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™ Marine Adhesive Sealant Fast Cure 4000 UV, White

Product Identification Numbers
62-5563-1632-1 62-5563-5232-6

1.2. Recommended use and restrictions on use

Recommended use
Adhesive

For Industrial or Professional use 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
Skin Sensitiser: Category 1
Reproductive Toxicity: Category 1B
Chronic Aquatic Toxicity: Category 2

2.2. Label elements
SIGNAL WORD
Danger

Symbols:
Exclamation mark |Health Hazard |Environment |

Pictograms

HAZARD STATEMENTS:

H317	May cause an allergic skin reaction.
H360	May damage fertility or the unborn child.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

General

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
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.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Storage

P405	Store locked up.

Disposal

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

2.3. Other hazards
Although titanium dioxide is classified as a carcinogen, exposures associated with this health effect are not expected during normal, intended use of this product. Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	% by Weight
Calcium Carbonate	471-34-1	30 - 60
Polyether	Trade Secret	15 - 40
Diisodecyl Phthalate	68515-49-1	5 - 20

Titanium dioxide	13463-67-7	< 10
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	< 1
Hindered Amine	63843-89-0	< 1
Vinyltrimethoxysilane	2768-02-7	< 1
Polyamide	None	< 1
Tin, dioctylbis(2,4-pentanedionato-O,O')	54068-28-9	< 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
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

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

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

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

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
DO NOT USE WATER In case of fire: Use a carbon dioxide or dry chemical extinguisher 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
No special protective actions for fire-fighters are anticipated.

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. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed 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
Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from amines.

7.3. Certified handler
Not required

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Titanium dioxide	13463-67-7	ACGIH	TWA(Respirable nanoscale particles):0.2 mg/m3;TWA(Respirable finescale particles):2.5 mg/m3	A3: Confirmed animal carcinogen.
Titanium dioxide	13463-67-7	New Zealand WES	TWA(8 hours):10 mg/m3	
Calcium Carbonate	471-34-1	New Zealand WES	TWA(8 hours):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles	471-34-1	ACGIH	TWA(inhalable particulates):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified,	471-34-1	ACGIH	TWA(respirable particles):3 mg/m3	

respirable particles				
Tin, organic compounds	54068-28-9	ACGIH	TWA(as Sn):0.1 mg/m3;STEL(as Sn):0.2 mg/m3	A4: Not class. as human carcin, SKIN
Tin, organic compounds	54068-28-9	New Zealand WES	TWA(as Sn)(8 hours):0.1 mg/m3;STEL(as Sn)(15 minutes):0.2 mg/m3	Skin
1,2-Benzenedicarboxylic acid, 1,2-diisodecyl ester	68515-49-1	New Zealand WES	TWA(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 general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

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
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

When only incidental contact is anticipated, alternative glove material(s) may be used. If contact with the glove does occur, remove immediately and replace with a set of new gloves. For incidental contact, gloves made of the following material(s) may be used:Nitrile rubber.

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

Refer AS/NZS 1715 - Selection, use and maintenance of respiratory protective equipment and AS/NZS 1716 - Respiratory protective devices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Paste
Colour	White
Odour	Slight Polyether
Odour threshold	*No data available.*
pH	*No data available.*
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	*Not applicable.*
Flash point	No flash point
Evaporation rate	*Not applicable.*
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapour pressure	*Not applicable.*
Vapor Density and/or Relative Vapor Density	*Not applicable.*
Density	1.3 - 1.5 g/ml
Relative density	1.3 - 1.5 [*Ref Std:*WATER=1]
Water solubility	*No data available.*
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)	16 g/l [*Test Method:*tested per EPA method 24]
Percent volatile	0.93 % weight
VOC less H2O & exempt solvents	16 g/l [*Test Method:*tested per EPA method 24]
VOC less H2O & exempt solvents	0.93 % [*Test Method:*tested per EPA method 24]
Molecular weight	*No data available.*

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
Alcohols.
Amines.
Water

10.6 Hazardous decomposition products

Substance	Condition
None known.	

Refer to Section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

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

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

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

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

Additional Health Effects:

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

Additional information:
Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.

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

Calcium Carbonate	Dermal	Rat	LD50 > 2,000 mg/kg
Calcium Carbonate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Calcium Carbonate	Ingestion	Rat	LD50 6,450 mg/kg
Polyether	Dermal		LD50 estimated to be > 5,000 mg/kg
Polyether	Ingestion	Rat	LD50 5,000 mg/kg
Diisodecyl Phthalate	Dermal	Rabbit	LD50 > 3,160 mg/kg
Diisodecyl Phthalate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 12.5 mg/l
Diisodecyl Phthalate	Ingestion	Rat	LD50 > 9,700 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 >1.49, <2.44 mg/l
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Ingestion	Rat	LD50 1,897 mg/kg
Polyamide	Dermal	Rat	LD50 > 2,000
Polyamide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.3
Polyamide	Ingestion	Rat	LD50 > 2,000
Vinyltrimethoxysilane	Dermal	Rabbit	LD50 3,260 mg/kg
Vinyltrimethoxysilane	Inhalation-Vapor (4 hours)	Rat	LC50 16.8 mg/l
Vinyltrimethoxysilane	Ingestion	Rat	LD50 7,120 mg/kg
Tin, dioctylbis(2,4-pentanedionato-O,O')	Dermal	Rat	LD50 > 2,000 mg/kg
Tin, dioctylbis(2,4-pentanedionato-O,O')	Ingestion	Rat	LD50 > 2,000 mg/kg
Hindered Amine	Dermal	Rat	LD50 > 3,170 mg/kg
Hindered Amine	Ingestion	Rat	LD50 1,490 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Calcium Carbonate	Rabbit	No significant irritation
Diisodecyl Phthalate	Rabbit	Minimal irritation
Titanium dioxide	Rabbit	No significant irritation
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Rabbit	Mild irritant
Polyamide	Rabbit	No significant irritation
Vinyltrimethoxysilane	Rabbit	Minimal irritation
Tin, dioctylbis(2,4-pentanedionato-O,O')	Rabbit	No significant irritation
Hindered Amine	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Calcium Carbonate	Rabbit	No significant irritation
Diisodecyl Phthalate	Rabbit	Mild irritant
Titanium dioxide	Rabbit	No significant irritation
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Rabbit	Corrosive
Polyamide	Rabbit	Mild irritant
Vinyltrimethoxysilane	Rabbit	No significant irritation
Tin, dioctylbis(2,4-pentanedionato-O,O')	Rabbit	Mild irritant
Hindered Amine	Rabbit	Mild irritant

Sensitisation:

Skin Sensitisation

Name	Species	Value
Diisodecyl Phthalate	Guinea pig	Not classified
Titanium dioxide	Human and animal	Not classified
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Multiple animal species	Sensitising
Polyamide	Mouse	Not classified
Vinyltrimethoxysilane	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Tin, dioctylbis(2,4-pentanedionato-O,O')	Mouse	Sensitising
Hindered Amine	Guinea pig	Not classified

Photosensitisation

Name	Species	Value
Hindered Amine	Guinea pig	Not sensitizing

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
Diisodecyl Phthalate	In Vitro	Not mutagenic
Diisodecyl Phthalate	In vivo	Not mutagenic
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	In Vitro	Not mutagenic
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	In vivo	Not mutagenic
Polyamide	In Vitro	Not mutagenic
Vinyltrimethoxysilane	In vivo	Not mutagenic
Vinyltrimethoxysilane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Tin, dioctylbis(2,4-pentanedionato-O,O')	In Vitro	Not mutagenic
Hindered Amine	In vivo	Not mutagenic
Hindered Amine	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Calcium Carbonate	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
Diisodecyl Phthalate	Ingestion	Not classified for female reproduction	Rat	NOAEL 927	2 generation

				mg/kg/day	
Diisodecyl Phthalate	Ingestion	Not classified for male reproduction	Rat	NOAEL 929 mg/kg/day	2 generation
Diisodecyl Phthalate	Ingestion	Toxic to development	Rat	NOAEL 38 mg/kg/day	2 generation
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Ingestion	Not classified for female reproduction	Rat	NOAEL 500 mg/kg/day	premating into lactation
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	28 days
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	during gestation
Polyamide	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Polyamide	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	28 days
Polyamide	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Vinyltrimethoxysilane	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Vinyltrimethoxysilane	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Vinyltrimethoxysilane	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Vinyltrimethoxysilane	Inhalation	Not classified for development	Rat	NOAEL 1.8 mg/l	during organogenesis
Tin, dioctylbis(2,4-pentanedionato-O,O')	Ingestion	Toxic to development	similar compounds	NOAEL not available	2 generation
Hindered Amine	Ingestion	Not classified for female reproduction	Rat	NOAEL 10 mg/kg/day	premating into lactation
Hindered Amine	Ingestion	Not classified for male reproduction	Rat	NOAEL 10 mg/kg/day	36 days
Hindered Amine	Ingestion	Not classified for development	Rat	NOAEL 10 mg/kg/day	premating into lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Calcium Carbonate	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.812 mg/l	90 minutes
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	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
Calcium Carbonate	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
Diisodecyl Phthalate	Inhalation	respiratory system | hematopoietic system | liver	Not classified	Rat	NOAEL 0.5 mg/l	2 weeks
Diisodecyl Phthalate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.5 mg/l	2 generation
Diisodecyl Phthalate	Ingestion	endocrine system	Not classified	Rat	NOAEL 686 mg/kg/day	90 days
Diisodecyl Phthalate	Ingestion	liver | kidney and/or bladder | heart	Not classified	Rat	NOAEL 500 mg/kg/day	90 days

Diisodecyl Phthalate	Ingestion	hematopoietic system	Not classified	Dog	NOAEL 320 mg/kg/day	90 days
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Dermal	skin | endocrine system | hematopoietic system | kidney and/or bladder	Not classified	Rat	NOAEL 1,545 mg/kg/day	11 days
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Inhalation	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 0.015 mg/l	90 days
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Inhalation	hematopoietic system | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 0.044 mg/l	90 days
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Ingestion	hematopoietic system | nervous system	Not classified	Rat	NOAEL 500 mg/kg/day	28 days
Vinyltrimethoxysilane	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL mg/l	14 weeks
Vinyltrimethoxysilane	Inhalation	hematopoietic system | eyes	Not classified	Rat	NOAEL 2.4 mg/l	14 weeks
Vinyltrimethoxysilane	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	40 days
Vinyltrimethoxysilane	Ingestion	endocrine system | hematopoietic system | liver | immune system	Not classified	Rat	NOAEL 1,000 mg/kg/day	40 days
Tin, dioctylbis(2,4-pentanedionato-O,O')	Ingestion	immune system	Causes damage to organs through prolonged or repeated exposure	similar compounds	NOAEL not available	
Hindered Amine	Ingestion	gastrointestinal tract | hematopoietic system | liver | immune system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 2 mg/kg/day	36 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 2

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Calcium Carbonate	471-34-1	Green algae	Experimental	72 hours	EC50	>100 mg/l
Calcium Carbonate	471-34-1	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l
Calcium Carbonate	471-34-1	Water flea	Experimental	48 hours	EC50	>100 mg/l
Calcium Carbonate	471-34-1	Green algae	Experimental	72 hours	EC10	100 mg/l
Polyether	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Diisodecyl Phthalate	68515-49-1	Activated sludge	Experimental	30 minutes	EC50	>83.3 mg/l
Diisodecyl Phthalate	68515-49-1	Green algae	Experimental	96 hours	EC50	>100 mg/l
Diisodecyl Phthalate	68515-49-1	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l
Diisodecyl Phthalate	68515-49-1	Water flea	Experimental	48 hours	EC50	>100 mg/l
Diisodecyl Phthalate	68515-49-1	Green algae	Experimental	96 hours	NOEC	100 mg/l
Diisodecyl Phthalate	68515-49-1	Water flea	Experimental	21 days	NOEC	100 mg/l
Titanium dioxide	13463-67-7	Activated sludge	Experimental	3 hours	NOEC	>=1,000 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium dioxide	13463-67-7	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Bacteria	Experimental	16 hours	EC50	67 mg/l
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Fathead minnow	Experimental	96 hours	LC50	168 mg/l
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Green algae	Experimental	72 hours	ErC50	8.8 mg/l
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Water flea	Experimental	48 hours	EC50	81 mg/l
N-(3-(Trimethoxysilyl)propyl)ethyl	1760-24-3	Green algae	Experimental	72 hours	NOEC	3.1 mg/l

enediamine						
Hindered Amine	63843-89-0	Activated sludge	Experimental	3 hours	IC20	>100 mg/l
Hindered Amine	63843-89-0	Water flea	Experimental	21 days	NOEC	0.002 mg/l
Polyamide	None	Water flea	Endpoint not reached	48 hours	EC50	>100 mg/l
Polyamide	None	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
Polyamide	None	Common Carp	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Polyamide	None	Green algae	Experimental	72 hours	EC50	0.025 mg/l
Polyamide	None	Water flea	Endpoint not reached	21 days	NOEC	>100 mg/l
Polyamide	None	Green algae	Experimental	72 hours	NOEC	0.007 mg/l
Vinyltrimethoxysilane	2768-02-7	Bacteria	Experimental	5 hours	EC10	1.1 mg/l
Vinyltrimethoxysilane	2768-02-7	Green algae	Experimental	72 hours	EC50	>957 mg/l
Vinyltrimethoxysilane	2768-02-7	Rainbow trout	Experimental	96 hours	LC50	191 mg/l
Vinyltrimethoxysilane	2768-02-7	Water flea	Experimental	48 hours	EC50	169 mg/l
Vinyltrimethoxysilane	2768-02-7	Green algae	Experimental	72 hours	NOEC	957 mg/l
Vinyltrimethoxysilane	2768-02-7	Water flea	Experimental	21 days	NOEC	28 mg/l
Tin, dioctylbis(2,4-pentanedionato-O,O')	54068-28-9	Water flea	Estimated	24 hours	EC50	1.3 mg/l
Tin, dioctylbis(2,4-pentanedionato-O,O')	54068-28-9	Water flea	Estimated	21 days	NOEC	0.52 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Calcium Carbonate	471-34-1	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Polyether	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Diisodecyl Phthalate	68515-49-1	Experimental Biodegradation	28 days	BOD	74 %BOD/ThOD	OECD 301F - Manometric respirometry
Titanium dioxide	13463-67-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
N-(3-(Trimethoxysilyl)propyl)ethyl	1760-24-3	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	39 % removal of DOC	EC C.4.A. DOC Die-Away Test

enediamine						
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	1.5 minutes (t 1/2)	
Hindered Amine	63843-89-0	Experimental Biodegradation	28 days	CO2 evolution	2 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Polyamide	None	Experimental Biodegradation	28 days	CO2 evolution	7 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Vinyltrimethoxysilane	2768-02-7	Experimental Biodegradation	28 days	BOD	51 %BOD/ThOD	OECD 301F - Manometric respirometry
Tin, dioctylbis(2,4-pentanedionato-O,O')	54068-28-9	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
Calcium Carbonate	471-34-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyether	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Diisodecyl Phthalate	68515-49-1	Estimated BCF - Fish	56 days	Bioaccumulation factor	<14.4	OECD305-Bioconcentration
Titanium dioxide	13463-67-7	Experimental BCF - Fish	42 days	Bioaccumulation factor	9.6	
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hindered Amine	63843-89-0	Experimental BCF - Fish	60 days	Bioaccumulation factor	≤437.1	OECD305-Bioconcentration
Polyamide	None	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Vinyltrimethoxysilane	2768-02-7	Estimated Bioconcentration		Log Kow	-2	
Tin, dioctylbis(2,4-pentanedionato-O,O')	54068-28-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available.

SECTION 13: Disposal considerations

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. 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.: UN3077
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. , (Polyamide, Tin, Dioctylbis(2,4-Pentanedionato-O,O)-)
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. , (Polyamide, Tin, Dioctylbis(2,4-Pentanedionato-O,O)-)
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. , (Polyamide, Tin, Dioctylbis(2,4-Pentanedionato-O,O)-)
Class/Division: 9
Sub Risk: Not applicable.
Packing Group: III
Marine Pollutant: Polyamide, Tin, Dioctylbis(2,4-Pentanedionato-O,O)-
Special Instructions: Not restricted, as per IMDG code 2.10.2.7, marine pollutant exception.

SECTION 15: Regulatory information

HSNO Approval number	HSR002670
Group standard name	Surface Coatings and Colourants (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:
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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