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™ Clinpro™ 5000 1.1% Sodium Fluoride Anti-Cavity ToothPaste (12214)

Product Identification Numbers
70-2010-9848-3

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Dental preventative

Restrictions on use
For use by dental professionals only.

1.3. Supplier's details

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

1.4. Emergency telephone number
24 hr Medical Emergency, National Poisons Centre, 0800 764 766 (0800 POISON)

SECTION 2: Hazard identification

Classified as hazardous in accordance with the relevant criteria of the HSNO Act 1996 and the Hazardous Substances (Hazard Classification) Notice 2020.
Refer to Section 14 of this Safety Data Sheet for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture
Specific target organ toxicity – repeated exposure: Category 2

2.2. Label elements
SIGNAL WORD
Warning

Symbols:
Health Hazard |

Pictograms

HAZARD STATEMENTS:

H373	May cause damage to organs through prolonged or repeated exposure: musculoskeletal system.

PRECAUTIONARY STATEMENTS

Prevention

P260	Do not breathe dust/fume/gas/mist/vapours/spray.

Response

P314	Get medical advice/attention 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
Water	7732-18-5	30 - 40
Non-crystallizing sorbitol solution	50-70-4	20 - 30
Silica gel precipitated, crystalline free	112926-00-8	10 - 20
Amorphous silica	7631-86-9	5 - 10
Glycerol	56-81-5	1 - 10
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	25322-68-3	< 5
Polyethylene-polypropylene glycol	9003-11-6	1 - 5
Sodium carboxymethyl cellulose	9004-32-4	< 2
Sodium fluoride	7681-49-4	1 - 2
Sodium dodecyl sulphate	151-21-3	< 2
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	128-44-9	< 2
Titanium dioxide	13463-67-7	< 2
Flavourings	Mixture	< 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
Wash with soap and water. If signs/symptoms develop, get medical attention.

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

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

4.2. Most important symptoms and effects, both acute and delayed
No critical symptoms or effects. See Section 11.1, information on toxicological effects.

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

SECTION 5: Fire-fighting measures

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

5.2. Special hazards arising from the substance or mixture
Exposure to extreme heat can give rise to thermal decomposition.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.

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

5.4. Hazchem code: Not applicable.

SECTION 6: Accidental release measures

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

6.2. Environmental precautions
Avoid release to the environment.

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

SECTION 7: Handling and storage

Refer to Section 15 - Controls for more information

7.1. Precautions for safe handling
Avoid prolonged or repeated skin contact. Avoid inhalation of thermal decomposition products. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this

product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Do not get in eyes.

7.2. Conditions for safe storage including any incompatibilities
Store away from oxidising agents.

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
For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use with appropriate local exhaust ventilation sufficient to maintain levels of thermal decomposition products below their exposure guidelines.

8.2.2. Personal protective equipment (PPE)

Eye/face protection
None required.

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

Respiratory protection

For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use a positive pressure supplied-air respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Paste
Colour	White
Odour	Moderate Bubble gum, Moderate Minty
Odour threshold	*No data available.*
pH	*Not applicable.*
Melting point/Freezing point	*No data available.*
Boiling point/Initial boiling point/Boiling range	*Not applicable.*
Flash point	No flash point
Evaporation rate	*Not applicable.*
Flammability	Not applicable.
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*

Vapour pressure	*Not applicable.*
Vapor Density and/or Relative Vapor Density	*Not applicable.*
Density	1.04 g/cm3
Relative density	1.04 [*Ref Std:*WATER=1]
Water solubility	Appreciable
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*Not applicable.*
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
Kinematic Viscosity	*No data available.*
Volatile organic compounds (VOC)	*No data available.*
Percent volatile	*No data available.*
VOC less H2O & exempt solvents	*No data available.*

Particle Characteristics	*Not applicable.*

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
None known.

10.5 Incompatible materials
Strong oxidising agents.

10.6 Hazardous decomposition products

Substance	**Condition**
None known.	

Refer to Section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation
No known health effects.

Skin contact
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

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

Ingestion
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Exposures needed to cause the following health effect(s) are not expected during normal, intended use:
Hard tissue effects: Signs/symptoms may include colour changes in the teeth and nails, changes in development of bone, teeth or nails, weakening of the bones, and hair loss.

Carcinogenicity:
Exposures needed to cause the following health effect(s) are not expected during normal, intended use:
Contains a chemical or chemicals which can cause cancer.

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Non-crystallizing sorbitol solution	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Non-crystallizing sorbitol solution	Ingestion	Rat	LD50 15,900 mg/kg
Silica gel precipitated, crystalline free	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silica gel precipitated, crystalline free	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silica gel precipitated, crystalline free	Ingestion	Rat	LD50 > 5,110 mg/kg
Amorphous silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Amorphous silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Amorphous silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Glycerol	Dermal	Rabbit	LD50 estimated to be > 5,000 mg/kg
Glycerol	Ingestion	Rat	LD50 > 5,000 mg/kg
Polyethylene-polypropylene glycol	Dermal	similar compounds	LD50 > 2,000 mg/kg
Polyethylene-polypropylene glycol	Ingestion	similar compounds	LD50 > 5,000 mg/kg
Sodium fluoride	Dermal	Rat	LD50 > 2,000 mg/kg
Sodium fluoride	Inhalation-Dust/Mist	Rat	LC50 1 mg/l
Sodium fluoride	Ingestion	Rat	LD50 148.5 mg/kg
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-	Dermal	Rabbit	LD50 > 20,000 mg/kg

1,2-diol, ethoxylated			
Sodium carboxymethyl cellulose	Dermal	Rabbit	LD50 > 2,000 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	Ingestion	Rat	LD50 32,770 mg/kg
Sodium carboxymethyl cellulose	Ingestion	Rat	LD50 > 27,000 mg/kg
Sodium dodecyl sulphate	Ingestion	Rat	LD50 911 mg/kg
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	Ingestion	Rat	LD50 8,980 mg/kg
Titanium dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Sodium dodecyl sulphate	Dermal	similar compounds	LD50 > 2,000 mg/kg
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	Dermal	similar compounds	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Silica gel precipitated, crystalline free	Rabbit	No significant irritation
Amorphous silica	Rabbit	No significant irritation
Glycerol	Rabbit	No significant irritation
Polyethylene-polypropylene glycol	similar compounds	No significant irritation
Sodium fluoride	official classification	Irritant
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	Rabbit	Minimal irritation
Sodium carboxymethyl cellulose	Human	No significant irritation
Sodium dodecyl sulphate	Rabbit	Irritant
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Silica gel precipitated, crystalline free	Rabbit	No significant irritation
Amorphous silica	Rabbit	No significant irritation
Glycerol	Rabbit	No significant irritation
Polyethylene-polypropylene glycol	similar compounds	No significant irritation
Sodium fluoride	Rabbit	Corrosive
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	Rabbit	Mild irritant
Sodium carboxymethyl cellulose	Rabbit	No significant irritation
Sodium dodecyl sulphate	Rabbit	Corrosive
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation

Sensitisation:

Skin Sensitisation

Name	Species	Value
Silica gel precipitated, crystalline free	Human and	Not classified

	animal	
Amorphous silica	Human and animal	Not classified
Glycerol	Guinea pig	Not classified
Polyethylene-polypropylene glycol	Guinea pig	Not classified
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	Guinea pig	Not classified
Sodium carboxymethyl cellulose	Human	Not classified
Sodium dodecyl sulphate	similar compounds	Not classified
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	similar compounds	Not classified
Titanium dioxide	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
Silica gel precipitated, crystalline free	In Vitro	Not mutagenic
Amorphous silica	In Vitro	Not mutagenic
Polyethylene-polypropylene glycol	In Vitro	Not mutagenic
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	In Vitro	Not mutagenic
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	In vivo	Not mutagenic
Sodium carboxymethyl cellulose	In Vitro	Not mutagenic
Sodium dodecyl sulphate	In Vitro	Not mutagenic
Sodium dodecyl sulphate	In vivo	Not mutagenic
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	In Vitro	Not mutagenic
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	In vivo	Not mutagenic
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Silica gel precipitated, crystalline free	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Amorphous silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Glycerol	Ingestion	Mouse	Some positive data exist, but the data are not sufficient for classification
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	Ingestion	Rat	Not carcinogenic
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration

Silica gel precipitated, crystalline free	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica gel precipitated, crystalline free	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica gel precipitated, crystalline free	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Amorphous silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Amorphous silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Amorphous silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Glycerol	Ingestion	Not classified for female reproduction	Rat	NOAEL 2,000 mg/kg/day	2 generation
Glycerol	Ingestion	Not classified for male reproduction	Rat	NOAEL 2,000 mg/kg/day	2 generation
Glycerol	Ingestion	Not classified for development	Rat	NOAEL 2,000 mg/kg/day	2 generation
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,125 mg/kg/day	during gestation
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	Ingestion	Not classified for male reproduction	Rat	NOAEL 5699 +/-1341 mg/kg/day	5 days
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	Not specified.	Not classified for reproduction and/or development		NOEL N/A	
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	Ingestion	Not classified for development	Mouse	NOAEL 562 mg/animal/day	during gestation
Sodium carboxymethyl cellulose	Ingestion	Not classified for female reproduction	Rat	NOAEL 1 g/kg in the diet	3 generation
Sodium carboxymethyl cellulose	Ingestion	Not classified for male reproduction	Rat	NOAEL 1 g/kg in the diet	3 generation
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	Ingestion	Not classified for female reproduction	Mouse	NOAEL 25 mg/kg/day	2 generation
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	Ingestion	Not classified for male reproduction	Mouse	NOAEL 200 mg/kg/day	2 weeks
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	Ingestion	Not classified for development	Mouse	NOAEL 25 mg/kg/day	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Sodium fluoride	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	Inhalation	respiratory irritation	Not classified	Rat	NOAEL 1.008 mg/l	2 weeks
Sodium dodecyl sulphate	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

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

						Duration
Silica gel precipitated, crystalline free	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Amorphous silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Glycerol	Inhalation	respiratory system | heart | liver | kidney and/or bladder	Not classified	Rat	NOAEL 3.91 mg/l	14 days
Glycerol	Ingestion	endocrine system | hematopoietic system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 10,000 mg/kg/day	2 years
Sodium fluoride	Inhalation	bone, teeth, nails, and/or hair	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Sodium fluoride	Ingestion	bone, teeth, nails, and/or hair	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL 0.33 mg/kg/day	environmental exposure
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	Inhalation	respiratory system	Not classified	Rat	NOAEL 1.008 mg/l	2 weeks
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	Ingestion	kidney and/or bladder | heart | endocrine system | hematopoietic system | liver | nervous system	Not classified	Rat	NOAEL 5,640 mg/kg/day	13 weeks
Sodium carboxymethyl cellulose	Ingestion	blood | kidney and/or bladder	Not classified	Rat	NOAEL 1 g/kg in the diet	25 months
Sodium dodecyl sulphate	Ingestion	liver	Not classified	Rat	NOAEL 1,840 mg/kg/day	90 days
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	Ingestion	heart | hematopoietic system | liver | nervous system | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure

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

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

SECTION 12: Ecological information

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

12.1. Toxicity
Ecotoxic to the aquatic environment.
Acute Aquatic Toxicity: Category 3

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Non-crystallizing sorbitol solution	50-70-4	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Silica gel precipitated, crystalline free	112926-00-8	Green algae	Analogous Compound	72 hours	ErC50	>173.1 mg/l
Silica gel precipitated, crystalline free	112926-00-8	Sediment organism	Experimental	96 hours	EC50	8,500 mg/kg (Dry Weight)
Silica gel precipitated, crystalline free	112926-00-8	Water flea	Experimental	24 hours	EL50	>10,000 mg/l
Silica gel precipitated, crystalline free	112926-00-8	Zebra Fish	Experimental	96 hours	LL50	>10,000 mg/l
Silica gel precipitated, crystalline free	112926-00-8	Green algae	Analogous Compound	72 hours	NOEC	173.1 mg/l
Silica gel precipitated, crystalline free	112926-00-8	Water flea	Analogous Compound	21 days	NOEC	68 mg/l
Silica gel precipitated, crystalline free	112926-00-8	Activated sludge	Analogous Compound	3 hours	EC50	>1,000 mg/l
Amorphous silica	7631-86-9	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Glycerol	56-81-5	Bacteria	Experimental	16 hours	NOEC	10,000 mg/l
Glycerol	56-81-5	Rainbow trout	Experimental	96 hours	LC50	54,000 mg/l
Glycerol	56-81-5	Water flea	Experimental	48 hours	LC50	1,955 mg/l
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	25322-68-3	Activated sludge	Experimental	N/A	EC50	>1,000 mg/l
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	25322-68-3	Atlantic Salmon	Experimental	96 hours	LC50	>1,000 mg/l
Polyethylene-polypropylene glycol	9003-11-6	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Sodium carboxymethyl	9004-32-4	Water flea	Experimental	48 hours	EC50	87.26 mg/l

cellulose						
Sodium carboxymethyl cellulose	9004-32-4	Rainbow trout	Laboratory	96 hours	EC50	>20,000 mg/l
Sodium fluoride	7681-49-4	Green algae	Estimated	96 hours	EbC50	95 mg/l
Sodium fluoride	7681-49-4	Invertebrate	Estimated	96 hours	EC50	57 mg/l
Sodium fluoride	7681-49-4	Mysid Shrimp	Estimated	96 hours	EC50	23.2 mg/l
Sodium fluoride	7681-49-4	Rainbow trout	Estimated	96 hours	LC50	110 mg/l
Sodium fluoride	7681-49-4	Rainbow trout	Estimated	21 days	NOEC	8 mg/l
Sodium fluoride	7681-49-4	Water flea	Experimental	21 days	NOEC	8.2 mg/l
Sodium fluoride	7681-49-4	Soil microbes	Analogous Compound	63 days	NOEC	106 mg/kg (Dry Weight)
Sodium fluoride	7681-49-4	Arthropod	Experimental	126 days	NOEC	800 mg/kg (Dry Weight)
Sodium fluoride	7681-49-4	Bacteria	Experimental	16 hours	NOEC	231 mg/l
Sodium fluoride	7681-49-4	Redworm	Experimental	154 days	NOEC	1,200 mg/kg (Dry Weight)
Sodium dodecyl sulphate	151-21-3	Algae or other aquatic plants	Experimental	96 hours	ErC50	30.2 mg/l
Sodium dodecyl sulphate	151-21-3	Atlantic Silverside	Experimental	96 hours	LC50	2.8 mg/l
Sodium dodecyl sulphate	151-21-3	Bluegill	Experimental	96 hours	LC50	4.5 mg/l
Sodium dodecyl sulphate	151-21-3	Duckweed	Experimental	7 days	EC50	18 mg/l
Sodium dodecyl sulphate	151-21-3	Green algae	Experimental	96 hours	ErC50	117 mg/l
Sodium dodecyl sulphate	151-21-3	Invertebrate	Experimental	48 hours	EC50	1.2 mg/l
Sodium dodecyl sulphate	151-21-3	Fathead minnow	Experimental	42 days	NOEC	1.357 mg/l
Sodium dodecyl sulphate	151-21-3	Green algae	Experimental	96 hours	ErC10	12 mg/l
Sodium dodecyl sulphate	151-21-3	Water flea	Experimental	7 days	NOEC	0.88 mg/l
Sodium dodecyl sulphate	151-21-3	Activated sludge	Experimental	3 hours	EC50	135 mg/l

Sodium dodecyl sulphate	151-21-3	Wheat	Experimental	6 days	EC50	269.6 mg/l
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	128-44-9	Green algae	Experimental	72 hours	ErC50	>100 mg/l
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	128-44-9	Water flea	Experimental	48 hours	EC50	>100 mg/l
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	128-44-9	Zebra Fish	Experimental	96 hours	LC50	>400 mg/l
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	128-44-9	Green algae	Experimental	72 hours	NOEC	100 mg/l
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	128-44-9	Activated sludge	Analogous Compound	30 minutes	LOEC	>1,000 mg/l
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	128-44-9	White Mustard	Experimental	96 hours	EC50	>100 mg/kg (Dry Weight)
Titanium dioxide	13463-67-7	Activated sludge	Experimental	3 hours	NOEC	>=1,000 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium dioxide	13463-67-7	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Non-crystallizing sorbitol solution	50-70-4	Experimental Biodegradation	14 days	BOD	81 %BOD/ThOD	OECD 301C - MITI test (I)
Silica gel precipitated, crystalline free	112926-00-8	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Amorphous	7631-86-9	Data not	N/A	N/A	N/A	N/A

silica		availbl-insufficient				
Glycerol	56-81-5	Experimental Biodegradation	14 days	BOD	63 %BOD/ThOD	OECD 301C - MITI test (I)
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	25322-68-3	Experimental Biodegradation	28 days	BOD	53 %BOD/ThOD	OECD 301C - MITI test (I)
Polyethylene-polypropylene glycol	9003-11-6	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Sodium carboxymethyl cellulose	9004-32-4	Estimated Biodegradation	28 days	BOD	25 %BOD/ThOD	OECD 301A - DOC Die Away Test
Sodium fluoride	7681-49-4	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Sodium dodecyl sulphate	151-21-3	Experimental Aquatic Inherent Biodegrad.	28 days	Dissolv. Organic Carbon Deplet	100 % removal of DOC	
Sodium dodecyl sulphate	151-21-3	Experimental Biodegradation	28 days	CO2 evolution	95 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	128-44-9	Experimental Biodegradation	28 days	BOD	96.55 %BOD/ThOD	OECD 301D - Closed bottle test
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	128-44-9	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	OECD 111 Hydrolysis func of pH
Titanium dioxide	13463-67-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Non-crystallizing sorbitol solution	50-70-4	Experimental Bioconcentration		Log Kow	-2.20	
Silica gel precipitated, crystalline free	112926-00-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Amorphous silica	7631-86-9	Data not available or insufficient for	N/A	N/A	N/A	N/A

		classification				
Glycerol	56-81-5	Experimental Bioconcentration		Log Kow	-1.76	
Poly(oxy-1,2-ethanediyl),alpha-hydro-omega-hydroxy-ethane-1,2-diol, ethoxylated	25322-68-3	Estimated Bioconcentration		Bioaccumulation factor	2.3	
Polyethylene-polypropylene glycol	9003-11-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Sodium carboxymethyl cellulose	9004-32-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Sodium fluoride	7681-49-4	Experimental BCF - Fish	28 days	Bioaccumulation factor	≤ 6.4	OECD305-Bioconcentration
Sodium dodecyl sulphate	151-21-3	Experimental Bioconcentration		Log Kow	0.83	OECD 123 log Kow slow stir
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide, sodium salt	128-44-9	Experimental Bioconcentration		Log Kow	0.11	
Titanium dioxide	13463-67-7	Experimental BCF - Fish	42 days	Bioaccumulation factor	9.6	

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available.

SECTION 13: Disposal considerations

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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.: Not applicable.
Proper Shipping Name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.

Hazchem Code: Not applicable.
IERG: Not applicable.

International Air Transport Association (IATA) - Air Transport
UN No.: Not applicable.
Proper Shipping Name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.

International Maritime Dangerous Goods Code (IMDG) - Marine Transport
UN No.: Not applicable.
Proper Shipping Name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.
Marine Pollutant: Not applicable.

SECTION 15: Regulatory information

HSNO Approval number	HSR002558
Group standard name	Dental Products (Subsidiary Hazard) Group Standard 2020
HSNO Hazard classification	Refer to Section 2: Hazard identification

NZ Inventory of Chemicals (NZIoC) Status
All applicable chemical ingredients in this material are in compliance with NZIoC listing requirements.

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

Certified handler	Not required
Location Compliance Certificate	Not required
Hazardous atmosphere zone	Not required
Fire extinguishers	Not required
Emergency response plan	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for Acute toxicity Category 4, Skin sensitisation Category 1, Respiratory sensitisation Category 1, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L or 10 000 kg (for Germ cell mutagenicity Category 1, Reproductive toxicity Category 1, Specific target organ toxicity Category 1, Serious eye damage Category 1, Hazardous to the aquatic environment Category 4 substances)
Secondary containment	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for Acute toxicity Category 4, Skin sensitisation Category 1, Respiratory sensitisation Category 1, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L or 10 000 kg (for Germ cell mutagenicity

	Category 1, Reproductive toxicity Category 1, Specific target organ toxicity Category 1, Serious eye damage Category 1, Hazardous to the aquatic environment Category 4 substances)
Tracking	Not required
Warning signage	100 L or 100 kg (for Hazardous to the aquatic environment Category 1 substances); or 1 000 L or 1 000 kg (for Serious eye damage Category 1, Hazardous to the aquatic environment Category 2 or Hazardous to the aquatic environment Category 3 substances); or 10 000 L or 10 000 kg (for Acute toxicity Category 4 or Hazardous to the aquatic environment Category 4 substances)

SECTION 16: Other information

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Complete document review.

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Key to abbreviations and acronyms
GHS refers to the Globally Harmonised System of Classification and Labelling of Chemicals, 7th revised edition of 2017
HSNO means Hazardous Substances and New Organisms Act 1996

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