Safety Data Sheet

Document group:	28-0172-8	**Version number:**	2.00
Issue Date:	20/08/2024	**Supersedes date:**	17/02/2021

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™ Blue Cream Hardener 05766

Product Identification Numbers
60-9800-3723-2

1.2. Recommended use and restrictions on use

Recommended use
Automotive.

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
Organic Peroxide: Type E
Eye irritation: Category 2
Skin sensitisation: Category 1
Specific target organ toxicity – single exposure: Category 2
Hazardous to the aquatic environment acute: Category 1
Hazardous to the aquatic environment chronic: Category 1

2.2. Label elements
SIGNAL WORD
Warning

Symbols:
Flame |Exclamation mark |Health Hazard |Environment |

Pictograms

HAZARD STATEMENTS:

H242	Heating may cause a fire.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H371	May cause damage to organs: cardiovascular system | kidney/urinary tract | nervous system | respiratory system.
H410	Very 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

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P234	Keep only in original packaging.
P235	Keep cool.
P240	Ground and bond container and receiving equipment.
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.
P280B	Wear protective gloves and eye/face protection.

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.
P308 + P311	IF exposed or concerned: Call a POISON CENTER or doctor/physician.
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.

Storage

P403	Store in a well-ventilated place.
P405	Store locked up.

P410	Protect from sunlight.
P411	Store at temperatures not exceeding 32 ºC.
P420	Store separately.

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
Dibenzoyl peroxide	94-36-0	30 - 60
Benzoic Acid, C9-11-Branched Alkyl Esters	131298-44-7	10 - 30
Water	7732-18-5	10 - 30
Zinc Stearate	557-05-1	1 - 10
Ethylene Glycol	107-21-1	<= 10
Calcium Sulfate	7778-18-9	1 - 5
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	9038-95-3	<= 5
Ferric Ammonium Ferrocyanide	25869-00-5	<= 1
Ferric Ferrocyanide	14038-43-8	<= 1

SECTION 4: First aid measures

4.1. Description of first aid measures

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

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

Eye contact
Immediately flush with large amounts of water. 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
This product contains ethylene glycol. If there is reasonable suspicion of ethylene glycol poisoning, intravenous (IV) administration with either fomepizole (preferred) or ethanol (if fomepizole is unavailable) should be considered as part of the medical management.

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
Closed containers exposed to heat from fire may build pressure and explode. Part of the oxygen for combustion is supplied by the peroxide itself.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Toxic vapour, gas, particulate.	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: 1W

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. 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
Collect as much of the spilled material as possible using non-sparking tools. 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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. 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.

7.2. Conditions for safe storage including any incompatibilities
Protect from sunlight. Store at temperatures not exceeding 32C. Keep cool. Keep only in original container. Store away from other materials. Keep/store away from clothing and other combustible materials.

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
Ethylene Glycol	107-21-1	ACGIH	TWA(Vapour fraction):25 ppm;STEL(Vapour fraction):50 ppm;STEL(Inhalable aerosol):10 mg/m3	A4: Not class. as human carcinogin
Ethylene Glycol	107-21-1	New Zealand WES	CEIL(Vapor and mist):127 mg/m3(50 ppm)	
Dust, inert or nuisance	557-05-1	New Zealand WES	TWA(as respirable dust)(8 hours):3 mg/m3;TWA(as inhalable dust)(8 hours):10 mg/m3	
Calcium Sulfate	7778-18-9	ACGIH	TWA(inhalable fraction):10 mg/m3	
Calcium Sulfate	7778-18-9	New Zealand WES	TWA(8 hours):10 mg/m3	
Dibenzoyl peroxide	94-36-0	ACGIH	TWA:5 mg/m3	A4: Not class. as human carcinogin
Dibenzoyl peroxide	94-36-0	New Zealand WES	TWA(8 hours):5 mg/m3	Dermal sensitizer

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:
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

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	Solid.
Specific Physical Form:	Paste
Colour	Blue
Odour	Slight Ester
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	111 ºC [*Test Method:*Estimated]
Evaporation rate	*No data available.*
Flammability	Organic Peroxide: Type E.
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapour pressure	*No data available.*
Vapor Density and/or Relative Vapor Density	*No data available.*
Density	1.2 g/ml
Relative density	1.2 [*Ref Std:*WATER=1] [*Details:*@ 25 C]
Water solubility	Negligible
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	410 ºC [*Test Method:*Estimated]
Decomposition temperature	*No data available.*
Kinematic Viscosity	58,333 mm²/sec
Volatile organic compounds (VOC)	0 % weight [*Test Method:*calculated per CARB title 2]
Volatile organic compounds (VOC)	0 - 90 g/l [*Test Method:*calculated SCAQMD rule 443.1]
Percent volatile	21 - 28.5 % weight
VOC less H2O & exempt solvents	0 - 121 g/l [*Test Method:*calculated SCAQMD rule 443.1]
Molecular weight	*No data available.*

Particle Characteristics	*Not applicable.*

SECTION 10: Stability and reactivity

10.1 Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
None known.

10.5 Incompatible materials
Accelerators

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
May be harmful in contact with skin.
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
Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

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:
Cardiac effects: Signs/symptoms may include irregular heartbeat (arrhythmia), changes in heart rate, damage to heart muscle, heart attack, and may be fatal. Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate. 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. Kidney/Bladder effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

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 >2,000 - =5,000 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE >12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Dibenzoyl peroxide	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Dibenzoyl peroxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 24.3 mg/l
Dibenzoyl peroxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Benzoic Acid, C9-11-Branched Alkyl Esters	Dermal	Rabbit	LD50 > 2,000 mg/kg
Benzoic Acid, C9-11-Branched Alkyl Esters	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.5 mg/l
Benzoic Acid, C9-11-Branched Alkyl Esters	Ingestion	Rat	LD50 > 5,000 mg/kg
Calcium Sulfate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.61 mg/l
Calcium Sulfate	Ingestion	Rat	LD50 > 1,581 mg/kg
Calcium Sulfate	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
Ethylene Glycol	Ingestion	Human	LD50 1,600 mg/kg
Ethylene Glycol	Inhalation-Dust/Mist (4 hours)	Other	LC50 estimated to be 5 - 12.5 mg/l
Ethylene Glycol	Dermal	Rabbit	9,530 mg/kg
Zinc Stearate	Dermal	Rabbit	LD50 > 2,000 mg/kg
Zinc Stearate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 50 mg/l
Zinc Stearate	Ingestion	Rat	LD50 > 2,000 mg/kg
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Dermal	Rabbit	LD50 > 16,960 mg/kg
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5 mg/l
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	Rat	LD50 4,240 mg/kg
Ferric Ferrocyanide	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Ferric Ammonium Ferrocyanide	Dermal	Rat	LD50 > 2,000 mg/kg
Ferric Ammonium Ferrocyanide	Ingestion	Rat	LD50 > 2,000 mg/kg
Ferric Ferrocyanide	Ingestion	similar compounds	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Dibenzoyl peroxide	Rabbit	Minimal irritation
Benzoic Acid, C9-11-Branched Alkyl Esters	Rabbit	Minimal irritation
Calcium Sulfate	Rabbit	No significant irritation
Ethylene Glycol	Rabbit	Minimal irritation
Zinc Stearate	Rabbit	No significant irritation
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Rabbit	Minimal irritation
Ferric Ammonium Ferrocyanide	Rabbit	No significant irritation
Ferric Ferrocyanide	similar compounds	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Dibenzoyl peroxide	Rabbit	Severe irritant
Benzoic Acid, C9-11-Branched Alkyl Esters	Rabbit	Mild irritant
Calcium Sulfate	Rabbit	Mild irritant
Ethylene Glycol	Rabbit	Mild irritant
Zinc Stearate	Rabbit	No significant irritation
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Rabbit	No significant irritation
Ferric Ammonium Ferrocyanide	Rabbit	Mild irritant
Ferric Ferrocyanide	similar compounds	No significant irritation

Sensitisation:

Skin Sensitisation

Name	Species	Value
Dibenzoyl peroxide	Guinea pig	Sensitising
Benzoic Acid, C9-11-Branched Alkyl Esters	Guinea pig	Not classified
Calcium Sulfate	Guinea pig	Not classified
Ethylene Glycol	Human	Not classified
Zinc Stearate	Human	Not classified
Ferric Ammonium Ferrocyanide	Mouse	Not classified
Ferric Ferrocyanide	similar compounds	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
Dibenzoyl peroxide	In Vitro	Not mutagenic
Dibenzoyl peroxide	In vivo	Not mutagenic
Benzoic Acid, C9-11-Branched Alkyl Esters	In Vitro	Not mutagenic
Benzoic Acid, C9-11-Branched Alkyl Esters	In vivo	Not mutagenic
Calcium Sulfate	In Vitro	Not mutagenic
Calcium Sulfate	In vivo	Not mutagenic
Ethylene Glycol	In Vitro	Not mutagenic
Ethylene Glycol	In vivo	Not mutagenic

Zinc Stearate	In Vitro	Not mutagenic
Ferric Ammonium Ferrocyanide	In Vitro	Not mutagenic
Ferric Ferrocyanide	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Dibenzoyl peroxide	Ingestion	Multiple animal species	Not carcinogenic
Dibenzoyl peroxide	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Ethylene Glycol	Ingestion	Multiple animal species	Not carcinogenic
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Dibenzoyl peroxide	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
Dibenzoyl peroxide	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	premating & during gestation
Dibenzoyl peroxide	Ingestion	Not classified for development	Rat	NOAEL 500 mg/kg/day	premating & during gestation
Benzoic Acid, C9-11-Branched Alkyl Esters	Ingestion	Not classified for female reproduction	Rat	NOAEL 641 mg/kg/day	2 generation
Benzoic Acid, C9-11-Branched Alkyl Esters	Ingestion	Not classified for male reproduction	Rat	NOAEL 676 mg/kg/day	2 generation
Benzoic Acid, C9-11-Branched Alkyl Esters	Ingestion	Not classified for development	Rat	NOAEL 191 mg/kg/day	2 generation
Calcium Sulfate	Ingestion	Not classified for female reproduction	Rat	NOAEL 790 mg/kg/day	premating into lactation
Calcium Sulfate	Ingestion	Not classified for male reproduction	Rat	NOAEL 790 mg/kg/day	35 days
Calcium Sulfate	Ingestion	Not classified for development	Multiple animal species	NOAEL 1,600 mg/kg/day	during organogenesis
Ethylene Glycol	Dermal	Not classified for development	Mouse	NOAEL 3,549 mg/kg/day	during organogenesis
Ethylene Glycol	Ingestion	Not classified for development	Mouse	LOAEL 750 mg/kg/day	during organogenesis
Ethylene Glycol	Inhalation	Not classified for development	Mouse	NOAEL 1,000 mg/kg/day	during organogenesis
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation	Not classified for male reproduction	Rat	NOAEL 1 mg/l	2 weeks

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Ethylene Glycol	Ingestion	heart | nervous system | kidney and/or bladder | respiratory system	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
Ethylene Glycol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

Ethylene Glycol	Ingestion	liver	Not classified	Human	NOAEL Not available	poisoning and/or abuse
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	nervous system	Not classified	Rat	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Benzoic Acid, C9-11-Branched Alkyl Esters	Ingestion	heart | skin | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | liver | immune system | muscles | nervous system | eyes | kidney and/or bladder | respiratory system | vascular system	Not classified	Rat	NOAEL 619 mg/kg/day	91 days
Calcium Sulfate	Ingestion	liver | kidney and/or bladder | heart | endocrine system | gastrointestinal tract | hematopoietic system | immune system | nervous system | respiratory system	Not classified	Rat	NOAEL 790 mg/kg/day	35 days
Ethylene Glycol	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 200 mg/kg/day	2 years
Ethylene Glycol	Ingestion	vascular system	Not classified	Rat	NOAEL 200 mg/kg/day	2 years
Ethylene Glycol	Ingestion	heart | hematopoietic system | liver | immune system | muscles	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
Ethylene Glycol	Ingestion	respiratory system	Not classified	Mouse	NOAEL 12,000 mg/kg/day	2 years
Ethylene Glycol	Ingestion	skin | endocrine system | bone, teeth, nails, and/or hair | nervous system | eyes	Not classified	Multiple animal species	NOAEL 1,000 mg/kg/day	2 years
Zinc Stearate	Ingestion	heart | endocrine system | gastrointestinal tract | hematopoietic system | liver | immune system | nervous system | eyes | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation	endocrine system | hematopoietic system | liver | nervous system	Not classified	Rat	NOAEL 1 mg/l	2 weeks
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.005 mg/l	2 weeks
Oxirane, Polymer with	Inhalation	respiratory system	Not classified	Rat	LOAEL	2 weeks

Methyloxirane, Monobutyl Ether					0.001 mg/l	
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation	heart	Not classified	Rat	NOAEL 0.5 mg/l	2 weeks
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 145 mg/kg/day	90 days
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 500 mg/kg/day	2 years
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	heart | endocrine system | respiratory system	Not classified	Rat	NOAEL 3,770 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 1
Chronic Aquatic Toxicity: Category 1

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Dibenzoyl peroxide	94-36-0	Green algae	Experimental	72 hours	EC50	0.071 mg/l
Dibenzoyl peroxide	94-36-0	Rainbow trout	Experimental	96 hours	LC50	0.06 mg/l
Dibenzoyl peroxide	94-36-0	Water flea	Experimental	48 hours	EC50	0.11 mg/l
Dibenzoyl peroxide	94-36-0	Green algae	Experimental	72 hours	NOEC	0.02 mg/l
Dibenzoyl peroxide	94-36-0	Water flea	Experimental	21 days	EC10	0.001 mg/l
Dibenzoyl peroxide	94-36-0	Activated sludge	Experimental	30 minutes	EC50	35 mg/l
Dibenzoyl peroxide	94-36-0	Redworm	Experimental	14 days	LC50	>1,000 mg/kg (Dry Weight)
Dibenzoyl peroxide	94-36-0	Soil microbes	Experimental	28 days	EC50	2,300 mg/kg (Dry Weight)
Benzoic Acid, C9-11-Branched Alkyl Esters	131298-44-7	Green algae	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l

Benzoic Acid, C9-11-Branched Alkyl Esters	131298-44-7	Rainbow trout	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Benzoic Acid, C9-11-Branched Alkyl Esters	131298-44-7	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Benzoic Acid, C9-11-Branched Alkyl Esters	131298-44-7	Fathead minnow	Experimental	33 days	No tox obs at lmt of water sol	>100 mg/l
Benzoic Acid, C9-11-Branched Alkyl Esters	131298-44-7	Green algae	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Benzoic Acid, C9-11-Branched Alkyl Esters	131298-44-7	Midge	Experimental	28 days	NOEC	64.7 mg/kg (Dry Weight)
Benzoic Acid, C9-11-Branched Alkyl Esters	131298-44-7	Water flea	Experimental	21 days	No tox obs at lmt of water sol	>100 mg/l
Benzoic Acid, C9-11-Branched Alkyl Esters	131298-44-7	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
Ethylene Glycol	107-21-1	Bacteria	Experimental	16 hours	EC50	10,000 mg/l
Ethylene Glycol	107-21-1	Fathead minnow	Experimental	96 hours	LC50	8,050 mg/l
Ethylene Glycol	107-21-1	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Ethylene Glycol	107-21-1	Water flea	Experimental	48 hours	EC50	>1,100 mg/l
Ethylene Glycol	107-21-1	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
Ethylene Glycol	107-21-1	Water flea	Experimental	21 days	NOEC	100 mg/l
Zinc Stearate	557-05-1	Water flea	Experimental	48 hours	EC50	>100 mg/l
Zinc Stearate	557-05-1	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Calcium Sulfate	7778-18-9	Activated sludge	Estimated	3 hours	NOEC	1,000 mg/l
Calcium Sulfate	7778-18-9	Algae or other aquatic plants	Experimental	96 hours	EC50	3,200 mg/l
Calcium Sulfate	7778-18-9	Bluegill	Experimental	96 hours	LC50	>2,980 mg/l
Calcium Sulfate	7778-18-9	Water flea	Experimental	48 hours	LC50	>1,970 mg/l
Calcium Sulfate	7778-18-9	Water flea	Estimated	21 days	NOEC	1,270 mg/l
Oxirane,	9038-95-3	Fathead	Experimental	96 hours	LC50	24,500 mg/l

Polymer with Methyloxirane, Monobutyl Ether		minnow				
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	9038-95-3	Water flea	Experimental	48 hours	EC50	21,000 mg/l
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	9038-95-3	Activated sludge	Experimental	16 hours	IC50	32,000 mg/l
Ferric Ammonium Ferrocyanide	25869-00-5	Water flea	Endpoint not reached	24 hours	EC50	>100 mg/l
Ferric Ammonium Ferrocyanide	25869-00-5	Activated sludge	Experimental	3 hours	NOEC	100 mg/l
Ferric Ammonium Ferrocyanide	25869-00-5	Common Carp	Experimental	96 hours	LC50	>100 mg/l
Ferric Ammonium Ferrocyanide	25869-00-5	Green algae	Experimental	72 hours	EC50	9.7 mg/l
Ferric Ammonium Ferrocyanide	25869-00-5	Green algae	Experimental	72 hours	NOEC	8 mg/l
Ferric Ammonium Ferrocyanide	25869-00-5	Water flea	Experimental	21 days	EC10	0.168 mg/l
Ferric Ferrocyanide	14038-43-8	Golden Orfe	Estimated	96 hours	LC50	>100 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Dibenzoyl peroxide	94-36-0	Experimental Biodegradation	28 days	BOD	71 %BOD/ThOD	OECD 301D - Closed bottle test
Dibenzoyl peroxide	94-36-0	Experimental Hydrolysis		Hydrolytic half-life	5.2 hours (t 1/2)	OECD 111 Hydrolysis func of pH
Benzoic Acid, C9-11-Branched Alkyl Esters	131298-44-7	Experimental Biodegradation	28 days	BOD	77.7 %BOD/ThOD	OECD 301F - Manometric respirometry
Ethylene Glycol	107-21-1	Experimental Biodegradation	14 days	BOD	90 %BOD/ThOD	OECD 301C - MITI test (I)
Zinc Stearate	557-05-1	Experimental Biodegradation	28 days	BOD	14.6 %BOD/ThOD	OECD 301D - Closed bottle test
Calcium Sulfate	7778-18-9	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Oxirane, Polymer with	9038-95-3	Experimental Biodegradation	28 days	CO2 evolution	45 %CO2 evolution/THC	similar to OECD 301B

Methyloxirane, Monobutyl Ether					O2 evolution (does not pass 10-day window)	
Ferric Ammonium Ferrocyanide	25869-00-5	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Ferric Ferrocyanide	14038-43-8	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
Dibenzoyl peroxide	94-36-0	Experimental Bioconcentration		Log Kow	3.2	OECD 117 log Kow HPLC method
Benzoic Acid, C9-11-Branched Alkyl Esters	131298-44-7	Modeled Bioconcentration		Bioaccumulation factor	288	Catalogic™
Benzoic Acid, C9-11-Branched Alkyl Esters	131298-44-7	Experimental Bioconcentration		Log Kow	4.61	EC A.8 Partition Coefficient
Ethylene Glycol	107-21-1	Experimental Bioconcentration		Log Kow	-1.36	
Zinc Stearate	557-05-1	Experimental Bioconcentration		Log Kow	4.64	OECD 117 log Kow HPLC method
Calcium Sulfate	7778-18-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	9038-95-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ferric Ammonium Ferrocyanide	25869-00-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ferric Ferrocyanide	14038-43-8	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 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.: UN3108
Proper Shipping Name: ORGANIC PEROXIDE TYPE E, SOLID , (Dibenzoyl Peroxide (As a Paste), <= 52%)
Class/Division: 5.2
Sub Risk: Not applicable.
Packing Group: Not applicable.
Special Instructions: Limited quantity may apply
Hazchem Code: 1W
IERG: 32

International Air Transport Association (IATA) - Air Transport
UN No.: UN3108
Proper Shipping Name: ORGANIC PEROXIDE TYPE E, SOLID , (Dibenzoyl Peroxide (As a Paste), <= 52%)
Class/Division: 5.2
Sub Risk: Not applicable.
Packing Group: Not applicable.
Special Instructions: Forbidden packaging does not meet requirements for this mode of transport

International Maritime Dangerous Goods Code (IMDG) - Marine Transport
UN No.: UN3108
Proper Shipping Name: ORGANIC PEROXIDE TYPE E, SOLID , (Dibenzoyl Peroxide (As a Paste), <= 52%)
Class/Division: 5.2
Sub Risk: Not applicable.
Packing Group: Not applicable.
Marine Pollutant: Not applicable.
Special Instructions: Limited quantity may apply

SECTION 15: Regulatory information

HSNO Approval number	HSR002629
Group standard name	Organic Peroxides 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	25 kg
Hazardous atmosphere zone	Not required
Fire extinguishers	One required for 50 L or 50 kg
Emergency response plan	100 L or 100 kg
Secondary containment	100 L or 100 kg
Tracking	Not required
Warning signage	10 L or 10 kg

SECTION 16: Other information

Revision information:
Complete document review.

Document group:	28-0172-8	**Version number:**	2.00
Issue Date:	20/08/2024	**Supersedes date:**	17/02/2021

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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