

**Safety Data Sheet**

For Compliance with OSHA 29 CFR 1910.1200 and ANSI Z400.1-1998

**Section 1: Identification****Product Name** Manganese Sulfate USP Monohydrate**Commercial Name** Not available.**Product Use** Not available**Restrictions On Use** Not available**Product Code** 30-1345**Company** PCCA  
9901 South Wilcrest  
Houston, TX 77099  
Phone: 1-800-331-2498  
Fax: 1-800-874-5760In case of emergency contact:  
**CHEMTREC (24hr) 1-800-424-9300****Section 2: Hazard(s) Identification****OSHA Haz Com:** Acute toxicity (oral) Category 4 Serious eye damage/eye irritation Category 1**CFR 1910.1200****Signal Word** DANGER**Hazard Statement(s)** Harmful if swallowed. Causes serious eye damage.**Pictogram(s) or Symbol(s)****Precautionary Statement(s):****Prevention** P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P280 - Wear protective gloves/protective clothing/eye protection/face protection.**Response** P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell 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 P330 - Rinse mouth**Storage** Not available.**Disposal** P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation**Section 3: Composition/Information on Ingredients****Substance/Mixture** Substance**Components** Manganese sulfate monohydrate**% By Weight** 100**CAS#** 10034-96-5**Molecular Weight** 169.01 g/mole**Chemical Formula** MnSO4.H2O**Synonym(s)** Manganous Sulfate, Hydrate; Sulfuric Acid, Manganese (2 +) Salt (1:1), Monohydrate**Mixtures**

Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
Manganese sulfate monohydrate	10034-96-5	100		Not available.

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**Section 4: First-Aid Measures**

<b>Inhalation</b>	Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
<b>Skin Contact</b>	Rinse with water. Soap may be used. Take victim to a doctor if irritation persists. Wash skin with plenty of water.
<b>Eye Contact</b>	Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. Rinse eyes with water as a precaution.
<b>Ingestion</b>	Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre ( <a href="http://www.big.be/antigif.htm">www.big.be/antigif.htm</a> ). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Call a poison enter/doctor/physician if you feel unwell.
<b>Symptoms/Effects</b>	
<b>Acute</b>	Slightly harmful if swallowed. Slightly irritant to skin AFTER INHALATION OF DUST: Coughing. ON HEATING: Metal fume fever Symptoms/effects after skin contact : Slight irritation. Red skin. Symptoms/effects after eye contact : Redness of the eye tissue. Symptoms/effects after ingestion : AFTER INGESTION OF HIGH QUANTITIES: Irritation of the gastric/intestinal mucosa
<b>Delayed</b>	ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Coughing. Respiratory difficulties. Impairment of the nervous system. Brain affection. Feeling of weakness. Loss of appetite. Behavioural disturbances. Slurred speech. Movement disturbances. Myasthenia. Tremor. Impaired concentration. Emotional instability

**Immediate Medical Attention**

Treat symptomatically.

**Section 5: Fire-Fighting Measures****Suitable Extinguishing Media**

Adapt extinguishing media to the environment for surrounding fires. Water spray. Dry powder. Foam.

**Unsuitable Extinguishing Media**

Not available.

**Products of Combustion**

Not available.

**Firefighters Special Equipment and Precautions**

Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighborhood close doors and windows. Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it. Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**Section 6: Accidental Release Measures**

Protective equipment : Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Emergency procedures : Ventilate spillage area. Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes. Do not breathe dust/fume/gas/mist/vapors/spray. Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighborhood close doors and windows Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Emergency procedures : Avoid contact with skin and eyes. Avoid release to the environment. Prevent soil and water pollution. Prevent spreading in sewers For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Collect spillage. Methods for cleaning up : Mechanically recover the product. Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. Other information : Dispose of materials or solid residues at an authorized site.

**Section 7: Handling and Storage**

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Handling: Ensure good ventilation of the work station. Wear personal protective equipment. Avoid raising dust. Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not breathe dust/fume/gas/mist/vapors/spray. Storage: Observe very strict hygiene - avoid contact. Keep container tightly closed. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Technical measures : Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Storage conditions : Store in a well-ventilated place. Keep cool. Incompatible materials : Strong oxidizers. Metals. Reactive metals (Al, K, Zn ...). Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. water/moisture. Storage area : Store in a dry area. Unauthorized persons are not admitted. Meet the legal requirements. Special rules on packaging : SPECIAL REQUIREMENTS: closing. watertight. dry. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers. Packaging materials : SUITABLE MATERIAL: cardboard. plastics. glass.

**Section 8: Exposure Controls/Personal Protection**

<b>Exposure Limits</b>	DNEL DNEL 0.2 mg/m <sup>3</sup> (Long-term - systemic effects, inhalation, workers) PNEC PNEC 0.0128 mg/l (aqua, freshwater)
<b>Engineering Controls</b>	Appropriate engineering controls : Ensure good ventilation of the work station. Environmental exposure controls : Avoid release to the environment.
<b>Personal Protection</b>	Personal protective equipment: Dust/aerosol mask with filter type P2. Gloves. In case of dust production: protective goggles. Safety glasses. Materials for protective clothing: GIVE GOOD RESISTANCE: butyl rubber. PVC Hand protection: Gloves Eye protection: Safety glasses. In case of dust production: protective goggles. Safety glasses Skin and body protection: Protective clothing Respiratory protection: Dust production: dust mask with filter type P3

**Section 9: Physical and Chemical Properties**

<b>Appearance</b>	Rose. Powder. Granular solid.		
<b>Odor</b>	Odorless.		
<b>Odor Threshold</b>	Not available		
<b>Melting Point</b>	700 °C	<b>pH</b>	3.0 - 3.5 (5 %)
<b>Freezing Point</b>	Not available	<b>Vapor Pressure</b>	Not applicable.
<b>Boiling Point/Range</b>	Not applicable	<b>Vapor Density</b>	Not available.
<b>Decomposition temperature</b>	> 117 °C	<b>Viscosity</b>	Not available.
<b>Partition Coefficient: n-octanol/water</b>	Not available	<b>Evaporation Rate</b>	Not available
<b>Flash Point</b>	Not applicable	<b>Autoignition temperature</b>	Not available
<b>Flammability</b>	Not available	<b>Flammability or Explosive Limits:</b>	
		<b>Lower</b>	Not available
		<b>Upper</b>	Not available

<b>Solubility(ies)</b>	Soluble in water. Water: 100 g/100ml
<b>Other</b>	VOC content : 0 % Other properties : Hygroscopic. Acid reaction.

**Section 10: Stability and Reactivity**

<b>Reactivity</b>	The product is non-reactive under normal conditions of use, storage and transport.
<b>Chemical Stability</b>	Hygroscopic
<b>Hazardous Polymerization</b>	Will not occur.
<b>Conditions to Avoid</b>	None under recommended storage and handling conditions
<b>Incompatible Materials</b>	Oxidizing agent. Powdered metals
<b>Hazardous Decomposition Products</b>	Sulphur oxides. Metallic oxides.

**Section 11: Toxicological Information**

<b>RTECS</b>	OP0893500
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**Acute Toxicity**

Oral: Harmful if swallowed. LD50 oral rat 2150 mg/kg (Published data) LC50 inhalation rat (mg/l) > 4.45 mg/l/4h ATE US (oral) 500 mg/kg body weight

**Skin Corrosion/Irritation**

Slightly irritant to skin.

**Serious Eye Damage/Irritation**

Causes serious eye damage

**Respiratory or Skin Sensitization**

Not available

**Germ Cell Mutagenicity**

Not available

**Carcinogenicity**

Not available

**Reproductive Toxicity**

Not available

**Routes of Entry**

Skin and eye contact.

**Symptoms Related to Exposure**

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Slight irritation. Red skin Redness of the eye tissue AFTER INGESTION OF HIGH QUANTITIES: Irritation of the gastric/intestinal mucosa.

**Potential Health Effects**

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Coughing. Respiratory difficulties. Impairment of the nervous system. Brain affection. Feeling of weakness. Loss of appetite. Behavioural disturbances. Slurred speech. Movement disturbances. Myasthenia. Tremor. Impaired concentration. Emotional instability.

**Target Organ(s)** Not available

**Section 12: Ecological Information****Ecotoxicity**

Ecology - general : Dangerous for the environment. Toxic to aquatic life with long lasting effects. Toxic to aquatic life. Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Ecology - water : Toxic to crustacea. Harmful to fishes. Mild water pollutant (surface water). pH shift.

**Persistence and Degradability**

Not available

**Bioaccumulative Potential**

Not available

**Mobility in Soil**

Not available

**Other Adverse Effects**

Not available

**Section 13: Disposal Considerations****Waste Disposal**

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions. Product/Packaging disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Remove to an authorized dump (Class I). Precipitate/make insoluble. Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

**Disposal of Container**

Not available

**Other Considerations**

Not available

**Section 14: Transport Information****DOT Classification**

Not a DOT controlled material (United States). This material is not classified dangerous good according to international transportation regulations (ADR/RID-IMDG-ICAO/IATA).

**Section 15: Regulatory Information****Regulations**

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). Components present in this product at a level which could require reporting under the statute are: NONE Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual report release of toxic chemicals that appear in 40 CFR 372 (used for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are: NONE

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**Other**

WHMIS CLASS D-2B: Material causing other toxic (Canada) effects (TOXIC).;DSCL (EEC) R36/38- Irritating to eyes and skin.;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**

Not available.