



Super Conductor Materials, Inc.

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Chemtrec: (800) 424-9300

Poison Center: (800) 562-8236

Revision Date: January 8th, 2019

SAFETY DATA SHEET

Identity: Manganese Oxide

Formula: Mn₂O₃

SECTION I - GENERAL INFORMATION

Manufacturer: Super Conductor Materials, Inc.

The information below is believed to be accurate and represents the best information available to Super Conductor Materials, Inc. However, SCM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular weight: 157.86

CAS #	OSHA PEL	ACGIH TLV	%
1317-34-6	5 mg/m ³	5mg/m ³	0.0-100.0%

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: N/A

Vapor Pressure (vs. air or mmHg): N/A

Melting Point: 1080°C (1976°F)

Density: 4.50 g/cm³

Evaporation Rate: N/A

Flash Point: N/A

Solubility in water: Insoluble/

Soluble in HCl evolving chlorine

Appearance and odor: Black-fine powder and pieces, odorless

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Explosive Limits: Unknown

LEL: N/A

UEL: N/A

Extinguishing Media: Use suitable extinguishing agent for surrounding material and type of fire

Special Fire Fighting Procedures:

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Unusual Fire and Explosive Hazards: Product in finely divided form.



SECTION V - RADIOACTIVITY DATA

Stability: Stable

Conditions to Avoid (instability): None

Incompatibility (Materials to avoid): None recorded

Hazardous Decomposition or Byproducts: Manganese fume

Hazardous Polymerization: Will not occur

Conditions to avoid (hazardous polymerization): None

SECTION VI – HEALTH HAZARDS DATA

Routes of entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other? No

Signs and Symptoms of Overexposure:

Inhalation: May cause red, dry throat. Metal fume may cause: chills, fever, muscle aches, headaches, dry throat, and sleepiness, weakness in the legs, muscles twitching, nocturnal leg cramps and slowness of speech. Manganese may cause: a slapping gait, cramps, tremors, slurred speech, hallucinations, insomnia, mental confusion, inflammation of the kidneys, cirrhosis of the liver, anorexia, muscular fatigue, sexual impotence, reduction of the white blood cells and anemia.

Ingestion: No acute or chronic health effects recorded.

Skin: May cause redness, itching.

Eye: May cause redness, itching, watering.

Health Hazards (Acute and Chronic):

Inhalation:

Acute: Toxic by inhalation of dust. Manganese compounds may cause irritation of the respiratory tract and mucous membranes. Inhalation of manganese compounds' dusts and fumes may cause metal fume fever.

Chronic: Chronic inhalation of manganese compounds' dust particles, approximately 3 um in size, for a period of a few months may cause pulmonary pneumonitis. They may also cause manganese poisoning if exposed for long periods. Manganese compounds may cause manganese, psychic and neurological disorders effecting the central nervous system, to develop (not fatal but may cause permanent disability).

Ingestion:

Acute: Absorption of manganese compounds from the gastrointestinal tract is poor under normal conditions.

Chronic: No chronic effects recorded.

Skin:

Acute: May cause irritation. Moderately toxic by subcutaneous route.

Chronic: No chronic effects recorded.

Eye:

Acute: May cause moderate irritation.

Chronic: No chronic health effects recorded.

Target Organs: May affect the central nervous system, kidneys, respiratory system, and liver.



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Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Medical Conditions Aggravated by Exposure: None

Emergency and First Aid Procedures:

- Inhalation:* Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention
- Ingestion:* Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person
- Skin:* Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist
- Eye:* Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide ventilation and extinguish sources of ignition. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste disposal method:

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

Hazard Label Information:

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

Precautions: Avoid breathing dust and use adequate ventilation.

SECTION VIII- CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

Ventilation:

Local Exhaust: Local exhaust ventilation may be necessary to control any air contaminants to within their PELs or TLVs during the use of this product.

Mechanical (General): Not recommended.

Work/Hygienic/Maintenance Practices:

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established