



## Safety Data Sheet

Date of Issue: 12/06/2020

Expiry: 12/06/2025

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name: **ECP Limited**  
Address: 39 Woodside Ave, Northcote, Auckland , New Zealand 0627

|   |                       |                    |                    |                 |      |
|---|-----------------------|--------------------|--------------------|-----------------|------|
| Emergency Tel: 0800 243 622 or<br>.....0800 CHE M CA LL |                       | Tel +64 9 480 4386 | FAX +64 9 480 4385 |                 |      |
| Product   | Manganese(II) Sulfate |                    |                    | Code            | 3120 |
| CAS#  | HSNO#                 | UN #               | DG Class/es        | Packing group # |      |
| 10034-96-5  | HSR003945             | 3077               | 9                  | III             |      |

Recommended use: Laboratory Investigations

### 2. Hazards identification

#### 2.1 GHS Classification

Specific Target Organ Toxicity (Category B), : H373  
Aquatic toxicity (Acute or Chronic) (Category D), ; H401



Signal Word : **Warning**

| Hazard statement(s) |  |
|---------------------|--|
| H373                | May cause damage to organs through prolonged or repeated exposure. |
| H401                | Toxic to aquatic life.   |

| Precautionary statement(s) |   |
|----------------------------|---|
| <b>Prevention</b>          |   |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.               |
| P273                       | Avoid release to the environment.                                   |
| <b>Response</b>            |   |
| P314                       | Get medical advice/ attention if you feel unwell.                   |
| <b>Disposal</b>            |   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant. |

**2.3 Other hazards** : none

### 3. Composition/information on ingredients

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Substance / Mixture : Substance

#### 3.1 Substances

Formula : MnO<sub>4</sub>S · H<sub>2</sub>O  
Molecular weight : 169.02 g/mol  
CAS-No. : 10034-96-5  
EC-No. : 232-089-9  
Index-No. : 025-003-00-4

#### Hazardous components

| Component                            | Classification           | Concentration |
|--------------------------------------|--------------------------|---------------|
| <b>Manganese Sulfate Monohydrate</b> |                          |               |
|                                      | 6.9 B; 9.1 D; H373, H401 | <= 100 %      |

### 4. First aid measures

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#### 4.1 Description of first aid measures

##### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

##### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Consult a physician.

##### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

##### In case of eye contact

Flush eyes with water as a precaution.

##### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### **4.3 Indication of any immediate medical attention and special treatment needed**

No data available

## **5. Firefighting measures**

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### **5.1 Extinguishing media**

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### **5.2 Special hazards arising from the substance or mixture**

Sulphur oxides, Manganese/manganese oxides

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **5.4 Further information**

No data available

## **6. Accidental release measures**

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### **6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### **6.3 Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### **6.4 Reference to other sections**

For disposal see section 13.

## **7. Handling and storage**

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### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place. Hygroscopic.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Components with workplace control parameters

| Component                     | CAS No.    | Value                  | Control parameters  | Basis  |
|-------------------------------|------------|------------------------|---------------------|--|
| Manganese Sulfate Monohydrate | 10034-96-5 | WES-TWA                | 1 mg/m <sup>3</sup> | New Zealand. Workplace Exposure Standards for Atmospheric Contaminants |
|                               | Remarks    | Currently under review |                     |  |

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

## 9. Physical and chemical properties

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### 9.1 Information on basic physical and chemical properties

|   |                              |
|---|------------------------------|
| a) Appearance Form:                             | powder                       |
| Colour:   | light red                    |
| b) Odour  | No data available            |
| c) Odour Threshold                              | No data available            |
| d) pH   | 3.0 - 3.5 at 50 g/l at 20 °C |
| e) Melting point/freezing point                 | 700 °C                       |
| f) Initial boiling point and boiling range      | No data available            |
| g) Flash point                                  | No data available            |
| h) Evaporation rate                             | No data available            |
| i) Flammability (solid, gas)                    | No data available            |
| j) Upper/lower flammability or explosive limits | No data available            |
| k) Vapour pressure                              | No data available            |
| l) Vapour density                               | No data available            |
| m) Relative density                             | No data available            |
| n) Water solubility                             | No data available            |
| o) Partition coefficient: n-octanol/water       | No data available            |
| p) Auto-ignition temperature                    | No data available            |
| q) Decomposition temperature                    | No data available            |
| r) Viscosity                                    | No data available            |
| s) Explosive properties                         | No data available            |
| t) Oxidizing properties                         | No data available            |

**9.2 Other safety information** No data available

## 10. Stability and reactivity

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**10.1 Reactivity** No data available

**10.2 Chemical stability** Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions** No data available

**10.4 Conditions to avoid** Avoid moisture.

**10.5 Incompatible materials** Strong oxidizing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Manganese/manganese oxides

Other decomposition products - No data available

In the event of fire: see section 5

## 11. Toxicological information

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### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - 2,150 mg/kg

Remarks: (anhydrous substance) (ECHA)

LC50 Inhalation - Rat - male and female - 4 h - > 4.45 mg/l

(OECD Test Guideline 403)

Remarks: (anhydrous substance)

#### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Remarks: (anhydrous substance)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irreversible effects on the eye

(OECD Test Guideline 405)

Remarks: (anhydrous substance)

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

Ames test

Result: negative

(National Toxicology Program)

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### Reproductive toxicity

No data available

#### Specific target organ toxicity - single exposure

No data available

Acute oral toxicity - After uptake of large quantities:, Nausea, Vomiting, Diarrhoea, gastric pain, Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute inhalation toxicity - Possible damages:, mucosal irritations, tissue damage, Pneumonia

#### Specific target organ toxicity - repeated exposure

Inhalation - May cause damage to organs through prolonged or repeated exposure. – Brain

#### Aspiration hazard

No data available

### **Additional Information**

RTECS: OP0893500

Men exposed to manganese dusts showed a decrease in fertility. Chronic manganese poisoning primarily involves the central nervous system. Early symptoms include languor, sleepiness and weakness in the legs. A stolid mask-like appearance of the face, emotional disturbances such as uncontrollable laughter and a spastic gait with tendency to fall in walking are findings in more advanced cases. High incidence of pneumonia has been found in workers exposed to the dust or fume of some manganese compounds., Prolonged or repeated inhalation may cause:, Pneumonia

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Manganese compounds are generally only very slightly absorbable via the gastrointestinal tract.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

#### **12.6 Other adverse effects**

Toxic to aquatic life with long lasting effects.

Discharge into the environment must be avoided.

## **12. Ecological information**

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### **12.1 Toxicity**

Toxicity to algae static test NOEC - *Desmodesmus subspicatus* (green algae) - 1 mg/l - 72 h

(OECD Test Guideline 201)

static test ErC50 - *Desmodesmus subspicatus* (green algae) - 61 mg/l - 72 h

(OECD Test Guideline 201)

Toxicity to bacteria

### **12.2 Persistence and degradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

### **12.3 Bioaccumulative potential**

No data available

### **12.4 Mobility in soil**

No data available

### **12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### **12.6 Other adverse effects**

Toxic to aquatic life with long lasting effects.

Discharge into the environment must be avoided.

## 13. Disposal considerations

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### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

## 14. Transport Information Table

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|      |                                 | ADR/RID –<br>European packaging<br>certification | IMDG<br>International<br>Maritime Dangerous<br>Goods Code | IATA – DGR<br>International Air Travel<br>Association – Dangerous<br>Goods Regulations |
|------|---------------------------------|--|---|--|
| 14.1 | UN Number                       | 3077   | 3077  | 3077   |
| 14.2 | UN Proper Shipping<br>name      | Manganese Sulfate<br>Monohydrate                 | Manganese Sulfate<br>Monohydrate                          | Manganese Sulfate<br>Monohydrate   |
| 14.3 | Transport Hazard<br>Class       | 9  | 9   | 9  |
| 14.4 | Packaging group                 | III  | III   | III  |
| 14.5 | Environmental<br>Hazards        | Yes  | Yes   | Yes  |
| 14.6 | Special precautions<br>for user |  |   |  |

## 15. Regulatory information

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

National regulatory information

HSNO Approval Code: HSR003945

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits  
Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required



## 16. Disclaimer

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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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