



# American International Chemical, Inc.

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## MATERIAL SAFETY DATA SHEET

### MANGANESE SULFATE

#### SECTION 1 - CHEMICAL PRODUCT AND COMPANY INFORMATION

American International Chemical, Inc. 135 Newbury Street Framingham, MA 01701	Emergency Number: Chemtrec Information Number:	800-424-9300 703-527-3887 800-238-0001
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Revision Date: August 2007

Synonyms: None Known

CAS #: 10034-96-5

DOT Hazard Class: Not Regulated

#### SECTION 2 - COMPOSITION AND INFORMATION ON INGREDIENTS

Manganese Sulfate 98% min.

#### SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: White/pink crystalline powder, odorless.

Neurotoxin, may effect respiratory system. Avoid prolonged or repeated exposure to dusts. Will cause irritation to skin and eyes. Avoid mixing with powdered metals.

##### POTENTIAL HEALTH EFFECTS:

Acute (Short Term Effects)

##### Manganese

EYES: Redness, tear production of eyes.

SKIN: Red, dry skin.

INHALATION: Pulmonary effects, consisting of dyspnea, shallow respiration and fever which mimic metal fume fever. Physical irritation to eyes and throat. Cold-like symptoms, chills and muscle aches, dryness of mouth.

Chronic (Long Term Effects)

##### Manganese

EYES: Conjunctivitis and corneal damage from irritant dusts.

SKIN: Dermatitis

#### SECTION - 3 HAZARD S IDENTIFICATION cont'd

**INHALATION:** Central Nervous System: Symptoms may appear after 1-2 years of elevated exposure.  
**Stage I** - subclinical, reversible - Indifference; irritability; headache; anorexia; sleep disturbances; decreased libido; arthralgia; muscular spasm and diminished fine motor coordination; emotional and behavioral disorders called “manganic psychosis” are more frequently seen among miners at this state.  
**Stage II** - clinical or intermediate - Speech becomes slow and stammering with monotonous voice; mask-like faces; excessive salivation; awkward gestures; tremors of tongue; arms, and legs; gait disturbances.  
**Stage III** - late - Muscular rigidity; bradykinesia with slow spasmodic gait; emotional instability; postural instability and imbalance; diminished metal ability.

**AGGRAVATION OF EXISTING CONDITIONS:** Higher incidence of respiratory infection and pneumonia; persons with a history of alcoholism, psychiatric, neurologic, or pulmonary diseases, liver dysfunction, or anemia.

**Target Organs:** As Manganese (Central Nervous System) Ceiling 5 mg/m<sup>3</sup> OSHA, PEL, ACGIH TLV

**CARCINOGENICITY:** Not listed under OSHA, IARC, or NTP.

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#### **SECTION 4 - FIRST AID MEASURES**

**EYES:** Immediately flush for at least 15 minutes while holding eyelids open. If symptoms develop, consult a physician.

**SKIN:** Wash thoroughly with soap and water. A shower is recommended if significant exposure occurs.

**INGESTION:** If swallowed and the person is conscious, drink water and induce vomiting. Call a physician.

**INHALATION:** Remove to fresh air. Treat symptoms. Call a physician.

**NOTE TO PHYSICIAN:** Based on the individual reactions of the patient, the physician’s judgment should be used to control symptoms and clinical condition.

**CAUTION:** If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

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#### **SECTION 5 - FIRE FIGHTING MEASURES**

**Flash Point:** Not Applicable

**Flammable Limits:** Not Applicable

**Extinguishing Media:** Use media that is appropriate to treat surrounding fire or dry chemical or carbon dioxide.

**Special Fire Fighting Procedures:**

Use fire fighting procedure that is appropriate to treat surrounding fire.

**Unusual Fire Explosion Hazard:** When heated above 850°C, may emit toxic gases of manganese and sulfur.

**Auto Ignition Temperature:** Not Applicable

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#### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

Isolate hazard area and deny entry to unnecessary or unprotected personnel. Sweep or shovel material into waste disposal container. Flush area with water.

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### **SECTION 7 - HANDLING AND STORAGE**

Avoid contact with skin, eyes and clothing. Avoid breathing dust. Use normal personal hygiene and housekeeping. Store in cool dry area away from other incompatible materials.

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### **SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION**

RESPIRATORY PROTECTION: Use NIOSH/MSHA approved respirators.

VENTILATION REQUIREMENTS: Ventilate as necessary to eliminate dust from the work area.

SKIN AND EYE PROTECTION:

Use rubber or neoprene gloves, chemical goggles and clothing sufficient to protect skin from dust.

WORK, HYGIENIC PRACTICES:

As required to protect skin and eyes from dust. Safety showers and/or eye wash should be available. Do not leave food or smoke in work area. Wash thoroughly and remove or clean any contaminated clothing.

EXPOSURE GUIDELINES: As Mn

	OSHA	-	TWA	-	STEL	CEILING
						5 mg/m <sup>3</sup>
	NIOSH		1 mg/m <sup>3</sup>		3 mg/m <sup>3</sup>	-
	ACGIH		5 mg/m <sup>3</sup>		-	-

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### **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point: Not Applicable

Vapor Pressure (MM Hg): Not Applicable

Vapor Density (AIR=1): Not Applicable

Specific Gravity (H2O=1): 2.95

Percent Volatile by Volume (%): Not Applicable

Melting Point: 700°C

Evaporation Rate (Butyl Acetate=1): Not Applicable

Solubility in Water: Complete

pH: Not Applicable

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### **SECTION 10 - STABILITY AND REACTIVITY**

CHEMICAL STABILITY: Stable under normal temperature of pressure.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: May release toxic gases above 850°C of manganese oxides and sulfur oxides.

INCAPABILITY: Avoid mixing with powdered metals.

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### **SECTION 11 - TOXICOLOGICAL INFORMATION**

Manganese Sulfate Mouse - Intrapentoneal LD<sub>50</sub> 120 mg/kg

Manganese Rat - Oral - LD<sub>50</sub> - 9000 mg/kg

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### **SECTION 12 - ECOLOGICAL INFORMATION**

Not available

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### **SECTION 13 - DISPOSAL CONSIDERATIONS**

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

RCRA WASTE #: Not Listed

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### **SECTION 14 - TRANSPORTATION INFORMATION**

DOT HAZARD CLASS: Not Regulated

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### **SECTION 15 - REGULATORY INFORMATION**

TSCA (TOXIC SUBSTANCE CONTROL ACT):

This product is listed on the TSCA Inventory.

CERCLA REPORTABLE REQUIREMENTS: (RQ) None

SARA TITLE III INFORMATION:

Section 302 Extremely Hazardous Substance: Unlisted

Section 313 Toxic Chemicals: Listed -As Manganese Compounds

Section 311/312 Hazard Category: Acute Health, Chronic Health

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### **SECTION 16 - OTHER INFORMATION**

Manganese Sulfate

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Reason for Issue: Changed Date

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