

# Material Safety Data Sheet Of Manganese sulfate monohydrate

## Section 1: Product And Company Identification

### Product identifiers

Product name: Manganese (II) Sulfate Monohydrate  
Product Number: FPM-1  
Brand: Pangoo  
CAS-No.: 10034-96-5  
Chemical Name: Manganese Sulfate, monohydrate  
Chemical Formula:  $MnSO_4 \cdot H_2O$

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

Identified uses : Feed for animals

### Details of the supplier of the safety data sheet

Company : Pangoo Biotech Hebei Co., Ltd.  
Telephone : 0086-317-8585021  
Fax : 0086-317-3171801

### Emergency telephone number

Emergency Phone : 0086-317-8585021

## Section 2: Hazards Identification

**Potential Acute Health Effects:** Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

### Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast.

TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to lungs, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

## Section 3 : Composition/Information On Ingredients

Composition:		
Name	CAS #	%by Weight
Manganese sulfate monohydrate	10034-96-5	100

#### Section 4 : First-Aid Measures

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##### **Eye Contact:**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

##### **Skin Contact:**

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

##### **Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

##### **Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

##### **Ingestion:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion: Not available.**

#### Section 5 : Fire-fighting Measures

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**Flammability of the Product:** Non-flammable.

**Auto-Ignition Temperature:** Not applicable.

**Flash Points:** Not applicable. **Flammable Limits:** Not applicable. **Products of Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** Not applicable.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:** Not applicable.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

#### Section 6 : Accidental Release Measures

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##### **Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

##### **Large Spill:**

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## Section 7 : Handling And Storage

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### **Precautions:**

Keep locked up.. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, metals, acids.

### **Storage:**

Hygroscopic. Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 25°C (77°F).

## Section 8 : Exposure Controls/Personal Protection

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### **Engineering Controls:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### **Personal Protection:**

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

### **Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

### **Exposure Limits:**

TWA: 5 (mg(Mn)/m) from OSHA (PEL) [United States] TWA: 0.2 (mg(Mn)/m) from ACGIH (TLV) [United States]  
Consult local authorities for acceptable exposure limits.

## Section 9 : Physical and Chemical Properties

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**Physical state and appearance:** Solid. (Efflorescent crystals solid.)

**Odor:** Odorless.

**Taste:** Not available.

**Molecular Weight:** 169.01 g/mole

**Color:** Red. (Light.)

**pH (1% soln/water):** Not available. **Boiling Point:** 850°C (1562°F) **Melting Point:** 700°C (1292°F) **Critical**

**Temperature:** Not available. **Specific Gravity:** 2.95 (Water = 1) **Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available. **Water/Oil Dist. Coeff.:** Not available. **Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water.

**Solubility:** Easily soluble in cold water, hot water.

## Section 10 : Stability and Reactivity

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**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Incompatible materials

**Incompatibility with various substances:** Reactive with oxidizing agents, metals, acids.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:**

Hygroscopic. Incompatible with powdered metals. May react violently with hydrogen peroxide.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## Section 11 : Toxicological Information

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**Routes of Entry:** Inhalation. Ingestion.

**Toxicity to Animals:**

LD50: Not available. LC50: Not available.

**Chronic Effects on Humans:**

MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. May cause damage to the following organs: lungs, central nervous system (CNS).

**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:**

May cause adverse reproductive effects (paternal) based on animal data. May affect genetic material.

**Special Remarks on other Toxic Effects on Humans:**

Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: May cause eye irritation. Inhalation: May cause nasal/ respiratory tract irritation. Ingestion: It is poorly absorbed following ingestion. It may cause gastrointestinal tract irritation with nausea, vomiting, and diarrhea. Chronic Potential Health Effects: Ingestion: Prolonged or repeated exposure may affect liver, blood, respiration, and metabolism. Prolonged or repeated inhalation or ingestion may cause argyria, which is characterized by blue-gray discoloration of the eyes, skin and mucous membranes. The toxicological properties of this substance have not been fully investigated.

## Section 12 : Ecological Information

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**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The product itself and its products of degradation are not toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13 : Disposal Considerations

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**Waste Disposal:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

#### Section 14 : Transport Information

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**DOT Classification:** Not a DOT controlled material (United States).

**Identification:** Not applicable.

**Special Provisions for Transport:** Not applicable.

#### Section 15 : Regulatory Information

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**Federal and State Regulations:** No products were found.

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

**WHMIS (Canada):** CLASS D-2B: Material causing other toxic effects (TOXIC).

**DSCL (EEC):**

R20/22- Harmful by inhalation and if swallowed. R36/37/38- Irritating to eyes, respiratory system and skin. R40- Possible risks of irreversible effects. S2- Keep out of the reach of children. S22- Do not breathe dust. S36- Wear suitable protective clothing. S46- If swallowed, seek medical advice immediately and show this container or label.

**HMIS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 0

**Reactivity:** 0

**Personal Protection:** E

**National Fire Protection Association (U.S.A.): Health:** 2

**Flammability:** 0

**Reactivity:** 0

**Specific hazard: Protective Equipment:**

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

#### Section 16 : Other Information

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"IMO" : not dangerous for sea transport

Disclaimer

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Additional references can be taken from the label or the product description. The information given here is correct to the best of our knowledge at the time of writing this sheet. No responsibility can be taken for improper use or handling of the product.

