

# Guardian seal zinc primer Safety data sheet

## Guardian seal

Version No: 2.0

Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017

Issue Date: 31/07/2025

Print Date: 31/07/2025

L.GHS.NZL.EN

## SECTION 1 Identification of the substance / mixture and of the company / undertaking

### Product Identifier

Product name: Guardian seal zinc primer

Synonyms: None

Other means of identification: Not Available

### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Primer for applicable roof surfaces. Application to properly prepared roof substrates. Uses advised against: Not for use on potable water contact surfaces during curing period. Not for interior applications.

### Details of the manufacturer or importer of the safety data sheet

Registered company name: Commercial Coating Manufacturers

Address: 9 Bay Park Place, Birkdale, Auckland 0626

Emergency telephone number

NZ POISONS (24hr 7days): 0800 764766

## SECTION 2 Hazards identification

Classification of the substance or mixture

Classification:

Hazard Code	Hazard Category and Description
<b>H410</b>	Chronic Aquatic Toxicity – Category 1: Very toxic to aquatic life with long lasting effects
<b>H319</b>	Serious Eye Irritation – Category 2: Causes serious eye irritation

Legend: Classification based on mixture and ingredient data, from supplier SDS;

Determined using GHS/HSNO criteria: 9.1A, 6.4A

Label elements

Hazard pictogram(s):

- GHS07 (Exclamation mark) - Health hazard warning
- GHS09 (Environment) - Environmental hazard

Signal word: Warning



Precautionary statement(s) Prevention

P264: Wash hands thoroughly after handling  
 P270: Do not eat, drink or smoke when using this product  
 P273: Avoid release to the environment  
 P280: Wear protective gloves/protective clothing/eye protection/face protection

#### Precautionary statement(s) 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  
 P337+P313: If eye irritation persists: Get medical advice/attention  
 P302+P352: IF ON SKIN: Wash with plenty of water  
 P332+P313: If skin irritation occurs: Get medical advice/attention

#### Precautionary statement(s) Storage

P233: Keep container tightly closed.

#### Precautionary statement(s) Disposal

P501: Dispose of contents/container in accordance with local/regional/national regulations

## SECTION 3 Composition / information on ingredients

### Substances

See section below for composition of Mixtures

### Mixtures

Ingredients are required by the Hazard Substances (Safety Data Sheets) Notice 2017, EPA consolidation 30 September 2022 to be identified:

#### Substance

CAS No	Name	%[weight]
25265-77-4	2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	1-3%
3811-73-2	pyridine-2-thiol 1-oxide, sodium salt	<0.1%
1314-13-2	Zinc oxide	1-3%
7779-90-0	Trizinc	1-3%

	bis(orthophosphate)	
7632-00-0	Sodium Nitrite	<0.1%

Legend: 1. Classification drawn from supplier SDS;

## SECTION 4 First aid measures

### Description of first aid measures

#### Eye Contact

If this product comes in contact with the eyes:

- Wash out immediately with fresh running water for at least 15 minutes
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids
- Remove contact lenses if present and easy to do, continue rinsing
- Seek immediate medical attention if pain persists, recurs, or vision is affected
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel

#### Skin Contact

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear
- Wash skin thoroughly with soap and water for at least 15 minutes
- For paint removal, use waterless hand cleaner followed by soap and water
- Do not use solvents or thinners to remove paint from skin
- Seek medical attention if irritation develops or persists

#### Inhalation

If mist, vapors or spray are inhaled:

- Remove person from contaminated area to fresh air
- Keep person warm and at rest in a position comfortable for breathing
- If breathing is difficult, give oxygen if available
- If person is not breathing, give artificial respiration
- Seek immediate medical attention if symptoms persist or worsen

#### Ingestion

If swallowed:

- Do not induce vomiting unless directed by medical personnel
- Rinse mouth thoroughly with water

- Give small sips of water if person is conscious and able to swallow
- Never give anything by mouth to an unconscious person
- Seek immediate medical attention
- If spontaneous vomiting occurs, lean person forward to prevent aspiration

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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## SECTION 5 Firefighting measures

### Extinguishing media

Suitable extinguishing media:

- Water spray or fog (preferred for cooling containers)
- Foam (alcohol resistant preferred)
- Dry chemical powder
- Carbon dioxide (CO<sub>2</sub>)

Unsuitable extinguishing media:

- None known - all standard firefighting media may be used

### Special hazards arising from the substrate or mixture

None

Hazardous decomposition products:

- Carbon monoxide (CO)
- Carbon dioxide (CO<sub>2</sub>)
- Acrylic monomers
- Water vapor
- Various organic compounds

### Advice for firefighters

Fire Fighting: Alert Fire Brigade and tell them location and nature of hazard. Approach fire from upwind direction.

Special protective equipment for firefighters:

- Wear full structural firefighting protective clothing and equipment

- Use self-contained breathing apparatus (SCBA) with full face mask operated in positive pressure mode
- Cool fire-exposed containers with water spray

#### Fire/Explosion Hazard

- Non-combustible under normal conditions
- Water-based coating with flash point >100°C
- May burn if sufficient heat is applied
- Containers may rupture when exposed to fire due to pressure buildup
- Burning release: carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), acrylic monomers
- May emit irritating vapor/fumes when heated

## SECTION 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

- Eliminate all sources of ignition
- Ensure adequate ventilation
- Wear appropriate personal protective equipment (see Section 8)
- Avoid breathing mist/vapors
- Avoid contact with skin and eyes

For emergency responders:

- Use personal protective equipment as required
- See section 8 for detailed PPE recommendations

### Environmental precautions

Environmental precautions:

- Prevent entry into waterways, sewers, basements or confined areas
- Do not allow product to enter stormwater drains, soil, or groundwater
- Dyke spilled material to prevent spreading
- Inform relevant authorities if environmental contamination occurs
- See section 12 for ecological information

### Methods and material for containment and cleaning up

Small spills:

- Absorb with inert absorbent material (sand, earth, vermiculite, diatomaceous earth)
- Sweep up absorbed material and place in suitable containers for disposal
- Clean residue with soap and water
- Ensure good ventilation

#### Large spills:

- Dyke spilled material where possible to prevent spreading
- Remove sources of ignition and provide adequate ventilation
- Personnel should wear appropriate protective equipment
- Absorb with inert absorbent material
- Collect mechanically and place in appropriate containers for disposal
- Clean contaminated area thoroughly with soap and water
- Do not use high pressure water jets which may spread contamination

#### Additional advice:

- Never use compressed air to clean up spills
- Dispose of waste in accordance with local regulations
- Personal Protective Equipment advice is contained in Section 8 of the SDS

## SECTION 7 Handling and storage

### Precautions for safe handling

#### Safe handling procedures:

- Avoid unnecessary personal contact, including inhalation
- Do NOT allow clothing wet with material to stay in contact with skin
- Avoid contact with eyes and skin
- Avoid breathing mist/vapors, especially in enclosed areas
- Use only in well-ventilated areas
- Wash hands thoroughly after handling
- Remove contaminated clothing and wash before reuse
- Do not eat, drink or smoke when using this product
- Ensure eye wash stations and safety showers are accessible

#### General hygiene considerations:

- Handle in accordance with good industrial hygiene and safety practices
- Regular cleaning of equipment and work area
- Provide adequate ventilation when applying by spray

### Conditions for safe storage, including any incompatibilities

Storage requirements:

- Store in original containers in a cool, dry, well-ventilated area
- Storage temperature: 5°C to 35°C (41°F to 95°F)
- Protect from freezing - product may be damaged if frozen
- Protect from extreme heat and direct sunlight
- Keep containers tightly closed when not in use
- Store away from children and unauthorized personnel

Container considerations:

- Use only original containers or containers approved for this material
- Ensure container is suitable and properly labeled
- Do not store in unlabeled containers

Incompatible materials:

- Strong oxidizing agents (chlorine bleaches, peroxides, nitrates)
- Strong acids and alkalis
- Active metals (aluminum powder, zinc dust)
- Products containing ammonia

Segregation requirements:

- Separate from incompatible materials
- Store away from heat sources, ignition sources, and direct sunlight
- Ensure adequate separation from oxidizing materials

## SECTION 8 Exposure controls / personal protection

### Control parameters

Occupational Exposure Limits (OEL)

#### INGREDIENT DATA

Not Available

Ingredient	Original IDLH	Revised IDLH
2,2,4-Trimethyl-1,3-pent anediol monoisobutyrate	Not available	Not available

pyridine-2-thiol 1-oxide, sodium salt	Not available	Not available
Zinc oxide	2,500 mg/m <sup>3</sup>	500 mg/m <sup>3</sup>
Trizinc bis(orthophosphate)	Not available	Not available
Sodium Nitrite	Not available	Not available

## MATERIAL DATA

## Exposure controls

Appropriate engineering controls:

- General mechanical ventilation is adequate for normal use
- Local exhaust ventilation recommended for spray application or use in enclosed areas
- Ensure fresh air introduction and exhaust ventilation adequate to maintain exposures below occupational limits
- Explosion-proof equipment may be required in enclosed areas with inadequate ventilation
- Eye wash stations should be available in work areas

Individual protection measures, such as personal protective equipment



Eye and face protection:

- Safety glasses with side shields (minimum requirement)
- Chemical goggles recommended for spray application
- Face shield recommended when splash contact is possible
- Contact lens use is not recommended

Skin protection:

- Chemical-resistant gloves recommended (nitrile rubber preferred)
- Avoid natural rubber, PVC may be suitable for brief contact
- Impervious protective clothing for extensive exposure
- Long-sleeved shirts and long pants recommended
- Change contaminated clothing immediately

#### Hands/feet protection:

- Wear chemical protective gloves, e.g. nitrile rubber
- Rubber boots recommended for large-scale applications
- NOTE: The material may produce skin sensitisation in predisposed individuals
- Glove breakthrough times vary by manufacturer - consult glove supplier
- Do NOT use natural rubber, butyl rubber, EPDM or polystyrene-containing materials for prolonged contact

#### Respiratory protection:

- Generally not required for outdoor use with adequate ventilation
- For spray application or poorly ventilated areas: Use NIOSH/MSHA approved respirator
- Recommended filter type: Particulate filter (P95 minimum) for spray mist
- Organic vapor cartridge (Type A filter) if significant vapor exposure occurs
- Full face respirator may be required for extensive spray operations

#### Body protection:

- Impervious apron for protection against splashes
- Coveralls for extensive exposure
- Remove contaminated clothing immediately and wash before reuse

#### Other protection:

- Emergency eye wash and safety shower should be available
- Suitable facilities for washing hands and face should be available

## SECTION 9 Physical and chemical properties

#### Information on basic physical and chemical properties

Property	Value
Appearance	Colored acrylic dispersion
Physical state	Liquid
Relative density (Water = 1)	1.30 - 1.50
Odor	Mild acrylic/polymer odor
Partition coefficient n-octanol / water	Not Available
Odor threshold	Not Available

Auto-ignition temperature (°C)	Not Available
pH (as supplied)	8-10
Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	0°C (water-based)
Viscosity (cSt)	1500-2000
Initial boiling point and boiling range (°C)	100 (water component)
Molecular weight (g/mol)	Not Applicable (mixture)
Flash point (°C)	>100°C (water-based)
Taste	Not Available
Evaporation rate	Slow (water = 1)
Explosive properties	Not explosive
Flammability	Not flammable
Oxidising properties	Not oxidizing
Upper Explosive Limit (%)	Not Available
Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available
Volatile Component (%vol)	46-48
Vapour pressure (kPa)	~2.3 kPa at 20°C (water)
Gas group	Not Applicable
Solubility in water	Miscible when wet, insoluble when dry
pH as a solution (1%)	Not Available
Vapour density (Air = 1)	>1 (heavier than air when wet)
VOC g/L	<60

## SECTION 10 Stability and reactivity

Property	Description
Reactivity	Stable under normal conditions of use and storage
Chemical Stability	Stable under normal handling and storage conditions. Stable when stored as recommended
Possibility of Hazardous Reactions	None under normal processing conditions. Will not undergo hazardous polymerization
Conditions to avoid	See section 7

## SECTION 11 Toxicological information

Information on toxicological effects

Toxicological Endpoint	Assessment
a) Acute Toxicity	Based on available data, the classification criteria are not met.
b) Skin Irritation/Corrosion	May cause skin irritation.
c) Serious Eye Damage/Irritation	May cause eye irritation.
d) Respiratory or Skin Sensitisation	May cause an allergic skin reaction.
e) Mutagenicity	Based on available data, the classification criteria are not met.
f) Carcinogenicity	Based on available data, the classification criteria are not met.
g) Reproductivity	Based on available data, the classification criteria are not met.

h) STOT - Single Exposure	Based on available data, the classification criteria are not met.
i) STOT - Repeated Exposure	Based on available data, the classification criteria are not met.
j) Aspiration Hazard	Based on available data, the classification criteria are not met.

#### Information on toxicological effects

Exposure Route	Information
Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract under normal use conditions. However, inhalation of mist or vapors may cause irritation of the nose, throat and respiratory system.
Ingestion	The material has not been classified as 'harmful by ingestion'. Ingestion may cause irritation to the gastric tract, with stomach pain, nausea and vomiting. Human metabolism can handle small amounts, however toxic effects may appear if overwhelmed by large doses.
Skin Contact	May be irritating to skin. The symptoms may include redness and itching. May cause an allergic skin reaction in predisposed individuals. Limited evidence suggests the material may produce inflammation of the skin following direct contact.
Eye	May be irritating to eyes. The symptoms may include redness, itching and tearing. Although not classified as an eye irritant, direct contact may produce transient discomfort.
Chronic	Long-term exposure to the product is not thought to produce chronic effects adverse to health under normal use conditions. Nevertheless, exposure by all routes should be minimised as a matter of course.

#### Toxicological information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	= 3200 mg/kg ( Rat ) <sup>[1]</sup>	> 15200 mg/kg ( Rat ) <sup>[1]</sup>	> 3.55 mg/L ( Rat ) 6 h <sup>[1]</sup>
pyridine-2-thiol 1-oxide, sodium salt	Not available	Not available	Not available

Zinc oxide	> 2000 mg/kg (Rat <sup>[1]</sup> )	>2000 mg/kg (Rat) <sup>[1]</sup>	> 5.7 mg/L (Rat) 4h <sup>[1]</sup>
Trizinc bis(orthophosphate)	>5000 mg/kg bw (Rat) <sup>[1]</sup>	Not available	> 5.7 mg/L (Rat) 4h <sup>[1]</sup>
Sodium Nitrite	LD50 = 85 mg/kg ( Rat )	Not listed	LC50 = 5.5 mg/L ( Rat ) 4 h

Legend: [1]. Value obtained from Manufacturer's SDS

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE	Not a skin sensitiser (guinea pig, Magnusson-Kligman) *** Ames Test: negative *** Micronucleus, mouse: negative *** Not mutagenic *** No effects on fertility or foetal development seen in the rat *** * [SWIFT] ** [Eastman] *** [Perstop] The material may be irritating to the eye, with prolonged contact causing inflammation. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
pyridine-2-thiol 1-oxide, sodium salt	Not available
Zinc oxide	Not available
Trizinc bis(orthophosphate)	Not available

**Acute Toxicity:** Data either not available or does not fill the criteria for classification

**Skin Irritation/Corrosion:** Data either not available or does not fill the criteria for classification

**Serious Eye Damage/Irritation:** Data either not available or does not fill the criteria for classification

**Respiratory or Skin Sensitisation:** Data either not available or does not fill the criteria for classification

**Mutagenicity:** Data either not available or does not fill the criteria for classification

**Carcinogenicity:** Data either not available or does not fill the criteria for classification

**Reproductivity:** Data either not available or does not fill the criteria for classification

**STOT - Single Exposure:** Data either not available or does not fill the criteria for classification

**STOT - Repeated Exposure:** Data either not available or does not fill the criteria for classification

**Aspiration Hazard:** Data either not available or does not fill the criteria for classification

## SECTION 12 Ecological information

## Toxicity

Guardian seal zinc primer				
Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

### 2,2,4-trimethyl-1,3-pentanediol monoisobutyrate

Chemical Name	Algae / Aquatic Plants	Fish	Crustacea
2,2,4-Trimethyl-1,3-pentane diol monoisobutyrate <sup>[1]</sup>	EC50: 18.4 mg/L (72h, <i>Pseudokirchneriella subcapitata</i> ) <sup>[1]</sup>	LC50: 30 mg/L (96h, <i>Pimephales promelas</i> ) <sup>[1]</sup>	LC50: >95 mg/L (96h, <i>Daphnia magna</i> ) <sup>[1]</sup>

Legend: [1]. Value obtained from Manufacturer's SDS

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark.

DO NOT discharge into sewer or waterways.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

### pyridine-2-thiol 1-oxide, sodium salt

Chemical Name	Algae / Aquatic Plants	Fish	Crustacea
pyridine-2-thiol 1-oxide, sodium salt	EC50 / 72 h 0.46 mg/l ( <i>Selenastrum capricornutum</i> ) (OECD 201) Dossier (REACH) <sup>[1]</sup>	LC50 / 96 h 0.00767 mg/l ( <i>Brachydanio rerio</i> ) (OECD 203) S 3495 <sup>[1]</sup>	EC50 / 48 h 0.022 mg/l ( <i>Daphnia</i> ) (OECD 202) Dossier (REACH) <sup>[1]</sup>

Legend: [1]. Value obtained from Manufacturer's SDS

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark.  
 DO NOT discharge into sewer or waterways.

Evaluation: very toxic to aquatic life <sup>[1]</sup>

Ecotoxicity – Very toxic to aquatic life with long lasting effects:

Chemical Name	Algae/Aquatic Plants	Fish	Toxicity to Microorganisms	Crustacea
<b>Zinc oxide</b>	LC <sub>50</sub> : 0.63 mg/L (72 h, <i>Pseudokirchneriella subcapitata</i> )	EC <sub>50</sub> : 1.1 mg/L (96 h, <i>Oncorhynchus mykiss</i> )	–	EC <sub>50</sub> : >2.0 mg/L (48 h, <i>Daphnia</i> )
<b>Trizinc bis(orthophosphate)</b>	IC <sub>50</sub> : 0.136 mg Zn/L (72 h, <i>Selenastrum capricornutum</i> )	LC <sub>50</sub> : 0.169 mg Zn/L (96 h, <i>Oncorhynchus mykiss</i> )	–	EC <sub>50</sub> : 0.155 mg/L (48 h, <i>Daphnia</i> )
<b>Sodium nitrite</b>	–	<i>Oncorhynchus mykiss</i> : LC50 = 0.09-0.13 mg/L 96h	–	12.5-100 mg/L 48h

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	LOW	LOW
pyridine-2-thiol 1-oxide, sodium salt	No information	No Information
Zinc oxide	No information	No Information
Trizinc bis(orthophosphate)	No information	No Information
Sodium Nitrite	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	LOW (LogKOW = 3)
pyridine-2-thiol 1-oxide, sodium salt	No information
Sodium Nitrite	No information

#### 3811-73-2 pyridine-2-thiol 1-oxide, sodium salt

OECD 301 B CO2-Evolution	>70 % Dossier (REACH)
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#### Mobility in soil

Ingredient	Mobility
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	LOW (Log KOC = 22.28)
pyridine-2-thiol 1-oxide, sodium salt	No further relevant information available.
Sodium nitrite	Will likely be mobile in the environment due to its water solubility. (log Pow Sodium nitrite -3.7)

## SECTION 13 Disposal considerations

### Waste treatment methods

#### Product / Packaging disposal

##### Liquid waste:

- Do not pour down drains or into water courses
- Allow paint to dry completely before disposal as solid waste
- Dried paint film may be disposed of as non-hazardous solid waste
- Small amounts: brush out onto absorbent material, allow to dry, dispose in household refuse

##### Container disposal:

- Empty containers should be completely drained
- Triple rinse empty containers with water

- Puncture or crush empty containers to prevent reuse
- Recycling may be possible where facilities exist
- Do not reuse containers for food, feed, or drinking water

Large quantities:

- Consult local waste management authority for disposal options
- May be suitable for energy recovery in appropriate facilities
- Follow all local, regional, and national disposal regulations

General disposal guidance:

- Legislation addressing waste disposal requirements may differ by country, state and/or territory
- DO NOT allow wash water from cleaning or process equipment to enter drains
- Recycle wherever possible
- Consult manufacturer for recycling options
- Do not discharge the substance into the environment

### Disposal Requirements

- Packages that have been in direct contact with the product should be appropriately cleaned before disposal
- Do not allow product or wash water from cleaning or process equipment to enter drains or watercourses
- It may be necessary to collect all wash water for treatment before disposal
- The generation of waste should be avoided or minimised wherever possible
- Disposal of this product should comply with local hazardous waste regulations
- For treating and discharging processes contact your local authority

## SECTION 14 Transport information

### Labels Required

Marine Pollutant: NO  
HAZCHEM: N/A

UN Number: N/A  
Dangerous Goods Class: N/A  
Packaging Group: N/A

Land transport (UN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS  
Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS  
Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

## 14.7. Maritime transport in bulk according to IMO instruments

### 14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Group not Available

### 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Not Available

Group Not Available

### 14.7.3. Transport in bulk in accordance with the IGC Code

Not Available

Group not Available

## SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

This substance is to be managed using the conditions specified in an applicable Group Standard

HSR Number: HSR002670	Group Standard: Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2020
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Please refer to Section 8 of the SDS for any applicable tolerable exposure limit or Section 12 for environmental exposure limit.

Approved Handler: Not Required

2,2,4-trimethyl-1,3-pentanediol monoisobutyrate (CAS 25265-77-4), pyridine-2-thiol 1-oxide, sodium salt (CAS 3811-73-2), zinc oxide (CAS 1314-13-2), trizinc bis(orthophosphate) (CAS 7779-90-0), and sodium nitrite (CAS 7632-00-0), are listed on the New Zealand Inventory of Chemicals (NZIoC) and are subject to the Hazardous Substances and New Organisms (HSNO) Act, including the Classification of Chemicals and Classification Data registers.

### Hazardous Substance Location

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Quantities
Not Applicable	Not Applicable

## Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Class of substance	Quantities
Not Applicable	Not Applicable

## Maximum quantities of certain hazardous substances permitted on passenger service vehicles

Subject to Regulation 13.14 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Gas (aggregate water capacity in mL)	Liquid (L)	Solid (kg)	Maximum quantity per package for each classification
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

## Tracking Requirements

Not Applicable

## National Inventory Status

National Inventory	Status
Australia - AIIIC / Australia Non-Industrial Use	Yes
New Zealand - NZIoC	Yes

Legend: Yes = All CAS declared ingredients are on the inventory

No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

## SECTION 16 Other information

Revision Date: 06/07/2025

Initial Date: 21/03/2020

## SDS Version Summary

Version	Date of Update	Sections Updated
2.0	15/07/2025	Complete document with enhanced safety information, expanded handling procedures, detailed PPE recommendations, and comprehensive physical properties
2.1	05/03/2026	Minor wording changes the the description

## Other information

Disclaimer: The information contained in this Safety Data Sheet is based on data from sources considered technically reliable. It is provided for guidance only and does not constitute a guarantee of the properties of the product. Users should make their own investigations to determine the suitability of the information for their particular applications.

### Training recommendations:

- Ensure all personnel are trained in safe handling procedures
- Provide training on emergency procedures and spill response
- Train workers in proper use of personal protective equipment
- Regular refresher training on chemical safety procedures

### Additional safety considerations:

- Maintain good housekeeping practices
- Ensure adequate ventilation in work areas
- Regular equipment maintenance and inspection
- Emergency procedures should be practiced regularly

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment.

### Definitions and Abbreviations:

- PC TWA: Permissible Concentration-Time Weighted Average
- PC STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value

- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted No-Effect Concentration
- MARPOL: International Convention for the Prevention of Pollution from Ships
- IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code
- IBC: International Bulk Chemical Code
- CAS No: Chemical Abstract Service number
- TWA: Time Weighted Average
- VOC: Volatile Organic Compounds – organic chemicals with high vapor pressure that contribute to air pollution
- PPE: Personal Protective Equipment
- NIOSH: National Institute for Occupational Safety and Health (US agency)
- MSHA: Mine Safety and Health Administration (US agency)
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- HSNO: Hazardous Substances and New Organisms Act 1996 (New Zealand)
- UN Number: United Nations number assigned to hazardous substances for transport identification
- HAZCHEM: Hazardous Materials Emergency Action Code for NZ/Australia used in transport emergency response
- Pictogram: Graphical symbol on labels used to convey chemical hazard information under GHS
- Signal Word: "Warning" or "Danger" used on GHS labels to indicate severity of hazard
- STOT: Specific Target Organ Toxicity – chemicals that cause non-lethal organ effects from single or repeated exposure
- LD50: Median Lethal Dose – dose required to kill 50% of test population
- LC50: Median Lethal Concentration – airborne concentration causing death in 50% of test population
- NZIoC: New Zealand Inventory of Chemicals – list of substances approved under the HSNO Act
- EPA Approval: Environmental Protection Authority approval of a substance under a Group Standard
- HSR Number: Hazardous Substances Register number issued under HSNO for regulatory tracking
- Group Standard: Approval covering groups of substances with similar properties and risks under HSNO

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end of SDS