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(TM) Fire Barrier Moldable Putty Stix MP+

Product Identification Numbers
98-0400-5417-7

1.2. Recommended use and restrictions on use

Recommended use
Passive fire protection in industrial applications.

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
Serious Eye Damage/Irritation: Category 2
Reproductive Toxicity: Category 2
Chronic Aquatic Toxicity: Category 2

2.2. Label elements
SIGNAL WORD
Warning

Symbols:
Exclamation mark |Health Hazard |Environment |

Pictograms

HAZARD STATEMENTS:

H319	Causes serious eye irritation.
H361	Suspected of damaging 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.
P264	Wash thoroughly after handling.
P273	Avoid release to the environment.
P280E	Wear protective gloves.

Response

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P337 + P313	IF eye irritation persists: Get medical advice/attention.
P391	Collect spillage.

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
Boron zinc hydroxide oxide	138265-88-0	< 25
Petrolatum	8009-03-8	10 - 20
Polyisobutylene	9003-27-4	10 - 20
Silicic acid, sodium salt	1344-09-8	< 20
Styrene-Butadiene Polymer	9003-55-8	10 - 20
Melamine Phosphate	41583-09-9	1 - 10
Oxide Glass Chemicals	65997-17-3	1 - 10
Butadiene-Styrene-Meta-Divinylbenzene Polymer	26471-45-4	1 - 5
Alpha-Methylstyrene-Isoamylene-Piperylene Polymer	62258-49-5	< 3

Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	25036-25-3	< 3
Fatty Acids, C14-18 and C16-C18-Unsatd.	67701-06-8	< 3
Regenerated Cellulose	68442-85-3	< 3
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	< 3
Water	7732-18-5	< 3
Rayon Fiber	None	< 3
Iron Oxide	1309-37-1	< 1
Potassium Rosinate	61790-50-9	< 1
Rosin	8050-09-7	< 1
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	41484-35-9	< 1
Rubber	Trade Secret	< 1

SECTION 4: First aid measures

4.1. Description of first aid measures

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

Skin contact
Wash with soap and water. If signs/symptoms develop, get medical attention.

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

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

4.2. Most important symptoms and effects, both acute and delayed
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
Use a fire fighting agent suitable for the surrounding fire.

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

Hazardous Decomposition or By-Products

Substance	Condition
Aldehydes.	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	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. 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
Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
No special storage requirements.

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
Iron Oxide	1309-37-1	ACGIH	TWA(respirable fraction):5 mg/m3	A4: Not class. as human carcinogin
Iron Oxide	1309-37-1	New Zealand WES	TWA(as Fe, dust and fume)(8 hours):5 mg/m3	
Glass filaments	65997-17-3	New Zealand WES	TWA(Respirable fibers)(8 hours):1 f/mL;TWA(as respirable dust)(8 hours):1 f/mL;TWA(as inhalable dust)(8 hours):5 mg/m3	
Oxide Glass Chemicals	65997-17-3	Manufacturer determined	TWA(as non-fibrous, respirable)(8 hours):3 mg/m3;TWA(as non-fibrous,	

			inhalable fraction)(8 hours):10 mg/m3	
Mineral oils, highly-refined oils	8009-03-8	ACGIH	TWA(inhalable fraction):5 mg/m3	A4: Not class. as human carcinogin
Paraffin oil	8009-03-8	New Zealand WES	TWA(as mist)(8 hours):5 mg/m3;STEL(as mist)(15 minutes):10 mg/m3	
Rosin	8050-09-7	ACGIH	TWA(as Resin, inhalable fraction):0.001 mg/m3	Dermal/Respiratory Sensitizer
Rosin	8050-09-7	New Zealand WES	Limit value not established:	Dermal sensitiser, Respiratory sensitiser

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.
Indirect vented goggles.

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

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	Solid.
Specific Physical Form:	Putty
Colour	Red
Odour	Odourless
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	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	1.25 g/cm3
Relative density	1.25 [*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	*Not applicable.*
Decomposition temperature	*No data available.*
Viscosity/Kinematic Viscosity	*No data available.*
Volatile organic compounds (VOC)	< 1 % weight
Percent volatile	*No data available.*
VOC less H2O & exempt solvents	< 1 g/l
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
None known.

10.5 Incompatible materials
None known.

10.6 Hazardous decomposition products

Substance	**Condition**
None known.	

Refer to Section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

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

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

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

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

Ingestion
May be harmful if swallowed.
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. 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.

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 >2,000 - =5,000 mg/kg
Boron zinc hydroxide oxide	Dermal	Rabbit	LD50 > 5,000 mg/kg
Boron zinc hydroxide oxide	Inhalation-Dust/Mist	Rat	LC50 > 4.95 mg/l
Boron zinc hydroxide oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Silicic acid, sodium salt	Dermal	Rabbit	LD50 > 4,640 mg/kg
Silicic acid, sodium salt	Ingestion	Rat	LD50 500 mg/kg
Petrolatum	Dermal		LD50 estimated to be > 5,000 mg/kg
Petrolatum	Ingestion	Rat	LD50 > 5,000 mg/kg
Styrene-Butadiene Polymer	Dermal	Rabbit	LD50 > 2,000 mg/kg

Styrene-Butadiene Polymer	Ingestion	Rat	LD50 > 5,000 mg/kg
Polyisobutylene	Dermal		LD50 estimated to be > 5,000 mg/kg
Polyisobutylene	Ingestion	Rat	LD50 > 2,000 mg/kg
Melamine Phosphate	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Melamine Phosphate	Ingestion	Rat	LD50 > 4,000 mg/kg
Oxide Glass Chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Oxide Glass Chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Butadiene-Styrene-Meta-Divinylbenzene Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Butadiene-Styrene-Meta-Divinylbenzene Polymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Dermal	Rabbit	LD50 > 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Rat	LD50 > 5,110 mg/kg
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	Dermal	Rat	LD50 > 1,600 mg/kg
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	Ingestion	Rat	LD50 > 1,000 mg/kg
Alpha-Methylstyrene-Isoamylene-Piperylene Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Alpha-Methylstyrene-Isoamylene-Piperylene Polymer	Ingestion	Rat	LD50 > 40,000 mg/kg
Fatty Acids, C14-18 and C16-C18-Unsatd.	Ingestion	Rat	LD50 > 2,000 mg/kg
Fatty Acids, C14-18 and C16-C18-Unsatd.	Dermal	similar compounds	LD50 > 2,000 mg/kg
Iron Oxide	Dermal	Not available	LD50 3,100 mg/kg
Iron Oxide	Ingestion	Not available	LD50 3,700 mg/kg
Rosin	Dermal	Rabbit	LD50 > 2,500 mg/kg
Rosin	Ingestion	Rat	LD50 7,600 mg/kg
Rubber	Dermal		LD50 estimated to be > 5,000 mg/kg
Rubber	Ingestion		LD50 estimated to be > 5,000 mg/kg
Potassium Rosinate	Dermal	Rat	LD50 > 2,000 mg/kg
Potassium Rosinate	Ingestion	Rat	LD50 > 2,000 mg/kg
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	Dermal	Rabbit	LD50 > 3,000 mg/kg
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	Inhalation-Vapor (4 hours)	Rat	LC50 > 6.3 mg/l
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Boron zinc hydroxide oxide	Rabbit	No significant irritation
Silicic acid, sodium salt	Rabbit	Corrosive
Styrene-Butadiene Polymer	Professional judgement	No significant irritation
Polyisobutylene	Rabbit	No significant irritation
Oxide Glass Chemicals	Professional judgement	No significant irritation
Butadiene-Styrene-Meta-Divinylbenzene Polymer	Professional judgement	Minimal irritation
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	Rabbit	No significant irritation

Fatty Acids, C14-18 and C16-C18-Unsatd.	similar compounds	No significant irritation
Iron Oxide	Rabbit	No significant irritation
Rosin	Rabbit	No significant irritation
Rubber	Rabbit	No significant irritation
Potassium Rosinate	Rabbit	No significant irritation
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	Human	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Boron zinc hydroxide oxide	Rabbit	Severe irritant
Silicic acid, sodium salt	Rabbit	Corrosive
Polyisobutylene	Rabbit	No significant irritation
Oxide Glass Chemicals	Professional judgement	No significant irritation
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	Rabbit	Mild irritant
Fatty Acids, C14-18 and C16-C18-Unsatd.	similar compounds	Mild irritant
Iron Oxide	Rabbit	No significant irritation
Rosin	Rabbit	Mild irritant
Rubber	Professional judgement	No significant irritation
Potassium Rosinate	Rabbit	Moderate irritant
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	Rabbit	No significant irritation

Sensitisation:

Skin Sensitisation

Name	Species	Value
Boron zinc hydroxide oxide	Guinea pig	Not classified
Silicic acid, sodium salt	Mouse	Not classified
Synthetic amorphous silica, fumed, crystalline-free	Human and animal	Not classified
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	Guinea pig	Not classified
Fatty Acids, C14-18 and C16-C18-Unsatd.	similar compounds	Not classified
Iron Oxide	Human	Not classified
Rosin	Guinea pig	Sensitising
Potassium Rosinate	Mouse	Not classified
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	Human and animal	Not classified

Respiratory Sensitisation

Name	Species	Value
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	Human	Not classified
Rosin	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
Boron zinc hydroxide oxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Boron zinc hydroxide oxide	In vivo	Mutagenic
Silicic acid, sodium salt	In Vitro	Not mutagenic
Silicic acid, sodium salt	In vivo	Not mutagenic
Oxide Glass Chemicals	In Vitro	Some positive data exist, but the data are not sufficient for classification
Synthetic amorphous silica, fumed, crystalline-free	In Vitro	Not mutagenic
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	In vivo	Not mutagenic
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Fatty Acids, C14-18 and C16-C18-Unsatd.	In Vitro	Not mutagenic
Iron Oxide	In Vitro	Not mutagenic
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	In Vitro	Not mutagenic
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Oxide Glass Chemicals	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Synthetic amorphous silica, fumed, crystalline-free	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Iron Oxide	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Boron zinc hydroxide oxide	Ingestion	Toxic to male reproduction	Rat	NOAEL 100 mg/kg/day	92 days
Boron zinc hydroxide oxide	Ingestion	Toxic to development	Rat	LOAEL 100 mg/kg/day	during gestation
Silicic acid, sodium salt	Ingestion	Not classified for development	Mouse	NOAEL 200 mg/kg/day	during gestation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

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

Boron zinc hydroxide oxide	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Silicic acid, sodium salt	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Potassium Rosinate	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
Boron zinc hydroxide oxide	Inhalation	immune system | respiratory system | heart | endocrine system | hematopoietic system | liver | nervous system | kidney and/or bladder	Not classified	Rat	NOAEL 0.15 mg/l	2 weeks
Boron zinc hydroxide oxide	Ingestion	endocrine system | liver | kidney and/or bladder | heart | skin | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | eyes | respiratory system | vascular system	Not classified	Rat	NOAEL 375 mg/kg/day	92 days
Silicic acid, sodium salt	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Dog	LOAEL 2,400 mg/kg/day	4 weeks
Silicic acid, sodium salt	Ingestion	endocrine system | blood	Not classified	Rat	NOAEL 804 mg/kg/day	3 months
Silicic acid, sodium salt	Ingestion	heart | liver	Not classified	Rat	NOAEL 1,259 mg/kg/day	8 weeks
Oxide Glass Chemicals	Inhalation	respiratory system	Not classified	Human	NOAEL not available	occupational exposure
Synthetic amorphous silica, fumed, crystalline-free	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	Ingestion	auditory system | heart | endocrine system | hematopoietic system | liver | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Iron Oxide	Inhalation	pulmonary fibrosis | pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	Ingestion	liver	Not classified	Rat	NOAEL 500 mg/kg/day	90 days
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	Ingestion	heart | endocrine system | bone marrow | hematopoietic	Not classified	Rat	NOAEL 1,500 mg/kg/day	90 days

		system | immune system | nervous system | eyes | kidney and/or bladder | respiratory system				

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
Boron zinc hydroxide oxide	138265-88-0	Activated sludge	Estimated	4 hours	NOEC	0.33 mg/l
Boron zinc hydroxide oxide	138265-88-0	Green algae	Estimated	72 hours	IC50	0.45 mg/l
Boron zinc hydroxide oxide	138265-88-0	Rainbow trout	Estimated	96 hours	LC50	0.56 mg/l
Boron zinc hydroxide oxide	138265-88-0	Water flea	Estimated	48 hours	EC50	0.33 mg/l
Boron zinc hydroxide oxide	138265-88-0	Green algae	Estimated	72 hours	NOEC	0.02 mg/l
Boron zinc hydroxide oxide	138265-88-0	Invertebrate	Estimated	24 days	NOEC	0.02 mg/l
Boron zinc hydroxide oxide	138265-88-0	Rainbow trout	Estimated	25 days	NOEC	0.08 mg/l
Boron zinc hydroxide oxide	138265-88-0	Water flea	Estimated	21 days	NOEC	0.12 mg/l
Petrolatum	8009-03-8	Fathead minnow	Estimated	96 hours	LL50	>100 mg/l
Petrolatum	8009-03-8	Water flea	Estimated	48 hours	EL50	>10,000 mg/l

Petrolatum	8009-03-8	Green algae	Estimated	72 hours	NOEL	100 mg/l
Petrolatum	8009-03-8	Water flea	Estimated	21 days	NOEL	10 mg/l
Polyisobutylene	9003-27-4	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Silicic acid, sodium salt	1344-09-8	Bacteria	Experimental	30 minutes	NOEC	>3,454 mg/l
Silicic acid, sodium salt	1344-09-8	Green algae	Experimental	72 hours	EC50	>345.4 mg/l
Silicic acid, sodium salt	1344-09-8	Rainbow trout	Experimental	96 hours	LC50	281 mg/l
Silicic acid, sodium salt	1344-09-8	Water flea	Experimental	48 hours	EC50	1,700 mg/l
Silicic acid, sodium salt	1344-09-8	Green algae	Experimental	72 hours	NOEC	35 mg/l
Styrene-Butadiene Polymer	9003-55-8	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Melamine Phosphate	41583-09-9	Green algae	Analogous Compound	96 hours	EC50	1,700 mg/l
Melamine Phosphate	41583-09-9	Guppy	Analogous Compound	96 hours	LC50	>5,300 mg/l
Melamine Phosphate	41583-09-9	Water flea	Analogous Compound	48 hours	EC50	85 mg/l
Melamine Phosphate	41583-09-9	Green algae	Analogous Compound	96 hours	NOEC	>570 mg/l
Melamine Phosphate	41583-09-9	Water flea	Analogous Compound	21 days	NOEC	32 mg/l
Oxide Glass Chemicals	65997-17-3	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Oxide Glass Chemicals	65997-17-3	Water flea	Experimental	72 hours	EC50	>1,000 mg/l
Oxide Glass Chemicals	65997-17-3	Zebra Fish	Experimental	96 hours	LC50	>1,000 mg/l
Oxide Glass Chemicals	65997-17-3	Green algae	Experimental	72 hours	NOEC	>=1,000 mg/l
Butadiene-Styrene-Meta-Divinylbenzene Polymer	26471-45-4	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Alpha-Methylstyrene-Isoamylene-Piperylene Polymer	62258-49-5	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	25036-25-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Fatty Acids, C14-18 and	67701-06-8	N/A	Data not available or	N/A	N/A	N/A

C16-C18-Unsatd.			insufficient for classification			
Regenerated Cellulose	68442-85-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green algae	Analogous Compound	72 hours	ErC50	>173.1 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Sediment organism	Analogous Compound	96 hours	EC50	8,500 mg/kg (Dry Weight)
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Water flea	Analogous Compound	24 hours	EL50	>10,000 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Zebra Fish	Analogous Compound	96 hours	LL50	>10,000 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green algae	Analogous Compound	72 hours	NOEC	173.1 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Water flea	Analogous Compound	21 days	NOEC	68 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Iron Oxide	1309-37-1	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Iron Oxide	1309-37-1	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Iron Oxide	1309-37-1	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Iron Oxide	1309-37-1	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Iron Oxide	1309-37-1	Water flea	Experimental	21 days	No tox obs at lmt of water sol	>100 mg/l
Iron Oxide	1309-37-1	Activated sludge	Experimental	3 hours	EC50	>10,000 mg/l
Potassium Rosinate	61790-50-9	Activated sludge	Analogous Compound	3 hours	EC10	>10,000 mg/l
Potassium Rosinate	61790-50-9	Fathead minnow	Analogous Compound	96 hours	LC50	1.7 mg/l
Potassium Rosinate	61790-50-9	Green algae	Analogous Compound	72 hours	EC50	39.6 mg/l
Potassium Rosinate	61790-50-9	Water flea	Analogous Compound	48 hours	EC50	1.6 mg/l

Rosin	8050-09-7	Bacteria	Experimental	N/A	EC50	76.1 mg/l
Rosin	8050-09-7	Green algae	Experimental	72 hours	EL50	>100 mg/l
Rosin	8050-09-7	Water flea	Experimental	48 hours	EL50	911 mg/l
Rosin	8050-09-7	Zebra Fish	Experimental	96 hours	LL50	>1 mg/l
Rosin	8050-09-7	Green algae	Experimental	72 hours	NOEL	100 mg/l
Rubber	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	41484-35-9	Activated sludge	Experimental	3 hours	IC50	>100 mg/l
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	41484-35-9	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	41484-35-9	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	41484-35-9	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	41484-35-9	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	41484-35-9	Water flea	Experimental	21 days	No tox obs at lmt of water sol	>100 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Boron zinc hydroxide oxide	138265-88-0	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Petrolatum	8009-03-8	Estimated Biodegradation	28 days	BOD	31 %BOD/COD	OECD 301F - Manometric respirometry
Polyisobutylene	9003-27-4	Estimated Biodegradation	28 days	CO2 evolution	2.8 %CO2 evolution/THCO2 evolution	Modeled
Silicic acid, sodium salt	1344-09-8	Data not availbl-insufficient	N/A	N/A	N/A	N/A

Styrene-Butadiene Polymer	9003-55-8	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Melamine Phosphate	41583-09-9	Analogous Compound Biodegradation	14 days	BOD	0 %BOD/ThOD	OECD 301C - MITI test (I)
Oxide Glass Chemicals	65997-17-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Butadiene-Styrene-Meta-Divinylbenzene Polymer	26471-45-4	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Alpha-Methylstyrene-Isoamylene-Piperylene Polymer	62258-49-5	Estimated Biodegradation	28 days	CO2 evolution	18.7 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	25036-25-3	Estimated Biodegradation	28 days	BOD	7 %BOD/ThOD	OECD 301C - MITI test (I)
Fatty Acids, C14-18 and C16-C18-Unsatd.	67701-06-8	Analogous Compound Biodegradation	28 days	BOD	78 %BOD/ThOD	OECD 301C - MITI test (I)
Regenerated Cellulose	68442-85-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Iron Oxide	1309-37-1	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Potassium Rosinate	61790-50-9	Analogous Compound Biodegradation	28 days	CO2 evolution	80 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Rosin	8050-09-7	Experimental Biodegradation	28 days	CO2 evolution	64 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Rubber	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	41484-35-9	Experimental Biodegradation	28 days	CO2 evolution	2 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol

Boron zinc hydroxide oxide	138265-88-0	Estimated BCF - Fish	56 days	Bioaccumulation factor	242	OECD305-Bioconcentration
Petrolatum	8009-03-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyisobutylene	9003-27-4	Estimated Bioconcentration		Bioaccumulation factor	8.8	
Silicic acid, sodium salt	1344-09-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Styrene-Butadiene Polymer	9003-55-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Melamine Phosphate	41583-09-9	Analogous Compound BCF - Fish	42 days	Bioaccumulation factor	<3.8	OECD305-Bioconcentration
Oxide Glass Chemicals	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Butadiene-Styrene-Meta-Divinylbenzene Polymer	26471-45-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Alpha-Methylstyrene-Isoamylene-Piperylene Polymer	62258-49-5	Estimated Bioconcentration		Bioaccumulation factor	7.7	
Bisphenol A Diglycidyl Ether-Bisphenol A Copolymer	25036-25-3	Estimated Bioconcentration		Bioaccumulation factor	7.4	
Fatty Acids, C14-18 and C16-C18-Unsatd.	67701-06-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Regenerated Cellulose	68442-85-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Iron Oxide	1309-37-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

Potassium Rosinate	61790-50-9	Analogous Compound BCF - Fish	20 days	Bioaccumulation factor	≤129	
Rosin	8050-09-7	Analogous Compound BCF - Fish	20 days	Bioaccumulation factor	129	
Rubber	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Thiodiethylene Bis(3,5-Di-Tert-Butyl-4-Hydroxythydrocinnamate)	41484-35-9	Experimental BCF - Fish	56 days	Bioaccumulation factor	121-532	OECD305-Bioconcentration

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. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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. , (Boric acid, zinc salt)
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. , (Boric acid, zinc salt)
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. , (Boric acid, zinc salt)
Class/Division: 9
Sub Risk: Not applicable.
Packing Group: III
Marine Pollutant: Boric acid, zinc salt
Special Instructions: Not restricted, as per IMDG code 2.10.2.7, marine pollutant exception.

SECTION 15: Regulatory information

HSNO Approval number	HSR002544
Group standard name	Construction 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:
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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