

DATE OF ISSUE 8th April 2009

**BARMAC INDUSTRIES PTY LTD  
3 MARY ST, BLACKSTONE Q 4304**

**MATERIAL SAFETY DATA SHEET**

**PRODUCT NAME: BARMAC MANGANESE SULPHATE**  
**PHONE: (07) 3280 3000**  
**EMERGENCY AFTER HOURS NUMBER: (07) 3280 3000**

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Classified as hazardous by Worksafe Australia Criteria

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**IDENTIFICATION**

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**OTHER NAMES:** Manganous sulfate, Monohydrate: Manganese Mesosulfate (MnSO<sub>4</sub>.H<sub>2</sub>O)

**USES:** Fertilisers, feed additive, paints and varnishes, ceramics, textile dyes, medicines, fungicides, ore flotation, catalyst in viscose process, synthetic manganese dioxide.

**UN NUMBER:** N/A

**HAZCHEM CODE:** N/A

**DANGEROUS GOODS CLASS:** 9

**POISONS SCHEDULE:**

**SUBSIDIARY RISK:** N/A

**PHYSICAL DESCRIPTION/PROPERTIES**

**APPEARANCE:** translucent, pale pink granular powder

**FORMULA:** MnSO<sub>4</sub>.H<sub>2</sub>O

**FLASHPOINT ( ° C):** N/A

**BOILING POINT ( ° C):** N/A

**FLAMMABILITY LIMITS (%):** N/A

**VAPOUR PRESSURE (\_\_\_):** N/A

**SOLUBILITY IN WATER (g/L):** 762 g/l (20<sup>0</sup>C)

**SPECIFIC GRAVITY:** 2.95 (water = 1)

**OTHER PROPERTIES**

Decomposition Temp: 117°C Molecular Weight: 169.02 Solubility: Soluble in water. Insoluble in alcohol.

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**INGREDIENTS**

<b><u>CHEMICAL ENTITY</u></b>	<b><u>CAS NO.</u></b>	<b><u>PROPORTION</u></b>
Manganese (2) Sulphate Monohydrate	[10034-96-5]	90-100%

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**HEALTH HAZARD INFORMATION**

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**HEALTH EFFECTS**

**ACUTE:**

**SWALLOWED:** 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 intestine, but may produce hypoglycemia and decreased calcium blood levels should absorption occur.

**EYES:** May irritate eyes and cause redness and pain.

**SKIN:** May be harmful in contact with skin. May cause irritation, redness and pain. May be harmful if absorbed through the skin.

**INHALED:** May be harmful by inhalation. Acute poisoning by inhalation causes nose irritation and sneezing with possible nose bleeds. May cause 24-48 hour flu like illness characterised by chills, fever, aching muscles, dryness in the mouth and throat and headache. May irritate the respiratory tract and increase the incidence of upper respiratory infections (pneumonia).

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**CHRONIC**

Chronic manganese poisoning can result from excessive inhalation and ingestion exposure and involves impairment of the central nervous system. Early symptoms include sluggishness, sleepiness, and weakness in the legs. Advanced cases have shown fixed facial expression, emotional disturbances, spastic gait, and falling. Illness closely resembles Parkinson's Disease. Kidney effects, blood changes and manganese psychosis also may occur as a result of chronic exposure. Chronic inhalation exposure can cause lung damage.

**FIRST AID**

**SWALLOWED:** Rinse mouth with water. Give water to drink. DO NOT induce vomiting. Seek medical Attention.

**EYES:** Immediately flush eyes with plenty of water holding eyelids open. Seek medical attention.

**SKIN:** Remove contaminated clothing. Flush affected area with plenty of water. If irritation persists, seek medical attention.

**INHALED:** Remove victim from exposure to fresh air. Employ artificial respiration if indicated. Seek medical attention.

**ADVICE TO DOCTOR**

Treat symptomatically based on judgement of doctor and individual reactions of patient. Early administration of EDTA can hasten recovery, but it is of little value in cases of long standing.

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**TOXICITY DATA**

Oral LD50	=	2150mg/kg (rat)
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**PRECAUTIONS FOR USE**

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**EXPOSURE STANDARDS:** No exposure limit has been assigned to this material. However, the exposure standard for dust not otherwise specified is 10mg/m<sup>3</sup> (for inspirable dust) and 3mg/m<sup>3</sup> (for respirable dust)

**ENGINEERING CONTROLS:** A system of local and/or general exhaust is recommended to keep employee exposures as low as possible.

**PERSONAL PROTECTION:** Respirator: wear an NIOSH approved respirator if engineering controls are inadequate. Eyes: Safety glasses with side shields conforming with EN166. Hands: Protective gloves are recommended (EN 374). Clothing: Impervious coveralls and safety footwear.

**FLAMMABILITY:** Product is a non-flammable solid.

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**SAFE HANDLING INFORMATION**

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**STORAGE AND TRANSPORT:** Store in a cool, dry, well ventilated area. Keep containers tightly closed when not in use. Protect against physical damage. Store away from incompatible materials including oxidising agents, acids, aluminium, magnesium, powdered metals and sources of ignition. Protect from direct sunlight, moisture and electrostatic charges. Hygroscopic. This product is not classified dangerous for transport according to the Australian Code for the transport of dangerous goods by road and rail. Ensure an eye bath and safety shower are available ready for use.

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**SPILLS AND DISPOSAL:** Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Personnel involved in the clean up should wear full protective clothing. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Do not allow product to reach drains, sewers or waterways. If the product does enter a waterway, advise the EPA. Use spark proof equipment.

**FIRE/EXPLOSION HAZARD:** Non-combustable solid. Material will not burn. Incompatible with strong oxidising agents, acids, aluminium, magnesium, powdered metals and sources of ignition. Fire or heat may produce irritating, poisonous and/or corrosive gasses including sulfur oxides.

**EXTINGUISHING MEDIA** In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions. 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 hot manganese compounds.

**RISK PHASES**

**R48/20/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.**

**R51 Toxic to aquatic organisms.**

**R53 May cause long-term adverse effects in the aquatic environment**

**SAFETY PHASES**

**S2** Keep out of reach of children.

**S22** Do not breathe dust.

**S25** Avoid contact with eyes.

**S61** Avoid release to the environment. Refer to special instructions/MSDS.

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NOTICE: Information for this product is believed to be reliable, however buyer and user assume all risk of use, handling and storage whether in accordance with directions or not. Barmac Industries Pty Ltd and its agents give no guarantee or warranty of any kind express or implied concerning the use of this product and will not accept any responsibility whatsoever

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whether in contract or tort for any loss including consequential loss arising out of the use of this product or caused by this product.

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