

MSDS 04377 Date of Issue/re-issue: **16.11.2016**

User declaration:- I have read and understood this Safety Data Sheet

Name:- \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

**1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

Company Name



Address: 39 Woodside Ave, Northcote, Auckland , New Zealand

Emergency Tel: NZ 0800154666 | Tel +64 9 480 4386 | FAX +64 9 480 4385

<b>Product</b>	<b>Lead (II) Nitrate</b>			<b>Code</b>	<b>04377</b>
<b>CAS#</b>	<b>HSNO#</b>	<b>UN #</b>	<b>DG Class/es</b>	<b>Packing group #</b>	
10099-74-8	HSR001328	1469	5.1	II	

**Recommended use:** Laboratory Investigations

2. Hazards Identification

**2.1 GHS Classification**

- Oxidizing liquids or solids (Category B)
  - Acute toxicity, Oral (Category D)
  - Acute toxicity, Inhalation (Category D)
  - Serious eye damage (Category A)
  - Toxic to Reproduction (Category A)
  - Specific Target Organ Toxicity (Category B)
  - Aquatic toxicity (Acute or Chronic) (Category A)
- HSNO Classification:
- 5.1.1B - Oxidising substances that are liquids or solids: medium hazard
  - 6.1C - Substance that is acutely toxic (Oral)
  - 6.1D - Substance that is acutely toxic (Inhalation – vapours, dusts or mists)
  - 6.3B - Substance that is mildly irritating to the skin
  - 6.4A - Substance that is irritating to the eyes
  - 6.6B - Substance that is a suspected human mutagen
  - 6.7B - Substance that is a suspected human carcinogen
  - 6.8A - Substance that is known or presumed to be a human reproductive or developmental toxicant
  - 6.8C - Substance that produces toxic human reproductive or developmental effects on or via lactation
  - 6.9A - Substance that is toxic to human target organs or systems (Repeated exposure)
  - 6.9B - Substance that is harmful to human target organs or systems (Repeated exposure)
  - 9.1A - Substance that is very ecotoxic in the aquatic environment
  - 9.3B - Substance that is ecotoxic to terrestrial vertebrates

**2.2 GHS Label elements, including precautionary statements**



Pictogram

Signal word

# Danger

## Hazard statement(s)

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H360 May damage fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

## Precautionary statement(s)

### Prevention

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat.

P220 Keep/Store away from clothing/ combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

### Response

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/ physician.

P330 Rinse mouth. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P391 Collect spillage.

### Storage

P405 Store locked up.

### Disposal

P501 Dispose of contents/ container to an approved waste disposal plant. Restricted to professional users.

## 2.3 Other hazards - none

### Hazard Classification Australia:

Classified as Hazardous according to criteria of National Occupational Health & Safety Commission, Australia (NOHSC).

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

### New Zealand:

Classified as Hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand.

Classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2007 Transport of Dangerous Goods on Land.

HSNO Classification:

- 5.1.1B - Oxidising substances that are liquids or solids: medium hazard
- 6.1C - Substance that is acutely toxic (Oral)
- 6.1D - Substance that is acutely toxic (Inhalation – vapours, dusts or mists)
- 6.3B - Substance that is mildly irritating to the skin
- 6.4A - Substance that is irritating to the eyes
- 6.6B - Substance that is a suspected human mutagen
- 6.7B - Substance that is a suspected human carcinogen
- 6.8A - Substance that is known or presumed to be a human reproductive or developmental toxicant
- 6.8C - Substance that produces toxic human reproductive or developmental effects on or via lactation
- 6.9A - Substance that is toxic to human target organs or systems (Repeated exposure)
- 6.9B - Substance that is harmful to human target organs or systems (Repeated exposure)
- 9.1A - Substance that is very ecotoxic in the aquatic environment
- 9.3B - Substance that is ecotoxic to terrestrial vertebrates

Hazard statement codes:

- H272 May intensify fire; oxidizer.
- H301 Toxic if swallowed.
- H316 Causes mild skin irritation.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H360 May damage fertility or the unborn child.
- H362 May cause harm to breast-fed children.
- H372 Causes damage to organs through prolonged or repeated exposure (by inhalation).
- H373 May cause damage to organs through prolonged or repeated exposure (by ingestion).
- H410 Very toxic to aquatic life with long lasting effects.
- H432 Toxic to terrestrial vertebrates.

Precautionary statement codes - Prevention:

- P102 Keep out of reach of children. -This statement applies only where the substance is available to the general public.
- P103 Read label before use. -This statement applies only where the substance is available to the general public.
- P104 Read Safety Data Sheet before use.
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P220 Keep/Store away from clothing/combustible materials.
- P221 Take any precaution to avoid mixing with combustibles.
- P260 Do not breathe dust/fume/vapours.
- P263 Avoid contact during pregnancy/while nursing.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment. -This statement does not apply where this is the intended use.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement codes - Response:

- P101 If medical advice is needed, have product container or label at hand. -This statement applies only where the substance is available to the general public.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P330 Rinse mouth.

P331 Do NOT induce vomiting.  
 P308+P313 IF exposed or concerned: Get medical advice/ attention.  
 P370+P378 In case of fire: Use appropriate fire extinguisher for surrounding environment for extinction.  
 P391 Collect spillage.  
 INHALATION:  
 P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  
 INGESTION:  
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
 EYES:  
 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.  
 SKIN:  
 P332+P313 If skin irritation occurs: Get medical advice/ attention.

Precautionary statement codes - Storage:  
 P405 Store locked up.

Precautionary statement codes - Disposal:  
 P501 In the case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Regulations 2001. This may also include any method of disposal that must be avoided. See Section 13 for disposal details.  
 Australia:  
 Classified as Hazardous according to criteria of National Occupational Health & Safety Commission, Australia (NOHSC).  
 Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

**Other Information**

Lead poisoning is one of the commonest occupational diseases, although in recent years there has been a decline in both the number of reported cases and the severity of the symptoms presented, hence lead poisoning has shifted from an industrial hazard to an environmental one. The toxicity of lead compounds depends largely on their solubility and particle size.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Ingredients	Name	Proportion
	Lead Nitrate	10099-74-8 100 %

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### 4. FIRST AID MEASURES

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<b>Inhalation</b>	If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.
<b>Ingestion</b>	Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.
<b>Skin</b>	Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.
<b>Eye</b>	If dust in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and persist seek medical attention.

<b>First Aid Facilities</b>	Eyewash and normal washroom facilities.
<b>Advice to Doctor</b>	Treat symptomatically.
<b>Other Information</b>	For advice in an emergency, contact a Poisons Information Centre (Phone Australia 13 1126; New Zealand 0800 POISON / 0800 764 766) or a doctor at once.

## 5. FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Use appropriate fire extinguisher for surrounding environment.
<b>Hazards from Combustion Products</b>	Under fire conditions this product may emit toxic and/or irritating fumes.
<b>Hazchem Code</b>	1Y
<b>Precautions in connection with Fire</b>	Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Emergency Procedures</b>	Increase ventilation. Evacuate all unprotected personnel. Wear sufficient respiratory protection and full protective clothing to prevent exposure. Sweep up material avoiding dust generation or dampen spilled material with water to avoid airborne dust, then transfer material to a suitable container. Wash surfaces well with soap and water. Seal all wastes in labelled plastic containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.
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## 7. HANDLING AND STORAGE

<b>Precautions for Safe Handling</b>	Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of dust in the work atmosphere. Avoid inhalation of dust, and skin or eye contact. Maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities.
<b>Conditions for Safe Storage</b>	Store in a cool, dry, well-ventilated area, out of direct sunlight and moisture. Store in labelled, corrosion-resistant containers. Keep containers tightly closed. Store away from bases, water and other incompatible materials. Have appropriate fire extinguishers available in and near the storage area. Ensure that storage conditions comply with applicable local and national regulations.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>National Exposure Standards</b>	<p>No exposure standards have been established for the mixture by the Australian National Occupational Health &amp; Safety Commission (NOHSC) or the Occupational Safety and Health Service (OSH) of the New Zealand Department of Labour. However, over-exposure to some industrial chemicals may result in enhancement of pre-existing adverse medical conditions and/or allergic reactions and should be kept to the least possible levels.</p> <p>The exposure limits for dust not otherwise specified are as follows:</p> <p>Australian National Occupational Health And Safety Commission (NOHSC) exposure standards:</p> <p>Dust TWA 10 mg/m<sup>3</sup> (inspirable fraction)</p> <p>New Zealand Workplace Exposure Standards (OSH):</p> <p>Particulates TWA 10 mg/m<sup>3</sup> (inhalable) TWA 3 mg/m<sup>3</sup> (respirable)</p> <p>TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.</p>
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<b>Biological Limit Values</b>	No biological limit allocated.
<b>Engineering Controls</b>	Provide sufficient ventilation to keep airborne levels below the exposure limits. Where dusts or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a local exhaust ventilation system is required.
<b>Respiratory Protection</b>	If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable dust/particulate filter should be used. Reference should be made to Australian/New Zealand Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.
<b>Eye Protection</b>	Safety glasses with side shields or chemical goggles should be worn. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.
<b>Hand Protection</b>	Wear gloves of impervious material such as impervious PVC or rubber gloves. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.
<b>Footwear</b>	Wear safety footwear. Final choice will vary according to individual circumstances. Reference should be made to AS/NZS 2210.1: 2010 Safety, protective and occupational footwear-Guide to selection, care and use.
<b>Body Protection</b>	Suitable protective work wear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance</b>	White powder
<b>Odour</b>	Not available
<b>Melting Point</b>	decomposes at 470°C
<b>Boiling Point</b>	Not available
<b>Solubility in Water</b>	Not available
<b>Specific Gravity</b>	4.53 (at 20°C)
<b>pH Value</b>	Not available
<b>Vapour Pressure</b>	Not available
<b>Vapour Density (Air=1)</b>	Not available
<b>Flash Point</b>	Not available
<b>Flammability</b>	May act as an oxidising agent and can assist combustion.
<b>Flammable Limits - Lower</b>	Not available
<b>Flammable Limits - Upper</b>	Not available
<b>Molecular Weight</b>	331.21

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## 10. STABILITY AND REACTIVITY

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<b>Chemical Stability</b>	Stable under normal conditions of use.
<b>Conditions to Avoid</b>	Extremes of temperature and direct sunlight. Dust accumulation.
<b>Incompatible</b>	Ammonium thiocyanate, carbon, lead hypophosphite.

## Materials

<b>Hazardous Decomposition Products</b>	Dangerous when exposed to fire hazard. On decomposition will emit toxic fumes, such as lead fumes. Nitrates are powerful oxidising agents and may react violently with reducing agents.
<b>Hazardous Reactions</b>	Reacts violently with incompatible materials.
<b>Hazardous Polymerization</b>	Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

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### Toxicology Information

Toxicity data listed below.

### Inhalation

Harmful by inhalation. Inhalation of product dusts can cause irritation of the nose, throat and respiratory system.

### Ingestion

Harmful if swallowed. Ingestion of this product can cause irritation to the mouth, throat, oesophagus and stomach with symptoms of nausea, abdominal discomfort, vomiting and diarrhoea.

### Skin

Skin contact may cause mechanical irritation resulting in redness and itching.

### Eye

Eye contact may cause mechanical irritation. May result in mild abrasion.

### Chronic Effects

Danger of cumulative effects. The effects of lead poisoning may not be apparent immediately but significant absorption by inhalation or swallowing over a period of time may produce adverse effects due to the accumulation of lead in the body. Studies of humans and animals indicate that lead may exert gametotoxic, embryotoxic, and teratogenic effects that could influence the survival and development of the fetus and newborn. It appears that prenatal viability and development may also be indirectly affected by lead through its effects on the health of the expectant mother. The unborn therefore constitutes a group at risk for the effects of lead on health. Also, certain information regarding male reproductive functions has led to concern regarding the impact of lead on men.

### Reproductive Toxicity

May cause harm to the unborn child. This product is classified by NOHSC as Toxic to reproduction Category 1 (substances that cause developmental toxicity). Possible risk of harm to the unborn child. This product is classified by NOHSC as Toxic to reproduction Category 3 : - substances that cause concern for humans owing to possible developmental toxicity effects.

### Acute Toxicity - Oral

Oral LD50 (guinea pig): 1330 mg/kg

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## 12. ECOLOGICAL INFORMATION

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### Ecotoxicity

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

### Persistence / Degradability

Not available

### Mobility

Not available

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## 13. DISPOSAL CONSIDERATIONS

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### Disposal Considerations

Product Disposal:  
Product wastes are controlled wastes and should be disposed of in accordance with all applicable local and national regulations. This product can be disposed through a licensed commercial waste collection service. The product should be rendered non-hazardous before being sent to a licensed landfill facility.  
Do not dispose directly into the sewerage system. Do not discharge into drains or

watercourses or dispose where ground or surface waters may be affected. Personal protective clothing and equipment as specified in Section 8 of this SDS must be worn during handling and disposal of this product. The ventilation requirements as specified in the same section must also be followed, and the precautions given in Section 7 of this SDS regarding handling must also be followed.

In New Zealand, the disposal agency or contractor must comply with the New Zealand Hazardous Substances (Disposal) Regulations 2001. Further details regarding disposal can be obtained on the ERMA New Zealand website under specific group standards.

#### Container Disposal:

The container or packaging must be cleaned and rendered incapable of holding any substance. It can then be disposed of in a manner consistent with that of the substance it contained. In this instance the packaging can be disposed through a commercial waste collection service.

Alternatively, the container or packaging can be recycled if the hazardous residues have been thoroughly cleaned or rendered non-hazardous.

In New Zealand, the packaging (that may or may not hold any residual substance) that is lawfully disposed of by householders or other consumers through a public or commercial waste collection service is a means of compliance with regulations.

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## 14. TRANSPORT INFORMATION

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### Transport Information Australia:

This material is classified as a Division 5.1 (Oxidising Agents) Dangerous Goods and Subsidiary Division 6.1 (Toxic Substances) according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).

Division 5.1 Dangerous Goods are incompatible in a placard load with any of the following:

- Class 1, Explosives
- Division 2.1, Flammable Gases
- Division 2.3, Toxic Gases
- Class 3, Flammable Liquids
- Division 4.1, Flammable Solids
- Division 4.2, Spontaneously Combustible Substances
- Division 4.3, Dangerous When Wet Substances
- Some Division 5.1 Oxidising substances ( Refer Table 9.2)
- Division 5.2, Organic Peroxides
- Class 6, Toxic and Infectious Substances, if the Class 6 substance is a fire risk substance
- Class 7, Radioactive Substances
- Class 8, Corrosive Substances
- Class 9, Miscellaneous Dangerous Goods, if the Class 9 substance is a fire risk substance
- Fire risk substances
- Combustible liquids

And are incompatible with food and food packaging in any quantity.

### New Zealand:

This material is classified as a Class 5.1 Oxidising Substance and Subsidiary Division 6.1 (Toxic Substances) according to NZS 5433:2007 Transport of Dangerous Goods on Land. This material must not be loaded in the same freight container or on the same vehicle with:

- Class 1, Explosive
- Division 2.1, Flammable gases
- Division 2.3, Toxic gases
- Class 3, Flammable liquids
- Division 4.2, Spontaneously combustible substances
- Division 4.3, Dangerous When wet
- Division 5.2, Organic peroxides
- Division 6.2, Infectious substances



- Class 8, Corrosives  
 Must not be loaded with in the same freight container; and on the same vehicle must be separated horizontally by at least 3 metres unless all but one are packed in separate freight containers with:

- Division 4.1, Flammable Solids
- Division 6.1, Toxic Substances
- Class 7, Radioactive Materials unless specifically exempted

Goods of packing group II or III may be loaded in the same freight container or on the same vehicle if transported in segregation devices with:

- Flammable Liquids (Class 3),
- Division 4.1, Flammable Solids
- Division 4.2, Spontaneously Combustible Substances
- Division 4.3, Dangerous When Wet Substances
- Division 5.2, Organic Peroxides
- Division 6.1, Toxic Substances
- Division 6.2, Infectious Substances
- Class 8, Corrosive Substances

And are incompatible with food and food packaging in any quantity.

<b>U.N. Number</b>	1469
<b>Proper Shipping Name</b>	LEAD NITRATE
<b>DG Class</b>	5.1
<b>Sub.Risk</b>	6.1
<b>Hazchem Code</b>	1Y
<b>Packing Group</b>	II
<b>EPG Number</b>	5B2
<b>IERG Number</b>	31
<b>IMDG Marine Pollutant (MP)</b>	This product is classified as a MARINE POLLUTANT according to the International Maritime Dangerous Goods Code (IMDG).

## 15. REGULATORY INFORMATION

<b>Regulatory Information</b>	Australia: Classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia. Classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
<b>Poisons Schedule</b>	S6
<b>National and or International Regulatory Information</b>	New Zealand: Classified as Hazardous according to the New Zealand Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001. All components of this product are listed on the New Zealand Inventory of Chemicals (NZIoC) or exempted. HSNO (CCID) Name: Lead nitrate
<b>Hazard Category AICS (Australia)</b>	Toxic,Dangerous for the environment All components of this product are listed on the Australian Inventory of Chemical Substances (AICS).

## 16. Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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