

29-9001-8, 29-9002-6, 29-8286-6, 29-8287-4

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.: UN1133; UN1805

Proper shipping name: Adhesives; Phosphoric Acid Solution

Class/Division: 3; 8

Packing Group: III

Marine Pollutant: Not applicable.

Hazchem Code: -3Y; -2R

IERG: 14; 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 3, 8

International Maritime Dangerous Goods Code (IMDG) - Marine Transport

Special Instructions: Forbidden 3M US Division Policy

Revision information:

Complete document review.

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



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Document group: 29-8287-4 **Version number:** 4.00
Issue Date: 03/03/2021 **Supersedes date:** 10/04/2019

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 (41258)

Product Identification Numbers

70-2011-3903-0

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Adhesive

For use only by dental professionals.

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, 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 3	3.1C Flammable Liquid

Serious Eye Damage/Irritation: Category 1	8.3A Corrosive to eye
Skin Sensitiser: Category 1	6.5B Skin sensitiser

2.2. Label elements

SIGNAL WORD

DANGER!

Symbols:

Flame | Corrosion | Exclamation mark |

Pictograms



HAZARD STATEMENTS:

H226	Flammable liquid and vapour.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.

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.
P280A	Wear eye/face protection.
P280B	Wear protective gloves and eye/face protection.
P280E	Wear protective gloves.
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.
P321	Specific treatment (see Notes to Physician on this label).
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.
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Disposal:

3M™ Scotchbond™ Universal (41258)

P501

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

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
2-Hydroxyethyl methacrylate	868-77-9	15 - 25
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	15 - 25
Ethanol	64-17-5	10 - 15
Water	7732-18-5	10 - 15
1,10-Decanediol methacrylated phosphates	1207736-18-2	1 - 10
Copolymer of acrylic and itaconic acid	25948-33-8	1 - 5
Camphorquinone	10373-78-1	< 2
Ethyl 4-dimethylaminobenzoate	10287-53-3	< 2

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation**

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact

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

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

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

Not applicable

SECTION 5: Fire-fighting measures**5.1. Suitable extinguishing media**

In case of fire: Use a fire fighting agent suitable for 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: 3Y

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or 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. 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
Ethanol	64-17-5	ACGIH	STEL:1000 ppm	A3: Confirmed animal carcinogen.
Ethanol	64-17-5	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

CELL: 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	Characteristic Odour
Odour threshold	No data available.
pH	Not applicable.
Melting point/Freezing point	No data available.

Boiling point/Initial boiling point/Boiling range	>= 78 °C
Flash point	30.5 °C [Test Method: Closed Cup]
Evaporation rate	No data available.
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	No data available.
Flammable Limits(UEL)	No data available.
Vapour pressure	No data available.
Vapor Density and/or Relative Vapor Density	No data available.
Density	1 g/cm ³ - 1.2 g/cm ³
Relative density	1 - 1.2 [Ref Std: WATER=1]
Water solubility	Appreciable
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Autoignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity/Kinematic Viscosity	Not applicable.
Volatile organic compounds (VOC)	No data available.
Percent volatile	
VOC less H₂O & exempt solvents	
Molecular weight	No data available.

Nanoparticles

This material contains nanoparticles.

SECTION 10: Stability and reactivity**10.1 Reactivity**

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

10.2 Chemical stability

Stable.

10.3 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

No health effects are expected.

Skin contact

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

Eye contact

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

Ingestion

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

Additional information:

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

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
2-Hydroxyethyl methacrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-Hydroxyethyl methacrylate	Ingestion	Rat	LD50 5,564 mg/kg
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Ingestion	Rat	LD50 > 11,700 mg/kg
Ethanol	Dermal	Rabbit	LD50 > 15,800 mg/kg
Ethanol	Inhalation-Vapor (4 hours)	Rat	LC50 124.7 mg/l
Ethanol	Ingestion	Rat	LD50 17,800 mg/kg
1,10-Decanediol methacrylated phosphates	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
1,10-Decanediol methacrylated phosphates	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

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Camphorquinone	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Camphorquinone	Ingestion	Rat	LD50 > 2,000 mg/kg
Ethyl 4-dimethylaminobenzoate	Dermal	Rat	LD50 > 2,000 mg/kg
Ethyl 4-dimethylaminobenzoate	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Rabbit	No significant irritation
2-Hydroxyethyl methacrylate	Rabbit	Minimal irritation
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Rabbit	No significant irritation
Ethanol	Rabbit	No significant irritation
1,10-Decanediol methacrylated phosphates	In vitro data	Corrosive
Ethyl 4-dimethylaminobenzoate	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	In vitro data	Corrosive
2-Hydroxyethyl methacrylate	Rabbit	Moderate irritant
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	In vitro data	No significant irritation
Ethanol	Rabbit	Severe irritant
1,10-Decanediol methacrylated phosphates	In vitro data	Corrosive
Ethyl 4-dimethylaminobenzoate	Rabbit	Mild irritant

Sensitisation:**Skin Sensitisation**

Name	Species	Value
2-Hydroxyethyl methacrylate	Human and animal	Sensitising
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Mouse	Not classified
Ethanol	Human	Not classified
1,10-Decanediol methacrylated phosphates	Professional judgement	Sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
2-Hydroxyethyl methacrylate	In vivo	Not mutagenic
2-Hydroxyethyl methacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	In Vitro	Not mutagenic
Ethanol	In Vitro	Some positive data exist, but the data are not

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		sufficient for classification
Ethanol	In vivo	Some positive data exist, but the data are not sufficient for classification
1,10-Decanediol methacrylated phosphates	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-Hydroxyethyl methacrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	pre mating & 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	pre mating & during gestation
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during gestation
Ethanol	Inhalation	Not classified for development	Rat	NOAEL 38 mg/l	during gestation
Ethanol	Ingestion	Not classified for development	Rat	NOAEL 5,200 mg/kg/day	pre mating & during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
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	
1,10-Decanediol methacrylated phosphates	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
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	Ingestion	endocrine system hematopoietic system liver heart skin gastrointestinal tract bone, teeth, nails,	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days

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		and/or hair immune system muscles nervous system eyes kidney and/or bladder respiratory system vascular system				
Ethanol	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 124 mg/l	365 days
Ethanol	Inhalation	hematopoietic system immune system	Not classified	Rat	NOAEL 25 mg/l	14 days
Ethanol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 8,000 mg/kg/day	4 months
Ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg/day	7 days
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

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
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

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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
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2		Data not available or insufficient for classification			N/A
Ethanol	64-17-5	Fathead minnow	Experimental	96 hours	LC50	14,200 mg/l
Ethanol	64-17-5	Fish other	Experimental	96 hours	LC50	11,000 mg/l
Ethanol	64-17-5	Green algae	Experimental	72 hours	EC50	275 mg/l
Ethanol	64-17-5	Water flea	Experimental	48 hours	LC50	5,012 mg/l
Ethanol	64-17-5	Green algae	Experimental	72 hours	ErC10	11.5 mg/l
Ethanol	64-17-5	Water flea	Experimental	10 days	NOEC	9.6 mg/l
1,10-Decanediol methacrylated phosphates	1207736-18-2		Data not available or insufficient for classification			N/A
Copolymer of acrylic and itaconic acid	25948-33-8		Data not available or insufficient for classification			N/A
Camphorquinone	10373-78-1		Data not available or insufficient for classification			N/A
Ethyl 4-dimethylamino benzoate	10287-53-3	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Ethyl 4-dimethylamino benzoate	10287-53-3	Green Algae	Experimental	72 hours	EC50	2.8 mg/l
Ethyl 4-dimethylamino benzoate	10287-53-3	Rainbow trout	Experimental	96 hours	LC50	1.9 mg/l
Ethyl 4-dimethylamino benzoate	10287-53-3	Water flea	Experimental	48 hours	EC50	4.5 mg/l
Ethyl 4-dimethylamino benzoate	10287-53-3	Green Algae	Experimental	72 hours	ErC10	0.71 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
2-Hydroxyethyl methacrylate	868-77-9	Experimental Biodegradation	14 days	BOD	95 % BOD/ThBOD	OECD 301C - MITI test (I)

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(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	Estimated Biodegradation	28 days	BOD	32 % weight	OECD 301C - MITI test (I)
Ethanol	64-17-5	Experimental Biodegradation	14 days	BOD	89 % BOD/ThBOD	OECD 301C - MITI test (I)
1,10-Decanediol methacrylated phosphates	1207736-18-2	Estimated Biodegradation	28 days	BOD	91 % weight	OECD 301C - MITI test (I)
Copolymer of acrylic and itaconic acid	25948-33-8	Data not available - insufficient			N/A	
Camphorquinone	10373-78-1	Estimated Biodegradation	28 days	BOD	20.6 % BOD/ThBOD	OECD 301C - MITI test (I)
Ethyl 4-dimethylamino benzoate	10287-53-3	Experimental Biodegradation	28 days	CO2 evolution	40 % CO2 evolution/THC O2 evolution	OECD 301B - Modified Sturm or CO2

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
2-Hydroxyethyl methacrylate	868-77-9	Experimental Bioconcentration		Log Kow	0.42	Non-standard method
(1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bismethacrylate	1565-94-2	Estimated Bioconcentration		Bioaccumulation factor	5.8	Estimated: Bioconcentration factor
Ethanol	64-17-5	Experimental Bioconcentration		Log Kow	-0.35	Non-standard method
1,10-Decanediol methacrylated phosphates	1207736-18-2	Estimated Bioconcentration		Bioaccumulation factor	4.5	Non-standard method
Copolymer of acrylic and itaconic acid	25948-33-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Camphorquinone	10373-78-1	Estimated Bioconcentration		Bioaccumulation factor	7.1	Estimated: Bioconcentration factor
Ethyl 4-dimethylamino benzoate	10287-53-3	Experimental Bioconcentration		Log Kow	3.2	Non-standard method

12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods

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. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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.: UN1133

Proper Shipping Name: Adhesives

Class/Division: 3

Sub Risk: Not applicable.

Packing Group: III

Special Instructions: Dangerous Goods in Excepted Quantities, Class 3

Hazchem Code: 3Y

IERG: 14

International Air Transport Association (IATA) - Air Transport

UN No.: UN1133

Proper Shipping Name: Adhesives

Class/Division: 3

Sub Risk: Not applicable.

Packing Group: III

Special Instructions: Dangerous goods in Excepted Quantities, Class 3

International Maritime Dangerous Goods Code (IMDG) - Marine Transport

UN No.: UN1133

Proper Shipping Name: Adhesives

Class/Division: 3

Sub Risk: Not applicable.

Packing Group: III

Marine Pollutant: Not applicable.

Special Instructions: FORBIDDEN BY THIS MODE OF TRANSPORT, 3M DIVISION POLICY

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

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	500 L (closed containers greater than 5 L) 1,500 L (closed containers up to and including 5 L) 250 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 500 L
Emergency response plan	100 L (for a HSNO 9.1A substance); or 1,000 kg (for a HSNO 6.1D, 6.5A, 6.5B, 9.1B or 9.1C substance); or 10,000 kg (for all other substances)
Secondary containment	100 L (for a HSNO 9.1A substance); or 1,000 kg (for a HSNO 6.1D, 6.5A, 6.5B, 9.1B or 9.1C substance); or 10,000 kg (for all other substances)
Tracking	Not required
Warning signage	100 L (for a HSNO 9.1A substance) or 1,000 L (for all other substances)

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

Complete document review.

Document group:	29-8287-4	Version number:	4.00
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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: 29-9002-6 **Version number:** 3.00
Issue Date: 26/08/2019 **Supersedes date:** 01/04/2019

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™ ESPE™ RelyX™ Ultimate Catalyst Paste

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Adhesive resin cement.

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, 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
Acute Toxicity (oral): Category 5	6.1E Acute toxicity (oral)
Serious Eye Damage/Irritation: Category 2	6.4A Irritating to the eye
Skin Corrosion/Irritation: Category 3	6.3B Irritating to the skin
Skin Sensitiser: Category 1	6.5B Skin sensitiser
Acute Aquatic Toxicity: Category 1	9.1A Aquatic toxicity (acute)
Chronic Aquatic Toxicity: Category 2	9.1B Aquatic toxicity (chronic)

2.2. Label elements

SIGNAL WORD

WARNING!

Symbols:

Exclamation mark | Environment |

Pictograms



HAZARD STATEMENTS:

H303	May be harmful if swallowed.
H319	Causes serious eye irritation.
H316	Causes mild skin irritation.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280A	Wear eye/face protection.
P280E	Wear protective gloves.
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.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
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).
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.
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SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
(1-Methylethylidene)bis(4, 1-phenyleneoxy- 3, 1-propanediyl) bismethacrylate	27689-12-9	20 - 30
1,12-dodecane dimethacrylate	72829-09-5	< 5

3M™ ESPE™ RelyX™ Ultimate Catalyst Paste

2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	68909-20-6	< 5
Sodium P-Toluenesulfinate	824-79-3	< 5
Calcium dihydroxide	1305-62-0	< 2

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. 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: 2Z

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 get in eyes, on skin, or on clothing. 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.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat.

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
Calcium dihydroxide	1305-62-0	New Zealand WES	TWA(8 hours):5 mg/m ³	
Calcium dihydroxide	1305-62-0	ACGIH	TWA:5 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	Tooth
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>No data available.</i>
Flash point	No flash point
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>
Vapour density	<i>No data available.</i>
Density	2 - 2.2 g/cm ³
Relative density	2 - 2.2 [Ref Std:WATER=1]
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	<i>No data available.</i>
Molecular weight	<i>No data available.</i>
Volatile organic compounds (VOC)	<i>No data available.</i>

SECTION 10: Stability and reactivity**10.1 Reactivity**

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

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

Refer to Section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation

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

Skin contact

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

Eye contact

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion

May be harmful if swallowed.

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.

3M™ ESPE™ RelyX™ Ultimate Catalyst Paste**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
(1-Methylethylidene)bis(4, 1-phenyleneoxy- 3, 1-propanediyl) bismethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
(1-Methylethylidene)bis(4, 1-phenyleneoxy- 3, 1-propanediyl) bismethacrylate	Ingestion	Rat	LD50 > 17,600 mg/kg
1,12-dodecane dimethacrylate	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
1,12-dodecane dimethacrylate	Ingestion	similar compounds	LD50 2000-5000 mg/kg
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Calcium dihydroxide	Dermal	Rabbit	LD50 > 2,500 mg/kg
Calcium dihydroxide	Ingestion	Rat	LD50 7,340 mg/kg
Sodium P-Toluenesulfinate	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Sodium P-Toluenesulfinate	Ingestion	Rat	LD50 3,200 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
(1-Methylethylidene)bis(4, 1-phenyleneoxy- 3, 1-propanediyl) bismethacrylate	Rabbit	No significant irritation
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Rabbit	No significant irritation
Calcium dihydroxide	Human	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
(1-Methylethylidene)bis(4, 1-phenyleneoxy- 3, 1-propanediyl) bismethacrylate	Rabbit	Mild irritant
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Rabbit	No significant irritation
Calcium dihydroxide	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
(1-Methylethylidene)bis(4, 1-phenyleneoxy- 3, 1-propanediyl) bismethacrylate	Guinea pig	Not classified
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Human and animal	Not classified

Respiratory Sensitisation

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

Germ Cell Mutagenicity

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Name	Route	Value
(1-Methylethylidene)bis(4, 1-phenyleneoxy- 3, 1-propanediyl) bismethacrylate	In Vitro	Not mutagenic
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification

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

Name	Route	Value	Species	Test result	Exposure Duration
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Calcium dihydroxide	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL 2.5 mg/m ³	20 minutes

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Inhalation	respiratory system silicosis	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.

3M™ ESPE™ RelyX™ Ultimate Catalyst Paste

Acute Aquatic Toxicity: Category 1 (HSNO 9.1A 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
(1-Methylethylidene)bis(4, 1-phenyleneoxy-3, 1-propanediyl) bismethacrylate	27689-12-9	Green algae	Experimental	72 hours	EC50	>100 mg/l
(1-Methylethylidene)bis(4, 1-phenyleneoxy-3, 1-propanediyl) bismethacrylate	27689-12-9	Water flea	Experimental	48 hours	EC50	>100 mg/l
(1-Methylethylidene)bis(4, 1-phenyleneoxy-3, 1-propanediyl) bismethacrylate	27689-12-9	Green algae	Experimental	72 hours	NOEC	>100 mg/l
1,12-dodecane dimethacrylate	72829-09-5	Water flea	Experimental	48 hours	EC50	>100 mg/l
1,12-dodecane dimethacrylate	72829-09-5	Green Algae	Experimental	72 hours	EC50	17 ug/l
1,12-dodecane dimethacrylate	72829-09-5	Green Algae	Experimental	72 hours	Effect Concentration 10%	6.4 ug/l
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl) propyl ester, hydrolysis products with silica	68909-20-6	Algae	Estimated	72 hours	EC50	>100 mg/l
Sodium P-Toluenesulfinate	824-79-3	Water flea	Estimated	48 hours	EC50	>400 mg/l
Sodium P-Toluenesulfinate	824-79-3	Green Algae	Estimated	96 hours	EC50	230 mg/l
Sodium P-Toluenesulfinate	824-79-3	Fathead minnow	Estimated	96 hours	LC50	>400 mg/l
Sodium P-Toluenesulfinate	824-79-3	Green Algae	Estimated	96 hours	NOEC	31 mg/l
Calcium	1305-62-0	Green Algae	Estimated	72 hours	EC50	>4,000 mg/l

3M™ ESPE™ RelyX™ Ultimate Catalyst Paste

dihydroxide						
Calcium dihydroxide	1305-62-0	Water flea	Estimated	48 hours	EC50	2,400 mg/l
Calcium dihydroxide	1305-62-0	Fathead minnow	Estimated	96 hours	LC50	4,630 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
(1-Methylethylidene)bis(4, 1-phenyleneoxy-3, 1-propanediyl) bismethacrylate	27689-12-9	Experimental Biodegradation	28 days	CO2 evolution	7-12 % weight	OECD 301B - Modified sturm or CO2
1,12-dodecane dimethacrylate	72829-09-5	Experimental Biodegradation	28 days	CO2 evolution	97.3 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl) propyl ester, hydrolysis products with silica	68909-20-6	Data not availbl- insufficient			N/A	
Sodium P-Toluenesulfinate	824-79-3	Experimental Biodegradation	28 days	BOD	91 % BOD/ThBOD	OECD 301C - MITI test (I)
Calcium dihydroxide	1305-62-0	Data not availbl- insufficient			N/A	

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
(1-Methylethylidene)bis(4, 1-phenyleneoxy-3, 1-propanediyl) bismethacrylate	27689-12-9	Estimated Bioconcentration		Log Kow	7.61	Estimated: Octanol-water partition coefficient
1,12-dodecane dimethacrylate	72829-09-5	Estimated Bioconcentration		Bioaccumulation factor	6.6	Estimated: Bioconcentration factor
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl) propyl ester, hydrolysis products with silica	68909-20-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

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Sodium P-Toluenesulfinate	824-79-3	Estimated Bioconcentration		Bioaccumulation factor	3.9	Estimated: Bioconcentration factor
Calcium dihydroxide	1305-62-0	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.

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.: UN3077

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. , ((2-PROPENOIC ACID, 2-METHYL-,1,12-DODECANEDIDYL ESTER))

Class/Division: 9

Sub Risk: Not applicable.

Packing Group: III

Special Instructions: Not restricted, environmentally hazardous substance exception.

Hazchem Code: 2Z

IERG: 47

International Air Transport Association (IATA) - Air Transport

UN No.: UN3077

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. , ((2-PROPENOIC ACID, 2-METHYL-,1,12-DODECANEDIDYL ESTER))

Class/Division: 9

Sub Risk: Not applicable.

Packing Group: III

Special Instructions: Not restricted, as per Special Provision A197, environmentally hazardous substance exception.

International Maritime Dangerous Goods Code (IMDG) - Marine Transport

UN No.: UN3077

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. , ((2-PROPENOIC ACID, 2-METHYL-,1,12-DODECANEDIDYL ESTER))

Class/Division: 9

Sub Risk: Not applicable.

Packing Group: III

Marine Pollutant: Not applicable.

Special Instructions: Not restricted, as per IMDG code 2.10.2.7, marine pollutant exception.

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	100 L or 100 kg (for a HSNO 9.1A substance); or 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	100 L or 100 kg (for a HSNO 9.1A substance); or 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	100 L or 100 kg (for a HSNO 9.1A substance); or 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:**

Complete document review.

Document group:	29-9002-6	Version number:	3.00
Issue Date:	26/08/2019	Supersedes date:	01/04/2019

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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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: 29-9001-8 **Version number:** 3.00
Issue Date: 26/08/2019 **Supersedes date:** 18/12/2017

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™ ESPE™ RelyX™ Ultimate Base Paste

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Adhesive resin cement.

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, 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
Acute Toxicity (oral): Category 5	6.1E Acute toxicity (oral)
Skin Corrosion/Irritation: Category 3	6.3B 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

WARNING!

Symbols:

Exclamation mark | Environment |

Pictograms



HAZARD STATEMENTS:

H303 May be harmful if swallowed.
 H316 Causes mild skin irritation.
 H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P280E Wear protective gloves.
 P273 Avoid release to the environment.
 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.
 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).
 P312 Call a POISON CENTRE or doctor/physician if you feel unwell.

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
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	20 - 30
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	10 - 20
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	68909-20-6	5 - 10

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact

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

If swallowed

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

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

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

<u>Substance</u>	<u>Condition</u>
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Irritant vapours or gases.	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: 2Z

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 get in eyes, on skin, or on clothing. 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.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat.

7.3. Certified handler

Not required

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

8.2. Exposure controls

8.2.1. Engineering controls

Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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	Tooth
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>No data available.</i>
Flash point	No flash point
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>
Vapour density	<i>No data available.</i>
Density	2 - 2.2 g/cm ³
Relative density	2 - 2.2 [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	<i>No data available.</i>
Molecular weight	<i>No data available.</i>
Volatile organic compounds (VOC)	<i>No data available.</i>

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

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

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

Eye contact

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

Ingestion

May be harmful if swallowed.

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

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediy] 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-ethanediy] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Ingestion	Rat	LD50 > 2,000 mg/kg
2,2'-ethylenedioxydiethyl dimethacrylate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Rat	LD50 10,837 mg/kg
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
2-Propenoic acid, 2-methyl-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediy] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	Rabbit	Minimal irritation
2,2'-ethylenedioxydiethyl dimethacrylate	Guinea pig	Mild irritant

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2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Rabbit	No significant irritation
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Serious Eye Damage/Irritation

Name	Species	Value
Overall product		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
2,2'-ethylenedioxydiethyl dimethacrylate	Professional judgement	Moderate irritant
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
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
2,2'-ethylenedioxydiethyl dimethacrylate	Human and animal	Sensitising
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Human and animal	Not classified

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
2-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
2,2'-ethylenedioxydiethyl dimethacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
2,2'-ethylenedioxydiethyl dimethacrylate	Dermal	Mouse	Not carcinogenic
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Not classified for female reproduction	Mouse	NOAEL 1 mg/kg/day	1 generation
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Not classified for male reproduction	Mouse	NOAEL 1 mg/kg/day	1 generation
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Not classified for development	Mouse	NOAEL 1 mg/kg/day	1 generation
2-Propenoic acid, 2-methyl-, 3-	Ingestion	Not classified for female reproduction	Rat	NOAEL 509	1 generation

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(trimetoxysilyl)propyl ester, hydrolysis products with silica				mg/kg/day	
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

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

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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
2,2'-ethylenedioxydiethyl dimethacrylate	Dermal	kidney and/or bladder blood	Not classified	Mouse	NOAEL 833 mg/kg/day	78 weeks
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Inhalation	respiratory system silicosis	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 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-, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester, reaction products with 2-hydroxy-1,3-propanediyl dimethacrylate	1224866-76-5	Green algae	Endpoint not reached	72 hours	EC50	>100 mg/l

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and phosphorus oxide						
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 products with 2-hydroxy-1,3-propanediyl dimethacrylate and phosphorus oxide	1224866-76-5	Green algae	Experimental	72 hours	NOEC	56 mg/l
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Zebra Fish	Experimental	96 hours	LC50	16.4 mg/l
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Green Algae	Experimental	72 hours	EC50	>100 mg/l
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Water flea	Experimental	21 days	NOEC	32 mg/l
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Green algae	Experimental	72 hours	NOEC	18.6 mg/l
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl) propyl ester, hydrolysis products with silica	68909-20-6	Algae	Estimated	72 hours	EC50	>100 mg/l

12.2. Persistence and degradability

3M™ ESPE™ RelyX™ Ultimate Base Paste

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
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
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Experimental Biodegradation	28 days	CO2 evolution	85 % weight	OECD 301B - Modified sturm or CO2
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl) propyl ester, hydrolysis products with silica	68909-20-6	Data not availbl-insufficient			N/A	

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
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
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Experimental Bioconcentration		Log Kow	2.3	Other methods
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl) propyl ester, hydrolysis products with silica	68909-20-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods

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.: UN3077

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. , (TERT-BUTYL PEROXY-3, 5, 5-TRIMETHYLHEXANOATE, (ACETIC ACID, COPPER (2+) SALT, MONOHYDRATE))

Class/Division: 9

Sub Risk: Not applicable.

Packing Group: III

Special Instructions:Not restricted, environmentally hazardous substance exception.

Hazchem Code: 2Z

IERG: 47

International Air Transport Association (IATA) - Air Transport

UN No.: UN3077

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. , (TERT-BUTYL PEROXY-3, 5, 5-TRIMETHYLHEXANOATE, (ACETIC ACID, COPPER (2+) SALT, MONOHYDRATE))

Class/Division: 9

Sub Risk: Not applicable.

Packing Group: III

Special Instructions:Not restricted, as per Special Provision A197, environmentally hazardous substance exception.

International Maritime Dangerous Goods Code (IMDG) - Marine Transport

UN No.: UN3077

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. , (TERT-BUTYL PEROXY-3, 5, 5-TRIMETHYLHEXANOATE, (ACETIC ACID, COPPER (2+) SALT, MONOHYDRATE))

Class/Division: 9

Sub Risk: Not applicable.

Packing Group: III

Marine Pollutant: Not applicable.

Special Instructions:Not restricted, as per IMDG code 2.10.2.7, marine pollutant exception.

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	100 L or 100 kg (for a HSNO 9.1A substance); or 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	100 L or 100 kg (for a HSNO 9.1A substance); or 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	100 L or 100 kg (for a HSNO 9.1A substance); or 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:**

Complete document review.

Document group:	29-9001-8	Version number:	3.00
Issue Date:	26/08/2019	Supersedes date:	18/12/2017

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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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, 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
Corrosive to metal: Category 1	8.1A Corrosive to metals
Serious Eye Damage/Irritation: Category 1	8.3A Corrosive to eye
Skin Corrosion/Irritation: Category 1C	8.2C Corrosive to skin
No GHS Equivalent	9.3C Terrestrial vertebrate toxicity

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. |
| H433 | Harmful to terrestrial vertebrates. |

PRECAUTIONARY STATEMENTS

Prevention:

- | | |
|-------|---|
| P234A | Keep only in original packaging. |
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P280A | Wear eye/face protection. |
| P280D | Wear protective gloves, protective clothing, and eye/face protection. |
| P273 | Avoid release to the environment. |
| P264B | Wash exposed skin thoroughly after handling. |

Response:

- | | |
|---------------------|--|
| 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. |
| P301 + P330 + P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| P321 | Specific treatment (see Notes to Physician on this label). |
| P390 | Absorb spillage to prevent material damage. |
| P303 + P361 + P353A | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. |

Storage:

- | | |
|-------|--|
| P405 | Store locked up. |
| P406A | 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

3M™ Scotchbond™ Universal Etchant (41263)

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

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

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide.
Carbon dioxide.

Condition

During combustion.
During combustion.

5.3. Special protective actions for fire-fighters

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

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 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(as aerosol):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 H2O & exempt solvents	<i>No data available.</i>
Molecular weight	<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

Strong bases.

10.6 Hazardous decomposition products

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

Refer to Section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation

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

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.

3M™ Scotchbond™ Universal Etchant (41263)**Toxicological Data**

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
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

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Name	Route	Value
Phosphoric Acid	In Vitro	Not mutagenic
Synthetic Amorphous Silica, Fumed, Crystalline Free	In Vitro	Not mutagenic
Polyethylene Glycol	In Vitro	Not mutagenic
Polyethylene Glycol	In vivo	Not mutagenic
Aluminium Oxide	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Synthetic Amorphous Silica, Fumed, Crystalline Free	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Polyethylene Glycol	Ingestion	Rat	Not carcinogenic
Aluminium Oxide	Inhalation	Rat	Not carcinogenic

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

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

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

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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Synthetic Amorphous Silica, Fumed, Crystalline Free	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Polyethylene Glycol	Inhalation	respiratory system	Not classified	Rat	NOAEL 1.008 mg/l	2 weeks

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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**

9.3C Terrestrial vertebrate toxicity

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	Experimental	72 hours	EC50	>100 mg/l
Synthetic Amorphous Silica, Fumed, Crystalline Free	112945-52-5	Water flea	Experimental	24 hours	EC50	>100 mg/l
Synthetic Amorphous Silica, Fumed, Crystalline Free	112945-52-5	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Synthetic Amorphous	112945-52-5	Green Algae	Experimental	72 hours	NOEC	60 mg/l

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Silica, Fumed, Crystalline Free						
Polyethylene Glycol	25322-68-3	Activated sludge	Experimental		EC50	>1,000 mg/l
Polyethylene Glycol	25322-68-3	Atlantic Salmon	Experimental	96 hours	LC50	>1,000 mg/l
Aluminium Oxide	1344-28-1	Fish	Experimental	96 hours	LC50	>100 mg/l
Aluminium Oxide	1344-28-1	Green Algae	Experimental	72 hours	EC50	>100 mg/l
Aluminium Oxide	1344-28-1	Water flea	Experimental	48 hours	LC50	>100 mg/l
Aluminium Oxide	1344-28-1	Green Algae	Experimental	72 hours	NOEC	>100 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Phosphoric Acid	7664-38-2	Data not available - insufficient			N/A	
Synthetic Amorphous Silica, Fumed, Crystalline Free	112945-52-5	Data not available - insufficient			N/A	
Polyethylene Glycol	25322-68-3	Experimental Biodegradation	28 days	BOD	53 % BOD/ThBOD	OECD 301C - MITI test (I)
Aluminium Oxide	1344-28-1	Data not available - insufficient			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	Estimated: Bioconcentration factor
Aluminium Oxide	1344-28-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Special Instructions: Dangerous Goods in Excepted Quantities, Class 8

Hazchem Code: 2R

IERG: 37

International Air Transport Association (IATA) - Air Transport

UN No.: UN1805

Proper Shipping Name: PHOSPHORIC ACID SOLUTION

Class/Division: 8

Sub Risk: Not applicable.

Packing Group: III

Special Instructions: Dangerous Goods in Excepted Quantities, Class 8

International Maritime Dangerous Goods Code (IMDG) - Marine Transport

UN No.: UN1805

Proper Shipping Name: PHOSPHORIC ACID SOLUTION

Class/Division: 8

Sub Risk: Not applicable.

Packing Group: III

Marine Pollutant: Not applicable.

Special Instructions: FORBIDDEN BY THIS MODE OF TRANSPORT, 3M DIVISION POLICY

SECTION 15: Regulatory information

HSNO Approval number HSR002555

Group standard name Dental Products (Corrosive) 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

3M™ Scotchbond™ Universal Etchant (41263)

Location Compliance Certificate	Not required
Hazardous atmosphere zone	Not required
Fire extinguishers	Not required
Emergency response plan	100 L or 100 kg (for a HSNO 9.1A substance); or 1,000 L or 1,000 kg (for a HSNO 6.1D, 6.5A, 6.5B, 8.2B, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for all other substances)
Secondary containment	100 L or 100 kg (for a HSNO 9.1A substance); or 1,000 L or 1,000 kg (for a HSNO 6.1D, 6.5A, 6.5B, 8.2B, 9.1B or 9.1C substance); or 10,000 L or 10,000 kg (for all other substances)
Tracking	Not required
Warning signage	100 L or 100 kg (for a HSNO 9.1A substance); or 250 L or 250 kg (for a HSNO 8.2B substance); or 1,000 L or 1,000 kg (for all other substances)

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

Complete document review.

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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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