



# MATERIAL SAFETY DATA SHEET

## Manganese Sulfate

### 1. IDENTIFICATION

|                       |                                |
|-----------------------|--------------------------------|
| Product Name          | Manganese Sulfate.             |
| Chemical Name         | Manganese sulfate monohydrate. |
| Other Name/s          | Manganous sulfate monohydrate. |
| Manufacturers Name    | Nutri-Tech Solutions Pty Ltd.  |
| Telephone Number      | +61 (0)7 5472 9900.            |
| U.N. Number           | None allocated.                |
| Dangerous Goods Class | None allocated.                |
| Secondary Risk        | None allocated.                |
| Hazchem Group         | None allocated.                |
| Pack Group            | None allocated.                |
| EPG                   | None allocated.                |
| Poisons Schedule      | None allocated.                |
| Uses                  | Fertiliser, soil additive.     |

### 1.1 Emergency Contact Points

|                                     |  |
|-------------------------------------|--|
| Police and Fire Brigade             | 000.                                   |
| If ineffective                      | 13 22 03 (Exchange).                   |
| For emergency response              | 1800 625 526.                          |
| National Poisons Information Centre | 13 11 26 (from anywhere in Australia). |

### 1.2 Physical Description/Properties

|                       |                     |
|-----------------------|---------------------|
| Appearance            | Pink crystals.      |
| Chemical Formula      | $MnSO_4 \cdot H_2O$ |
| Odour                 | No data available.  |
| pH                    | 5 - 7               |
| Flammability          | Not combustible.    |
| Solubility in Water   | 39.3 g/100ml.       |
| Lower Explosion Limit | No data available.  |
| Upper Explosion Limit | No data available.  |
| Relative Density      | No data available.  |
| Specific Gravity      | 2.95                |
| Melting Point         | No data available.  |
| Boiling Point         | No data available.  |
| Vapour Pressure       | No data available.  |
| Evaporation Rate      | No data available.  |





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Reactivity Data . . . . . Stable. Decomposes on heating to produce sulfur oxides and manganese oxides.

1.3 Other Properties . . . . . No data available.

1.4 Ingredients . . . . . Manganese sulfate monohydrate CAS No. 10034-96-5 100%.

## 2 HEALTH HAZARD INFORMATION

### 2.1 Health Effects

General . . . . . Prevent dispersion of dust.

Ingestion . . . . . May be harmful if swallowed. Acute poisoning by ingestion causes abdominal pain, nausea, lethargy and possible coma. Inorganic manganese salts are poorly absorbed through the intestines, but may produce hypoglycemia and decreased calcium blood levels should absorption occur.

Eye Contact . . . . . May cause irritation, redness and pain.

Skin Contact . . . . . May be harmful in contact with the skin. May cause irritation, redness and pain. May be harmful if absorbed through the skin.

Inhalation . . . . . May be harmful by inhalation. Acute poisoning by inhalation causes nose irritation and sneezing with possible nose bleeds. May cause 24-28 hour flu-like illness characterised by chills, fever, aching muscles, dryness in the mouth and throat and headache.

### 2.2 First Aid and Emergency Procedures

Ingestion . . . . . Rinse mouth thoroughly with water immediately. Give plenty of water to drink. Do not induce vomiting. Seek medical attention.

Eye Contact . . . . . Immediately flush with plenty of water for at least 15 mins. Eyelids to be held open. Consult a physician.

Skin Contact . . . . . Wash effected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. Seek medical advice if effects persist.

Inhalation . . . . . Remove victim to fresh air. Employ artificial respiration if indicated. Seek medical attention.

2.3 First Aid Facilities . . . . . Eye bath station and safety shower.

2.4 Advice to Doctor . . . . . Treat symptomatically. Early administration of EDTA can hasten recovery, but it is of little value in cases of long standing.





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2.5 Toxicity Data ..... TLV (as Mn) 0.2 mg/m<sup>3</sup>  
 Toxicology ..... Oral Rat Ld50: 2150mg/kg.

## 3 PRECAUTIONS FOR USE

3.1 Conditions to Avoid ..... Avoid generation of large quantities of dust.

3.2 Materials to avoid ..... Aluminium, magnesium, powdered metals and strong oxidisers.

3.3 Engineering Controls..... In industrial situations maintain the concentration values below the TWA. This may be achieved by by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.

### 3.4 Personal Protection

Respirator..... Respiratory protection should comply with AS 1716. In the event of an emergency or planned entry into unknown concentrations a SCBA should be used.

Eye Protection ..... The use of a face shield, chemical goggles or safety glasses with side shields complying with AS1337 should be used.

Gloves ..... Occupational protective gloves complying with As2161 should be used.

Clothing ..... Protective clothing complying with AS 3765 should be worn, preferably with an apron.

Work/Hygienic Practices ..... Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

3.5 Special Fire Fighting Procedures ..... Full SCBA recommended.

3.6 Flammability ..... Not flammable. Gives off irritating or toxic fumes or gases in fire.





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## 4 SAFE HANDLING INFORMATION

4.1 Storage/Transport. . . . . Store in a cool, dry place. Store in a well ventilated area. Keep containers closed at all times.

### 4.2 Packaging/Labelling

UN No . . . . . Not applicable.  
 Pack Group . . . . . Not applicable.  
 Class . . . . . Not applicable.  
 Hazchem Code . . . . . Not applicable.  
 Subs Risk . . . . . Not applicable.  
 EPG No . . . . . Not applicable.  
 Shipping Name. . . . . Manganese sulfate.  
 Hazard . . . . . None.

### 4.3 Spills and Disposal

Spilled Material. . . . . Do NOT touch or walk through this product. Stop leak if safe to do so. Prevent entry into waterways, drains and confined areas. Prevent dust cloud. Use clean non-sparking tools to collect material and place it into loosely-covered plastic containers for later disposal.

Disposal . . . . . Dispose of in accordance with all local, state and federal regulations.

### 4.4 Fire/Explosion Hazard

Fire/Explosion . . . . . Material is not combustible, but gives off irritating or toxic fumes or gases in a fire. Containers may explode when heated. Runoff may pollute waterways.  
 Extinguishing Media . . . . . Use media appropriate to surrounding fire conditions.

## 5 OTHER INFORMATION

The use of fire extinguishers of the chlorinated hydrocarbon type is NOT recommended, as toxic products will probably be produced by the decomposition of the extinguishing medium when it comes into contact with the hot manganese compounds.

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