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™ 5% Sodium Fluoride White Varnish (12246, 12247, 12249, 12250, 12251)

Product Identification Numbers
70-2010-8839-3 70-2010-8840-1 70-2014-0114-1

1.2. Recommended use and restrictions on use

Recommended use
Dental product, Fluoride varnish

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
Flammable Liquids: Category 2
Serious eye damage: Category 1
Reproductive Toxicity: Category 2
Specific target organ toxicity – repeated exposure: Category 1
Aspiration Hazard: Category 1

2.2. Label elements
SIGNAL WORD
Danger

Symbols:
Flame |Corrosion |Health Hazard |

Pictograms

HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H318	Causes serious eye damage.
H361	Suspected of damaging fertility or the unborn child.
H304	May be fatal if swallowed and enters airways.
H372	Causes damage to organs through prolonged or repeated exposure: nervous system.
H373	May cause damage to organs through prolonged or repeated exposure: musculoskeletal system.

PRECAUTIONARY STATEMENTS

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280F	Wear respiratory protection.

Response

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P331	Do NOT induce vomiting.
P370 + P378	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage

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

Disposal

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

2.3. Other hazards
All or part of the classification is based on toxicity test data.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Pentaerythritol glycerol ester of colophony resin	Trade Secret	60 - 75
n-Hexane	110-54-3	10 - 15
Sodium fluoride	7681-49-4	1 - 5
USP/Food Grade Flavor	Mixture	1 - 5
Thickener	Trade Secret	1 - 5
Ethanol	64-17-5	1 - 5
Flavor enhancer	Trade Secret	1 - 5
Modified tricalcium phosphate	None	< 1

SECTION 4: First aid measures

4.1. Description of first aid measures

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

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

Eye contact
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.
A product risk assessment is recommended to determine if eye wash facilities may be required when using this product in the workplace.

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

4.2. Most important symptoms and effects, both acute and delayed
The most important symptoms and effects based on the CLP classification include:

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

SECTION 5: Fire-fighting measures

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

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

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide.	During combustion.
Carbon dioxide.	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
Avoid prolonged or repeated skin contact. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Do not get in eyes. Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidising agents.

7.3. Certified handler
Not required

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
n-Hexane	110-54-3	ACGIH	TWA:50 ppm	Danger of cutaneous absorption
n-Hexane	110-54-3	New Zealand WES	TWA(8 hours): 72 mg/m3 (20 ppm)	Ototoxicant
Ethanol	64-17-5	ACGIH	STEL:1000 ppm	A3: Confirmed animal carcinogen.
Ethanol	64-17-5	New Zealand WES	TWA(8 hours):380 mg/m3(200 ppm);STEL(15 minutes):1520 mg/m3(800 ppm)	Ototoxicant

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
New Zealand WES : New Zealand Workplace Exposure Standards.
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
ppm: parts per million
mg/m³: milligrams per cubic metre
CEIL: Ceiling

8.2. Exposure controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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

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

Respiratory protection
None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Liquid.
Colour	Light Yellow
Odour	Moderate Cherry, Moderate Melon, Moderate Minty
Odour threshold	*No data available.*
pH	*Not applicable.*
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	68 ºC
Flash point	6 ºC [*Test Method:*Closed Cup]

Evaporation rate	*Not applicable.*
Flammability	Flammable Liquid: Category 2.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapor Density and/or Relative Vapor Density	*Not applicable.*
Density	1 g/ml
Relative density	1 [*Ref Std:*WATER=1]
Water solubility	Moderate
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.*
Molecular weight	*Not applicable.*

Particle Characteristics	*Not applicable.*

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
Strong oxidising agents.
Strong acids.

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
Exposures needed to cause the following health effect(s) are not expected during normal, intended use:
Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.
May cause additional health effects (see below).

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

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
Chemical (aspiration) pneumonitis: Signs/symptoms may include coughing, gasping, choking, burning of the mouth, difficulty breathing, bluish coloured skin (cyanosis), and may be fatal. 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. Peripheral neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Additional information:

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

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion	Rat	LD50 > 2,000 mg/kg
Pentaerythritol glycerol ester of colophony resin	Dermal		LD50 estimated to be > 5,000 mg/kg
Pentaerythritol glycerol ester of colophony resin	Ingestion	Rat	LD50 8,400 mg/kg
n-Hexane	Dermal	Rabbit	LD50 > 2,000 mg/kg
n-Hexane	Inhalation-Vapor (4 hours)	Rat	LC50 170 mg/l
n-Hexane	Ingestion	Rat	LD50 > 28,700 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
Thickener	Dermal	Rabbit	LD50 > 5,000 mg/kg
Thickener	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Thickener	Ingestion	Rat	LD50 > 5,110 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
Flavor enhancer	Ingestion	Rat	LD50 > 4,000 mg/kg
Flavor enhancer	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
n-Hexane	Human and animal	Mild irritant
Sodium fluoride	official classification	Irritant
Thickener	Rabbit	No significant irritation
Ethanol	Rabbit	No significant irritation
Flavor enhancer	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	In vitro data	No significant irritation
n-Hexane	Rabbit	Mild irritant
Sodium fluoride	Rabbit	Corrosive
Thickener	Rabbit	No significant irritation
Ethanol	Rabbit	Severe irritant
Flavor enhancer	In vitro data	No significant irritation

Sensitisation:

Skin Sensitisation

Name	Species	Value
n-Hexane	Human	Not classified
Thickener	Human and animal	Not classified
Ethanol	Human	Not classified
Flavor enhancer	Human	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

n-Hexane	In Vitro	Not mutagenic
n-Hexane	In vivo	Not mutagenic
Thickener	In Vitro	Not mutagenic
Ethanol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Ethanol	In vivo	Some positive data exist, but the data are not sufficient for classification
Flavor enhancer	In Vitro	Not mutagenic
Flavor enhancer	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
n-Hexane	Dermal	Mouse	Not carcinogenic
n-Hexane	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Thickener	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Ethanol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Flavor enhancer	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
n-Hexane	Ingestion	Not classified for development	Mouse	NOAEL 2,200 mg/kg/day	during organogenesis
n-Hexane	Inhalation	Not classified for development	Rat	NOAEL 0.7 mg/l	during gestation
n-Hexane	Ingestion	Toxic to male reproduction	Rat	NOAEL 1,140 mg/kg/day	90 days
n-Hexane	Inhalation	Toxic to male reproduction	Rat	LOAEL 3.52 mg/l	28 days
Thickener	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Thickener	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Thickener	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Ethanol	Inhalation	Not classified for development	Rat	NOAEL 38 mg/l	during gestation
Ethanol	Ingestion	Not classified for development	Rat	NOAEL 5,200 mg/kg/day	premating & during gestation
Flavor enhancer	Ingestion	Not classified for female reproduction	Rat	NOAEL 20%	3 generation
Flavor enhancer	Ingestion	Not classified for male reproduction	Rat	NOAEL 20%	3 generation
Flavor enhancer	Ingestion	Not classified for development	Rabbit	NOAEL 6,770 mg/kg/day	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
n-Hexane	Inhalation	central nervous	May cause drowsiness or	Human	NOAEL Not	not available

		system depression	dizziness		available	
n-Hexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL Not available	8 hours
n-Hexane	Inhalation	respiratory system	Not classified	Rat	NOAEL 24.6 mg/l	8 hours
Sodium fluoride	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
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	
Flavor enhancer	Dermal	photoirritation	Not classified	Guinea pig	Irritation Positive	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
n-Hexane	Inhalation	peripheral nervous system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
n-Hexane	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Mouse	LOAEL 1.76 mg/l	13 weeks
n-Hexane	Inhalation	liver	Not classified	Rat	NOAEL Not available	6 months
n-Hexane	Inhalation	kidney and/or bladder	Not classified	Rat	LOAEL 1.76 mg/l	6 months
n-Hexane	Inhalation	hematopoietic system	Not classified	Mouse	NOAEL 35.2 mg/l	13 weeks
n-Hexane	Inhalation	auditory system | immune system | eyes	Not classified	Human	NOAEL Not available	occupational exposure
n-Hexane	Inhalation	heart | skin | endocrine system	Not classified	Rat	NOAEL 1.76 mg/l	6 months
n-Hexane	Ingestion	peripheral nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,140 mg/kg/day	90 days
n-Hexane	Ingestion	endocrine system | hematopoietic system | liver | immune system | kidney and/or bladder	Not classified	Rat	NOAEL Not available	13 weeks
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
Thickener	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
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	Not classified	Dog	NOAEL	7 days

		bladder			3,000 mg/kg/day	
Flavor enhancer	Inhalation	eyes | kidney and/or bladder | respiratory system	Not classified	Dog	NOAEL 3.5 mg/l	14 days
Flavor enhancer	Ingestion	kidney and/or bladder	Not classified	Mouse	NOAEL 2%	106 weeks
Flavor enhancer	Ingestion	heart | endocrine system | hematopoietic system | liver | nervous system | eyes | respiratory system	Not classified	Rat	NOAEL 20,000 mg/kg/day	13 weeks

Aspiration Hazard

Name	Value
n-Hexane	Aspiration hazard

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
Pentaerythritol glycerol ester of colophony resin	Trade Secret	Fathead minnow	Experimental	96 hours	LL50	>100 mg/l
Pentaerythritol glycerol ester of colophony resin	Trade Secret	Green algae	Experimental	72 hours	EL50	>100 mg/l
Pentaerythritol glycerol ester of colophony resin	Trade Secret	Water flea	Experimental	48 hours	EL50	>100 mg/l
Pentaerythritol glycerol ester of colophony resin	Trade Secret	Green algae	Experimental	72 hours	NOEL	>100 mg/l
n-Hexane	110-54-3	Fathead minnow	Experimental	96 hours	LC50	2.5 mg/l
n-Hexane	110-54-3	Water flea	Experimental	48 hours	LC50	3.9 mg/l
Ethanol	64-17-5	Fathead minnow	Experimental	96 hours	LC50	14,200 mg/l

Ethanol	64-17-5	Fish	Experimental	96 hours	LC50	11,000 mg/l
Ethanol	64-17-5	Green algae	Experimental	72 hours	EC50	275 mg/l
Ethanol	64-17-5	Water flea	Experimental	48 hours	LC50	5,012 mg/l
Ethanol	64-17-5	Green algae	Experimental	72 hours	ErC10	11.5 mg/l
Ethanol	64-17-5	Water flea	Experimental	10 days	NOEC	9.6 mg/l
Flavor enhancer	Trade Secret	Water flea	Experimental	48 hours	LC50	48,500 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)
Thickener	Trade Secret	Green algae	Analogous Compound	72 hours	ErC50	>173.1 mg/l
Thickener	Trade Secret	Sediment organism	Analogous Compound	96 hours	EC50	8,500 mg/kg (Dry Weight)
Thickener	Trade Secret	Water flea	Analogous Compound	24 hours	EL50	>10,000 mg/l
Thickener	Trade Secret	Zebra Fish	Analogous Compound	96 hours	LL50	>10,000 mg/l
Thickener	Trade Secret	Green algae	Analogous Compound	72 hours	NOEC	173.1 mg/l
Thickener	Trade Secret	Water flea	Analogous Compound	21 days	NOEC	68 mg/l
Thickener	Trade Secret	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Pentaerythritol glycerol ester of colophony resin	Trade Secret	Experimental Biodegradation	28 days	CO2 evolution	0 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
n-Hexane	110-54-3	Experimental Bioconcentration	28 days	BOD	100 %BOD/ThOD	OECD 301C - MITI test (I)
n-Hexane	110-54-3	Experimental Photolysis		Photolytic half-life (in air)	5.4 days (t 1/2)	

Ethanol	64-17-5	Experimental Biodegradation	14 days	BOD	89 %BOD/ThOD	OECD 301C - MITI test (I)
Flavor enhancer	Trade Secret	Experimental Biodegradation	14 days	BOD	82 %BOD/ThOD	OECD 301C - MITI test (I)
Sodium fluoride	7681-49-4	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Thickener	Trade Secret	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
Pentaerythritol glycerol ester of colophony resin	Trade Secret	Experimental Bioconcentration		Log Kow	3.6	
n-Hexane	110-54-3	Modeled Bioconcentration		Bioaccumulation factor	50	Catalogic™
Ethanol	64-17-5	Experimental Bioconcentration		Log Kow	-0.35	
Flavor enhancer	Trade Secret	Modeled Bioconcentration		Bioaccumulation factor	2.3	Catalogic™
Flavor enhancer	Trade Secret	Modeled Bioconcentration		Log Kow	-2.6	Episuite™
Sodium fluoride	7681-49-4	Experimental BCF - Fish	28 days	Bioaccumulation factor	≤ 6.4	OECD305-Bioconcentration
Thickener	Trade Secret	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.

Incinerate in a permitted waste incineration facility.

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

SECTION 14: Transport Information

New Zealand Land Transport Rule: Dangerous Goods - Road/Rail Transport
UN No.: UN1139
Proper Shipping Name: COATING SOLUTION
Class/Division: 3
Sub Risk: Not applicable.
Packing Group: III
Special Instructions:DANGEROUS GOODS IN EXCEPTED QUANTITIES: CLASS
Hazchem Code: -3Y
IERG: 14

International Air Transport Association (IATA) - Air Transport
UN No.: UN1139
Proper Shipping Name: COATING SOLUTION
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.: UN1139
Proper Shipping Name: COATING SOLUTION
Class/Division: 3
Sub Risk: Not applicable.
Packing Group: III
Marine Pollutant: Not applicable.
Special Instructions: Forbidden by this mode of transport

SECTION 15: Regulatory information

HSNO Approval number	HSR002556
Group standard name	Dental Products (Flammable) Group Standard 2020
HSNO Hazard classification	Refer to Section 2: Hazard identification

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

SECTION 16: Other information

Revision information:
Complete document review.

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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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