Safety Data Sheet

Document group:	43-5056-7	**Version number:**	1.00
Issue Date:	26/03/2024	**Supersedes date:**	Initial issue.

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

IDENTIFICATION:

1.1. Product identifier
3M™ Impregum™ Penta™ Soft Medium Body IntroKit (P31734)

Product Identification Numbers
UU-0098-0395-6

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Impression Material

Restrictions on use
For use only by dental professionals in approved indications.

1.3. Supplier's details

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

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

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

37-4623-7, 43-4351-3, 35-4551-4

One or more components of this KIT is classified as a hazardous substance in accordance with the relevant criteria of the HSNO Act 1996 and the Hazardous Substances (Hazard Classification) Notice 2020.

TRANSPORT INFORMATION

The Components of this KIT have various Dangerous Goods Transportation Classifications. Please refer to the attached component Safety Data Sheets for individual Transportation Classifications.

Marine Pollutant: Not applicable.

Revision information:
Initial issue.

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

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

Safety Data Sheet

Document group:	35-4551-4	**Version number:**	3.00
Issue Date:	03/01/2023	**Supersedes date:**	19/07/2020

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™ Polyether Adhesive (30600) - New Formulation

Product Identification Numbers
UU-0098-0601-7

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Tray Adhesive

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 Liquid: Category 2
Specific Target Organ Toxicity (single exposure): Category 3

2.2. Label elements
SIGNAL WORD
Danger

Symbols:
Flame |Exclamation mark |

Pictograms

HAZARD STATEMENTS:

H225	Highly flammable liquid and vapour.
H336	May cause drowsiness or dizziness.

PRECAUTIONARY STATEMENTS

Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.

Response

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.
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 + P233	Store in a well-ventilated place.	Keep container tightly closed.
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.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Ethyl acetate	141-78-6	70 - 80
Hydroxy-Terminated Dimethylsiloxane, Reaction Products with Chlorotrimethylsilane, Hydrochloric Acid, Isopropyl Alcohol, and Sodium Silicate	68440-70-0	40 - 60

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. 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.

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. 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 an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety

Data Sheet. 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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. 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 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
Ethyl acetate	141-78-6	ACGIH	TWA:400 ppm	
Ethyl acetate	141-78-6	New Zealand WES	TWA(8 hours):720 mg/m3(200 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/m^3: milligrams per cubic metre
CEIL: Ceiling

8.2. Exposure controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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

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

Respiratory protection
None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Viscous.
Colour	Red
Odour	Characteristic Organic solvent
Odour threshold	*No data available.*
pH	*No data available.*
Melting point/Freezing point	*No data available.*
Boiling point/Initial boiling point/Boiling range	76.1 ºC
Flash point	-3.9 ºC [*Test Method:*Closed Cup]
Evaporation rate	*No data available.*
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	1.2 %
Flammable Limits(UEL)	11.5 %
Vapour pressure	17,465.2 Pa
Vapor Density and/or Relative Vapor Density	> 1 [*Ref Std:*AIR=1]
Density	± 0.9 g/cm3
Relative density	> 0.9 [*Ref Std:*WATER=1]
Water solubility	Nil
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	± 0.25 Pa-s
Volatile organic compounds (VOC)	*No data available.*
Percent volatile	*No data available.*
VOC less H2O & exempt solvents	*No data available.*
Molecular weight	*No data available.*

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
Sparks and/or flames.
Heat.

10.5 Incompatible materials
None known.

10.6 Hazardous decomposition products

Substance	Condition
Carbon monoxide.	Oxidation, heat or reaction
Carbon dioxide.	Oxidation, heat or reaction

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation
Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

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

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:

Single exposure may cause target organ effects:
Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Ethyl acetate	Dermal	Rabbit	LD50 > 18,000 mg/kg
Ethyl acetate	Inhalation-Vapor (4 hours)	Rat	LC50 70.5 mg/l
Ethyl acetate	Ingestion	Rat	LD50 5,620 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Ethyl acetate	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Ethyl acetate	Rabbit	Mild irritant

Sensitisation:

Skin Sensitisation

Name	Species	Value
Ethyl acetate	Guinea pig	Not classified

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Ethyl acetate	In Vitro	Not mutagenic
Ethyl acetate	In vivo	Not mutagenic

Carcinogenicity

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

Reproductive Toxicity

Reproductive and/or Developmental Effects

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

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Ethyl acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Ethyl acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Ethyl acetate	Inhalation	endocrine system | liver | nervous system	Not classified	Rat	NOAEL 0.043 mg/l	90 days
Ethyl acetate	Inhalation	hematopoietic system	Not classified	Rabbit	LOAEL 16 mg/l	40 days
Ethyl acetate	Ingestion	hematopoietic system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 3,600 mg/kg/day	90 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
Ethyl acetate	141-78-6	Bacteria	Experimental	18 hours	EC10	2,900 mg/l
Ethyl acetate	141-78-6	Fish	Experimental	96 hours	LC50	212.5 mg/l
Ethyl acetate	141-78-6	Invertebrate	Experimental	48 hours	EC50	165 mg/l
Ethyl acetate	141-78-6	Green algae	Experimental	72 hours	NOEC	100 mg/l
Ethyl acetate	141-78-6	Water flea	Experimental	21 days	NOEC	2.4 mg/l
Hydroxy-Terminated Dimethylsiloxane, Reaction Products with Chlorotrimethylsilane, Hydrochloric Acid, Isopropyl Alcohol, and Sodium Silicate	68440-70-0	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Ethyl acetate	141-78-6	Experimental Biodegradation	14 days	BOD	94 %BOD/ThOD	OECD 301C - MITI test (I)
Ethyl acetate	141-78-6	Experimental Photolysis		Photolytic half-life (in air)	20.0 days (t 1/2)	
Hydroxy-Terminated Dimethylsiloxane, Reaction Products with Chlorotrimethylsilane, Hydrochloric Acid, Isopropyl Alcohol, and Sodium Silicate	68440-70-0	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
Ethyl acetate	141-78-6	Experimental Bioconcentration		Log Kow	0.68	
Hydroxy-Terminated Dimethylsiloxane, Reaction Products with Chlorotrimethylsilane, Hydrochloric Acid, Isopropyl Alcohol, and Sodium Silicate	68440-70-0	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.

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.: UN1133
Proper Shipping Name: ADHESIVES
Class/Division: 3
Sub Risk: Not applicable.
Packing Group: II

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: II
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: II
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.

Document group:	35-4551-4	**Version number:**	3.00
Issue Date:	03/01/2023	**Supersedes date:**	19/07/2020

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

The information in this Safety Data Sheet (SDS) is believed to be correct as of the date of issue. TO THE EXTENT PERMITTED BY LAW, 3M MAKES NO WARRANTY, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluates the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or

application. 3M provides information in electronic form as a service to customers. Due to the remote possibility of electronic transfer may have resulted in errors, omissions or alterations in this information; 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M.

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

Safety Data Sheet

Document group:	37-4623-7	**Version number:**	1.00
Issue Date:	26/03/2024	**Supersedes date:**	Initial issue.

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

SECTION 1: Identification

1.1. Product identifier
3M™ Impregum Penta Soft Medium Body Catalyst

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Impression Material

Restrictions on use
For use only by dental professionals in approved indications.

1.3. Supplier's details

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

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

SECTION 2: Hazard identification

Classified as hazardous in accordance with the relevant criteria of the HSNO Act 1996 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
Skin sensitisation: Category 1
Reproductive Toxicity: Category 2
Specific target organ toxicity – repeated exposure: Category 1
Hazardous to the aquatic environment chronic: Category 3

2.2. Label elements
SIGNAL WORD
Danger

Symbols:
Exclamation mark |Health Hazard |

Pictograms

HAZARD STATEMENTS:

H317	May cause an allergic skin reaction.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure: blood or blood-forming organs.
H373	May cause damage to organs through prolonged or repeated exposure: respiratory system | sensory organs.
H412	Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
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.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280E	Wear protective gloves.

Response

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Storage

P405	Store locked up.

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
Citric ester	77-90-7	30 - 50
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	68909-20-6	10 - 30
Sulphonium salt	72140-65-9	10 - 30

Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	1 - 20
Polyethylene-polypropylene glycol	9003-11-6	1 - 10
1-Naphthalenesulfonic acid, 4-hydroxy-3-[(4-sulfo-1-naphthalenyl)azo]-, aluminum salt (3:2)	84041-67-8	< 1
Laurylmercaptobutyronitrile	93918-85-5	< 0.5

SECTION 4: First aid measures

4.1. Description of first aid measures

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

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

Eye contact
No need for first aid is anticipated. If 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
The most important symptoms and effects based on the CLP classification include:

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

SECTION 5: Fire-fighting measures

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

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
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: 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
Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Do not get in eyes. Use personal protective equipment (eg. gloves, respirators…) as required. A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat. Store away from acids. Store away from strong bases. 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
Dust, inert or nuisance	68855-54-9	New Zealand WES	TWA(as respirable dust)(8 hours):3 mg/m3;TWA(as inhalable dust)(8 hours):10 mg/m3	
Aluminum, insoluble compounds	84041-67-8	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcinogin
Aluminium, soluable salts	84041-67-8	New Zealand WES	TWA(as Al)(8 hours):5 mg/m3	

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/m^3: 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	Dark Red
Odour	Slight Acrid
Odour threshold	*No data available.*
pH	*No data available.*
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 (solid, gas)	Not classified
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapour pressure	*Not applicable.*
Vapor Density and/or Relative Vapor Density	*Not applicable.*
Density	*No data available.*
Relative density	1.1 - 1.4 [*Ref Std:*WATER=1]
Water solubility	Negligible
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	*No data available.*
Volatile organic compounds (VOC)	*Not applicable.*
Percent volatile	*Not applicable.*
VOC less H2O & exempt solvents	*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
Heat.

10.5 Incompatible materials
Strong acids.
Strong bases.
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
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. May cause additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Ocular effects: Signs/symptoms may include blurred or significantly impaired vision. Bone marrow effects:

Signs/symptoms may include generalised weakness, pallor of the skin, fatty infiltration of the bone marrow, decreases in the numbers of circulating blood cells, increased susceptibility to infection. Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

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

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

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
Citric ester	Ingestion	Rat	LD50 > 31,500 mg/kg
Citric ester	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Ingestion	Rat	LD50 > 2,000 mg/kg
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
Sulphonium salt	Dermal	Rat	LD50 > 2,000 mg/kg
Sulphonium salt	Ingestion	Rat	LD50 300-2,000 mg/kg
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.7 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Ingestion	Rat	LD50 > 2,000 mg/kg
Polyethylene-polypropylene glycol	Dermal	similar compounds	LD50 > 2,000 mg/kg
Polyethylene-polypropylene glycol	Ingestion	similar compounds	LD50 > 5,000 mg/kg
1-Naphthalenesulfonic acid, 4-hydroxy-3-[(4-sulfo-1-naphthalenyl)azo]-, aluminum salt (3:2)	Dermal	similar compounds	LD50 > 2,000 mg/kg
1-Naphthalenesulfonic acid, 4-hydroxy-3-[(4-sulfo-1-naphthalenyl)azo]-, aluminum salt (3:2)	Ingestion	similar compounds	LD50 > 2,000 mg/kg
Laurylmercaptobutyronitrile	Dermal		LD50 estimated to be > 5,000 mg/kg
Laurylmercaptobutyronitrile	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Citric ester	Rabbit	No significant irritation
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Rabbit	No significant irritation
Sulphonium salt	Rabbit	Mild irritant

Flux calcined diatomaceous earth (cristobalite 1 - <10%)	In vitro data	No significant irritation
Polyethylene-polypropylene glycol	similar compounds	No significant irritation
1-Naphthalenesulfonic acid, 4-hydroxy-3-[(4-sulfo-1-naphthalenyl)azo]-, aluminum salt (3:2)	similar compounds	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Citric ester	Rabbit	Mild irritant
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Rabbit	No significant irritation
Sulphonium salt	Rabbit	Mild irritant
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Rabbit	Mild irritant
Polyethylene-polypropylene glycol	similar compounds	No significant irritation
1-Naphthalenesulfonic acid, 4-hydroxy-3-[(4-sulfo-1-naphthalenyl)azo]-, aluminum salt (3:2)	similar compounds	No significant irritation

Sensitisation:

Skin Sensitisation

Name	Species	Value
Citric ester	Guinea pig	Not classified
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Guinea pig	Not classified
Sulphonium salt	Mouse	Sensitising
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Mouse	Not classified
Polyethylene-polypropylene glycol	Guinea pig	Not classified

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Citric ester	In Vitro	Not mutagenic
Citric ester	In vivo	Not mutagenic
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	In Vitro	Not mutagenic
Sulphonium salt	In Vitro	Not mutagenic
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Polyethylene-polypropylene glycol	In Vitro	Not mutagenic
1-Naphthalenesulfonic acid, 4-hydroxy-3-[(4-sulfo-1-naphthalenyl)azo]-, aluminum salt (3:2)	In Vitro	Not mutagenic
Laurylmercaptobutyronitrile	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Citric ester	Ingestion	Rat	Not carcinogenic
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation	Human and animal	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Citric ester	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	2 generation
Citric ester	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	2 generation
Citric ester	Ingestion	Not classified for development	Rat	NOAEL 100 mg/kg/day	2 generation
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
Sulphonium salt	Ingestion	Not classified for development	Rat	NOAEL 100 mg/kg/day	premating into lactation
Sulphonium salt	Ingestion	Toxic to female reproduction	Rat	NOAEL 30 mg/kg/day	premating into lactation
Sulphonium salt	Ingestion	Toxic to male reproduction	Rat	NOAEL 30 mg/kg/day	30 days

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Sulphonium salt	Ingestion	respiratory system	Not classified	Rat	NOAEL 300 mg/kg	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Citric ester	Ingestion	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
Citric ester	Ingestion	immune system | respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Citric ester	Ingestion	heart | endocrine system | hematopoietic system | nervous system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Inhalation	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 0.035 mg/l	13 weeks
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Inhalation	hematopoietic system | kidney and/or bladder	Not classified	Rat	NOAEL 0.035 mg/l	13 weeks
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl)propyl ester, hydrolysis products with silica	Ingestion	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	5 weeks

Sulphonium salt	Ingestion	bone marrow	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 10 mg/kg/day	30 days
Sulphonium salt	Ingestion	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 30 mg/kg/day	30 days
Sulphonium salt	Ingestion	eyes	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 100 mg/kg/day	30 days
Sulphonium salt	Ingestion	hematopoietic system | liver | immune system | kidney and/or bladder	Not classified	Rat	NOAEL 300 mg/kg/day	30 days
Sulphonium salt	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 30 mg/kg/day	30 days
Sulphonium salt	Ingestion	auditory system | heart | skin | endocrine system | bone, teeth, nails, and/or hair | muscles | nervous system | vascular system	Not classified	Rat	NOAEL 300 mg/kg/day	30 days
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Ingestion	hematopoietic system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 3,738 mg/kg/day	90 days

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

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

SECTION 12: Ecological information

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

12.1. Toxicity
Ecotoxic to the aquatic environment.
Acute Aquatic Toxicity: Category 2
Chronic Aquatic Toxicity: Category 3

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Citric ester	77-90-7	Bluegill	Experimental	96 hours	LC50	38 mg/l
Citric ester	77-90-7	Green algae	Experimental	72 hours	ErC50	74.4 mg/l
Citric ester	77-90-7	Mummichog	Experimental	96 hours	LC50	59 mg/l
Citric ester	77-90-7	Water flea	Experimental	48 hours	EC50	7.82 mg/l
Citric ester	77-90-7	Fathead minnow	Experimental	7 days	NOEC	0.355 mg/l
Citric ester	77-90-7	Green algae	Experimental	72 hours	NOEC	0.109 mg/l

Citric ester	77-90-7	Water flea	Experimental	21 days	NOEC	>=1.11 mg/l
Citric ester	77-90-7	Activated sludge	Experimental	3 hours	EC10	>1,000 mg/l
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl) propyl ester, hydrolysis products with silica	68909-20-6	Algae or other aquatic plants	Estimated	72 hours	EC50	>100 mg/l
Sulphonium salt	72140-65-9	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Sulphonium salt	72140-65-9	Water flea	Analogous Compound	48 hours	No tox obs at lmt of water sol	>100 mg/l
Sulphonium salt	72140-65-9	Zebra Fish	Analogous Compound	96 hours	No tox obs at lmt of water sol	>100 mg/l
Sulphonium salt	72140-65-9	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Sulphonium salt	72140-65-9	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Rainbow trout	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Activated sludge	Experimental	3 hours	EC50	>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
1-Naphthalenesulfonic acid, 4-hydroxy-3-[(4-sulfo-1-	84041-67-8	Green algae	Analogous Compound	72 hours	ErC50	34.823 mg/l

naphthalenyl)azo]-, aluminum salt (3:2)						
1-Naphthalenesulfonic acid, 4-hydroxy-3-[(4-sulfo-1-naphthalenyl)azo]-, aluminum salt (3:2)	84041-67-8	Water flea	Analogous Compound	48 hours	EC50	203.2 mg/l
1-Naphthalenesulfonic acid, 4-hydroxy-3-[(4-sulfo-1-naphthalenyl)azo]-, aluminum salt (3:2)	84041-67-8	Zebra Fish	Analogous Compound	96 hours	LC50	>100 mg/l
Laurylmercaptobutyronitrile	93918-85-5	Water flea	Experimental	48 hours	EC50	>100 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Citric ester	77-90-7	Experimental Biodegradation	28 days	BOD	16 %BOD/ThOD	OECD 301D - Closed bottle test
Citric ester	77-90-7	Experimental Aquatic Inherent Biodegrad.	28 days	BOD	82 %BOD/ThOD	OECD 302C - Modified MITI (II)
Citric ester	77-90-7	Experimental Soil Metabolism Aerobic	42 days	CO2 evolution	>60 %CO2 evolution/THCO2 evolution	835.3300 Soil Biodeg
2-Propenoic acid, 2-methyl-, 3-(trimetoxysilyl) propyl ester, hydrolysis products with silica	68909-20-6	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Sulphonium salt	72140-65-9	Hydrolysis product Biodegradation	28 days	Percent degraded	52 % degraded	Catalogic™
Sulphonium salt	72140-65-9	Experimental Hydrolysis		Hydrolytic half-life	2.08 hours (t 1/2)	OECD 111 Hydrolysis func of pH
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Polyethylene-polypropylene	9003-11-6	Data not availbl-	N/A	N/A	N/A	N/A

glycol		insufficient				
1-Naphthalenesulfonic acid, 4-hydroxy-3-[(4-sulfo-1-naphthalenyl)azo]-, aluminum salt (3:2)	84041-67-8	Analogous Compound Biodegradation	28 days	BOD	82.14 %BOD/ThOD	OECD 301D - Closed bottle test
Laurylmercaptobutyronitrile	93918-85-5	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
Citric ester	77-90-7	Modeled Bioconcentration		Bioaccumulation factor	5.1	Catalogic™
Citric ester	77-90-7	Experimental Bioconcentration		Log Kow	4.86	OECD 117 log Kow HPLC method
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
Sulphonium salt	72140-65-9	Experimental Bioconcentration		Log Kow	≤0.75	830.7550 Part.Coef Shake Flask
Sulphonium salt	72140-65-9	Hydrolysis product Bioconcentration		Log Kow	6.81	Episuite™
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyethylene-polypropylene glycol	9003-11-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1-Naphthalenesulfonic acid, 4-hydroxy-3-[(4-sulfo-1-naphthalenyl)azo]-, aluminum salt (3:2)	84041-67-8	Analogous Compound Bioconcentration		Log Kow	2.234	OECD 117 log Kow HPLC method
Laurylmercapt	93918-85-5	Data not	N/A	N/A	N/A	N/A

obutyronitrile		available or insufficient for classification				

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available.

SECTION 13: Disposal considerations

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. 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

Revision information:
Initial issue.

Document group:	37-4623-7	**Version number:**	1.00
Issue Date:	26/03/2024	**Supersedes date:**	Initial issue.

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

The information in this Safety Data Sheet (SDS) is believed to be correct as of the date of issue. TO THE EXTENT PERMITTED BY LAW, 3M MAKES NO WARRANTY, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit

for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluates the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. 3M provides information in electronic form as a service to customers. Due to the remote possibility of electronic transfer may have resulted in errors, omissions or alterations in this information; 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M.

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

Safety Data Sheet

Document group:	43-4351-3	**Version number:**	1.00
Issue Date:	25/03/2024	**Supersedes date:**	Initial issue.

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

SECTION 1: Identification

1.1. Product identifier
3M™ Impregum™ Penta™ Soft Medium Body Base

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Impression Material

Restrictions on use
For use only by dental professionals in approved indications.

1.3. Supplier's details

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

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

SECTION 2: Hazard identification

Classified as hazardous in accordance with the relevant criteria of the HSNO Act 1996 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
Eye irritation: Category 2
Skin sensitisation: Category 1
Hazardous to the aquatic environment acute: Category 1
Hazardous to the aquatic environment chronic: Category 2

2.2. Label elements
SIGNAL WORD
Warning

Symbols:
Exclamation mark |Environment |

Pictograms

HAZARD STATEMENTS:

H319	Causes serious eye 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.
P264	Wash thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280E	Wear protective gloves.

Response

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	IF eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

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
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	110531-92-5	40 - 60
Glycerides, C14-18	67701-27-3	1 - 20
Oxirane, Polymer with Tetrahydrofuran, Diacetate	91825-26-2	1 - 20
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	1215036-04-6	1 - 10
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	< 10
1-Dodecylimidazole	4303-67-7	< 1
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	6485-40-1	< 0.2
Dibenzyltoluene	53585-53-8	< 0.1
Stearyldimethylamine	124-28-7	< 0.02

SECTION 4: First aid measures

4.1. Description of first aid measures

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

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

Eye contact
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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
The most important symptoms and effects based on the CLP classification include:

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

SECTION 5: Fire-fighting measures

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

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
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
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. A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat. Store away from acids. Store away from strong bases. 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
Dust, inert or nuisance	68855-54-9	New Zealand WES	TWA(as respirable dust)(8 hours):3 mg/m3;TWA(as inhalable dust)(8 hours):10 mg/m3	

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	Purple
Odour	Minty
Odour threshold	*No data available.*
pH	*No data available.*
Melting point/Freezing point	*No data available.*
Boiling point/Initial boiling point/Boiling range	*Not applicable.*
Flash point	Flash point > 93 °C (200 °F)
Evaporation rate	*Not applicable.*
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapour pressure	*Not applicable.*
Vapor Density and/or Relative Vapor Density	*Not applicable.*
Density	*No data available.*
Relative density	1 - 1.2 [*Ref Std:*WATER=1]
Water solubility	Nil
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	*No data available.*
Volatile organic compounds (VOC)	*Not applicable.*
Percent volatile	*Not applicable.*
VOC less H2O & exempt solvents	*Not applicable.*
Molecular weight	*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
Heat.

10.5 Incompatible materials
Strong acids.
Strong bases.
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
This product may have a characteristic odour; however, no adverse health effects are anticipated.

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

Eye contact
Moderate eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

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

Additional Health Effects:

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

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

Acute Toxicity

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

Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	Dermal	Professional judgement	LD50 Not applicable
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	Ingestion	Rat	LD50 > 2,000 mg/kg
Glycerides, C14-18	Dermal	similar compounds	LD50 > 2,000 mg/kg
Glycerides, C14-18	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 2.8 mg/l
Glycerides, C14-18	Ingestion	similar compounds	LD50 > 2,000 mg/kg
Oxirane, Polymer with Tetrahydrofuran, Diacetate	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Oxirane, Polymer with Tetrahydrofuran, Diacetate	Ingestion	Rat	LD50 > 2,000 mg/kg
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	Ingestion	Rat	LD50 > 2,300 mg/kg
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.7 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Ingestion	Rat	LD50 > 2,000 mg/kg
1-Dodecylimidazole	Ingestion	Rat	LD50 641 mg/kg
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	Dermal	Rat	LD50 > 2,000 mg/kg
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	Ingestion	Rat	LD50 4,900 mg/kg
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 5.66 mg/l
Dibenzyltoluene	Dermal	Rat	LD50 > 2,000 mg/kg
Dibenzyltoluene	Ingestion	Rat	LD50 > 10,360 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	Rabbit	No significant irritation
Glycerides, C14-18	similar compounds	No significant irritation
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	Rabbit	No significant irritation
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	In vitro data	No significant irritation
1-Dodecylimidazole	Rabbit	Mild irritant
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	Human and animal	No significant irritation
Dibenzyltoluene	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	Rabbit	Moderate irritant

Glycerides, C14-18	similar compounds	No significant irritation
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	Rabbit	Mild irritant
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Rabbit	Mild irritant
1-Dodecylimidazole	In vitro data	Severe irritant
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	Rabbit	No significant irritation
Dibenzyltoluene	Rabbit	No significant irritation

Sensitisation:

Skin Sensitisation

Name	Species	Value
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	Guinea pig	Not classified
Glycerides, C14-18	similar compounds	Not classified
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	Mouse	Not classified
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Mouse	Not classified
1-Dodecylimidazole	Mouse	Sensitising
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	Multiple animal species	Sensitising
Dibenzyltoluene	Guinea pig	Not classified

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	In Vitro	Not mutagenic
Glycerides, C14-18	In Vitro	Not mutagenic
Oxirane, Polymer with Tetrahydrofuran, Diacetate	In Vitro	Not mutagenic
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	In Vitro	Not mutagenic
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	In vivo	Not mutagenic
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	In Vitro	Some positive data exist, but the data are not sufficient for classification
1-Dodecylimidazole	In Vitro	Not mutagenic
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	In Vitro	Not mutagenic
Dibenzyltoluene	In Vitro	Not mutagenic
Dibenzyltoluene	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation	Human and animal	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during gestation
2-Cyclohexen-1-one, 2-methyl-5-(1-	Ingestion	Not classified for development	Rat	NOAEL 250	during

methylethenyl)-, (R)-				mg/kg/day	gestation
Dibenzyltoluene	Ingestion	Toxic to male reproduction	Rat	NOAEL 250 mg/kg/day	28 days
Dibenzyltoluene	Ingestion	Toxic to female reproduction	Rat	NOAEL 250 mg/kg/day	premating into lactation
Dibenzyltoluene	Ingestion	Toxic to development	Rabbit	LOAEL 10 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
Dibenzyltoluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	Ingestion	hematopoietic system | nervous system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 2,000 mg/kg/day	13 weeks
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Ingestion	hematopoietic system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 3,738 mg/kg/day	90 days
Dibenzyltoluene	Ingestion	liver | kidney and/or bladder | heart | skin | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles | nervous system | eyes | respiratory system | vascular system	Not classified	Rat	NOAEL 500 mg/kg/day	120 days

Aspiration Hazard

Name	Value
Dibenzyltoluene	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 1
Chronic Aquatic Toxicity: Category 2

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	110531-92-5	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Glycerides, C14-18	67701-27-3	Green algae	Estimated	72 hours	EC50	>100 mg/l
Glycerides, C14-18	67701-27-3	Water flea	Estimated	48 hours	EC50	>100 mg/l
Glycerides, C14-18	67701-27-3	Zebra Fish	Estimated	96 hours	LC50	>100 mg/l
Glycerides, C14-18	67701-27-3	Green algae	Estimated	72 hours	NOEC	100 mg/l
Glycerides, C14-18	67701-27-3	Water flea	Estimated	21 days	NOEC	100 mg/l
Oxirane, Polymer with Tetrahydrofuran, Diacetate	91825-26-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	1215036-04-6	Green algae	Experimental	72 hours	ErC50	172.2 mg/l
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	1215036-04-6	Water flea	Experimental	48 hours	EC50	49 mg/l
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	1215036-04-6	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	1215036-04-6	Green algae	Experimental	72 hours	ErC10	11.3 mg/l
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	1215036-04-6	Water flea	Experimental	21 days	NOEC	>1 mg/l
Flux calcined diatomaceous earth	68855-54-9	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l

(cristobalite 1 - <10%)						
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Rainbow trout	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
1-Dodecylimidazole	4303-67-7	Green algae	Experimental	72 hours	ErC50	0.00557 mg/l
1-Dodecylimidazole	4303-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
1-Dodecylimidazole	4303-67-7	Green algae	Experimental	72 hours	ErC10	0.0021 mg/l
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	6485-40-1	Green algae	Experimental	72 hours	EC50	19 mg/l
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	6485-40-1	Rainbow trout	Experimental	96 hours	LC50	6.1 mg/l
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	6485-40-1	Water flea	Experimental	48 hours	EC50	38 mg/l
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	6485-40-1	Green algae	Experimental	72 hours	NOEC	4.3 mg/l
Dibenzyltoluene	53585-53-8	Bacteria	Experimental	4.92 hours	EC10	>1,000 mg/l
Dibenzyltoluene	53585-53-8	Copepod	Experimental	48 hours	LC50	>0.0206 mg/l

Dibenzyltoluene	53585-53-8	Green algae	Experimental	96 hours	EC50	0.019 mg/l
Dibenzyltoluene	53585-53-8	Water flea	Experimental	48 hours	EC50	>0.029 mg/l
Dibenzyltoluene	53585-53-8	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Dibenzyltoluene	53585-53-8	Green algae	Experimental	96 hours	EC10	0.006 mg/l
Dibenzyltoluene	53585-53-8	Water flea	Experimental	21 days	NOEC	0.03 mg/l
Stearyldimethylamine	124-28-7	Water flea	Analogous Compound	48 hours	EC50	0.188 mg/l
Stearyldimethylamine	124-28-7	Green algae	Experimental	72 hours	EC50	0.0141 mg/l
Stearyldimethylamine	124-28-7	Rainbow trout	Experimental	96 hours	LC50	0.18 mg/l
Stearyldimethylamine	124-28-7	Water flea	Analogous Compound	21 days	NOEC	0.1 mg/l
Stearyldimethylamine	124-28-7	Green algae	Experimental	72 hours	EC10	0.00594 mg/l
Stearyldimethylamine	124-28-7	Activated sludge	Analogous Compound	3 hours	EC50	38 mg/l
Stearyldimethylamine	124-28-7	Rape	Analogous Compound	21 days	NOEC	10 mg/kg (Dry Weight)

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	110531-92-5	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Glycerides, C14-18	67701-27-3	Estimated Biodegradation	28 days	BOD	79 %BOD/ThOD	OECD 301F - Manometric respirometry
Oxirane, Polymer with Tetrahydrofuran, Diacetate	91825-26-2	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	1215036-04-6	Experimental Biodegradation	28 days	CO2 evolution	83 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Data not availbl-insufficient	N/A	N/A	N/A	N/A
1-Dodecylimidaz	4303-67-7	Experimental Biodegradation	28 days	CO2 evolution	2-3 %CO2 evolution/THC	OECD 301B - Modified sturm or CO2

ole					O2 evolution	
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	6485-40-1	Experimental Biodegradation	28 days	BOD	90 %BOD/ThOD	OECD 301F - Manometric respirometry
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	6485-40-1	Estimated Photolysis		Photolytic half-life (in air)	2.7 hours (t 1/2)	
Dibenzyltoluene	53585-53-8	Experimental Biodegradation	28 days	BOD	0.5 %BOD/ThOD	OECD 301D - Closed bottle test
Stearyldimethylamine	124-28-7	Experimental Biodegradation	28 days	BOD	68 %BOD/ThOD	OECD 301D - Closed bottle test
Stearyldimethylamine	124-28-7	Experimental Aquatic Inherent Biodegrad.	28 days	Percent degraded	56 %BOD/ThOD	OECD 302C - Modified MITI (II)
Stearyldimethylamine	124-28-7	Analogous Compound Biodegradation	6 days	Percent degraded	> 99.6 % degraded	OECD 303A - Simulated Aerobic
Stearyldimethylamine	124-28-7	Analogous Compound Biodegradation	62 days	Percent degraded	13.7 % degraded	OECD 307 Aero Anaer Trans soil

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	110531-92-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glycerides, C14-18	67701-27-3	Estimated Bioconcentration		Bioaccumulation factor	7.4	
Oxirane, Polymer with Tetrahydrofuran, Diacetate	91825-26-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Fatty acids, C8-10, diesters with 1,4:3,6-dianhydro-D-glucitol	1215036-04-6	Experimental Bioconcentration		Log Kow	>2.9	EC A.8 Partition Coefficient
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1-Dodecylimidaz	4303-67-7	Modeled Bioconcentrati		Bioaccumulation factor	3090	Catalogic™

ole		on				
2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-	6485-40-1	Experimental Bioconcentration		Log Kow	2.74	
Dibenzyltoluene	53585-53-8	Experimental BCF - Fish	56 days	Bioaccumulation factor	6300	OECD305-Bioconcentration
Stearyldimethylamine	124-28-7	Modeled Bioconcentration		Bioaccumulation factor	7.4	Catalogic™
Stearyldimethylamine	124-28-7	Estimated Bioconcentration		Log Kow	5.1	

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available.

SECTION 13: Disposal considerations

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

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

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

SECTION 14: Transport Information

New Zealand Land Transport Rule: Dangerous Goods - Road/Rail Transport
UN No.: UN3077
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. , (Laurylimidazole, Stabilizer)
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. , (Laurylimidazole, Stabilizer)
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. , (Laurylimidazole, Stabilizer)
Class/Division: 9
Sub Risk: Not applicable.
Packing Group: III
Marine Pollutant: Laurylimidazole, Stabilizer
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 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

Revision information:
Initial issue.

Document group:	43-4351-3	**Version number:**	1.00
Issue Date:	25/03/2024	**Supersedes date:**	Initial issue.

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

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

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