

# MATERIAL SAFETY DATA SHEET

Manganese Sulfate Monohydrate

## SECTION 1 . Product and Company Identification

Product Name and Synonym: Manganese Sulfate Monohydrate  
Product Code: M1031  
Material Uses:  
Manufacturer: Science Stuff  
1104 Newport Ave  
Austin, TX 78753  
(512) 837-6020  
Entry Date : 6/11/2013  
Print Date: 6/11/2013  
24 Hour Emergency Assistance : Chemtrec 800-424-9300  
Canutec 613-996-6666

Health:	2
Flammability:	0
Reactivity:	0
Hazard Rating: Least Slight Moderate High Extreme 0 1 2 3 4 NA=Not Applicable NE=Not Established	

## SECTION 2 HAZARD IDENTIFICATION

Harmful if swallowed. May cause irritation. Avoid breathing vapors, or dusts. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

Physical State and Appearance: Solid

Emergency Overview:

WARNING!  
HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED>  
CAUSES EYE AND SKIN IRRITATION>  
MAY BE HARMFUL IF INHALED>  
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:  
BLOOD< KIDNEYS< RESPIRATORY TRACT< CENTRAL NERVOUS SYSTEM>

Routes of entry:  
Eye contact. Inhalation. Ingestion.

Potential Acute Health Effects  
Eyes: Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching.  
Skin: Hazardous in case of skin contact (permeator, irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.  
Inhalation: May be hazardous in case of inhalation.  
Ingestion: Hazardous in case of ingestion.

Potential Chronic Health Effects

Carcinogenic Effects: This material is not known to cause cancer in animals or humans.

Medical Conditions Aggravated by Overexposure: Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

## SECTION 3 MIXTURE COMPONENTS

SARA 313	Component	CAS Number	Percent Comp.	Dimension	Exposure Limits
<input type="checkbox"/>	Manganese Sulfate Monohydrate	CAS# 10034-96-5	100 %	W/W	OSHA PEL 5 mg(Mn)/m <sup>3</sup> (Ceiling)

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## SECTION 4 FIRST AID MEASURES

Harmful if swallowed. May cause irritation. Avoid breathing vapors, or dusts. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

FIRST AID: SKIN: Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconscious person.

## SECTION 5 FIRE FIGHTING MEASURES

Fire Extinguisher Type: Any means suitable for extinguishing surrounding fire

Fire / Explosion Hazards: None Known.

Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

Sweep up and place in suitable (fiberboard) containers for reclamation or later disposal.

Small Spill and Leak:

Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill and Leak:

Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Spill Kit Information: The following EMD Chemicals Inc. SpillSolv™ absorbent is recommended for this product SX1310 Acid Treatment Kit

## SECTION 7 HANDLING AND STORAGE

Store in a cool dry place. Hygroscopic.

## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: NIOSH approved dust mask

Ventilation

Local Exhaust

Mechanical

Protective Gloves: Gloves to prevent skin exposure as rubber or vinyl

Eye Protection: Safety Glasses w/  
Side Shields

Other Protective Equipment: Wear appropriate clothing to prevent skin exposure

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering

## Manganese Sulfate Monohydrate

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

Eyes: Splash goggles.

Body: Lab coat.

Respiratory: Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Hands: Gloves.

Feet: Not applicable

### 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.

Belgium Minister of Labour (Belgium, 1998).

VL: 0.2 mg/m<sup>3</sup> 8 hour(s)

BAUA (Germany, 1997).

Spitzenbegrenzung: 2 mg/m<sup>3</sup>

TWA: 0.5 mg/m<sup>3</sup> 8 hour(s)

DK-Arbejdstyilsinet (Denmark, 1996).

GV: 2.5 mg/m<sup>3</sup> 8 hour(s)

Tyterveyslaitos (Finland, 1998).

TWA: 0.5 mg/m<sup>3</sup> 8 hour(s)

INRS (France, 1996).

VME: 1 mg/m<sup>3</sup> 8 hour(s)

National Authority for Occupational Safety/Health (Ireland, 1999).

OEL: 5 mg/m<sup>3</sup> 8 hour(s)

Arbeidsinspectie (Netherlands, 1999).

TGG 15 min: 3 mg/m<sup>3</sup> 15 minute(s)

TGG 8 uur: 1 mg/m<sup>3</sup> 8 hour(s)

N-Arbejdstyilsinet (Norway, 1996).

AN: 2.5 mg/m<sup>3</sup> 8 hour(s)

AFS (Sweden, 1996).

NGV: 1 mg/m<sup>3</sup> 8 hour(s)

EH40-OES (United Kingdom (UK), 1997).

TWA: 5 mg/m<sup>3</sup> 8 hour(s)

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Melting Point:	700 Deg. C	Percent Volatile by Volume:	NA
Boiling Point:	850 Deg C decomposes	Evaporation Rate	NA
Vapor Pressure:	NA	Evaporation Standard	
Vapor Density:	NA	Auto Ignition Temp	NE
Solubility in Water:	soluble	Lower Flamm. Limit in Air	NA
Appearance /Odors:	Odorless pink solid	Upper Flamm. Limit in Air	NA
Flash Point:	NA		
Specific Gravity:	2.95		

## SECTION 10 STABILITY AND REACTIVITY INFORMATION

## Manganese Sulfate Monohydrate

Stability:	Stable
Conditions to Avoid:	None known
Materials to Avoid:	Strong oxidizing agents, metals, acids.
Hazardous Decomposition Products:	Oxides of manganese and sulfur
Hazardous polymerization:	Will Not Occur
Conditions to Avoid:	None known

### SECTION 11 Toxicological Information

Toxicity: Not available

Chronic Effects on Humans: Not available

Acute Effects on Humans:

Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching. Hazardous in case of skin contact (permeator, irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. May be hazardous in case of inhalation. Hazardous in case of ingestion.

Special Remarks on Other Toxic Effects on Humans; MAY BE IRRITANTING ON CONTACT WITH MUCOUS MEMBRANES.

Carcinogenic Effects: This material is not known to cause cancer in animals or humans.

Teratogenic Effects: Not available.

Mutagenic Effects: Not available.

### SECTION 12 Ecological Information

Ecotoxicity: Not available

BOD5 and COD: Not available

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

### SECTION 13 Disposal Considerations

EPA Waste Number: Not available.

Treatment: Material does not have an EPA waste number and is not a listed waste, however consultation with a permitted waste disposal site (TSD) should be accomplished.

### SECTION 14 Transport Information

DOT Classification: Not Regulated

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

### SECTION 15 Regulatory Information

U.S. Federal Regulations:

TSCA 8(b) inventory: Manganese Sulfate

SARA 302/304/311/312 extremely hazardous substance: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Manganese Sulfate

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Manganese

Sulfate: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard

SARA 313 toxic chemical notification and release reporting: No products were found.

Clean Water Act (CWA) 307: No product were found.

Clean Water Act (CWA) 311: No product were found.

Clean air act (CAA) 112 accidental release prevention: No product were found.

Clean air act (CAA) 112 regulated flammable substances: No product were found.

Clean air act (CAA) 112 regulated toxic substance: No product were found.

WHMIS (Canada):

Manganese Sulfate Monohydrate

Class D-2B: Material causing other toxic effects (TOXIC).

This product has been classified in accordance with the the hazard criteria of thr Controlled Product Regulations and the MSDS contain all required information.

**SECTION 16 Additional Information**

Flammability

Health

Reactivity

Revisions

NFPA

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