
MATERIAL SAFETY DATA SHEET

Prince Minerals, Inc.
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New York, NY 10017**CONTACT NUMBERS:**
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Section I: Product Information

Identity: GRANUSOL MANGANESE
Synonyms/ Trade Names:
Names: NO PRODUCT SYNONYMS
Revision Date: 03/2007

Section II: Hazardous Ingredients

<u>Chemical Name:</u>	<u>CAS #</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Percent</u>
Manganese Compounds (as Mn)	7439-96-5	0.5 mg/m ³	0.2 mg/m ³	35
Amorphous Silica	112926-00-8	80% SiO ₂	3 R 10 T	5 – 10
Quartz (SiO ₂)	14808-60-7	10/(%SiO ₂ +2)R30/ (%SiO ₂ +2)T	0.05	<1
CaO	1305-78-8	5 mg/m ³	2 mg/m ³	0-6

Section III: Physical/Chemical Characteristics

Bulk density:	98 lbs/ft ³	Freeze Point:	Solid at STP	% volatile by vol:	0% H ₂ O
Water solubility:	Slight	Melting Point:	>2000 °F	Vapor Density:	N/A
pH: (10% aqueous slurry)	6-10	Boiling Point:	N/A	Vapor Pressure:	N/A
Appearance and Odor:	A dry, dark gray to black mixture of BB sized granules. Odorless.				

Section IV: Fire and Explosion Hazard Data

Emergency Overview:	Dry, free-flowing, black granules ranging in size from minus 6 to plus 20 mesh. Avoid excessive inhalation of dust. Not a fire, spill nor environmental hazard.
Flammable Properties:	Material will not burn. No unusual fire or explosion hazards.
Extinguishing Media:	Use extinguishing media appropriate to combustibles in the surrounding area.
Protection for Firefighters:	Wet material should be kept out of eyes and off skin. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Material does not give off toxic fumes in a fire unless molten.

Section V: Reactivity Data

Stability:	Stable under normal conditions of storage.
Conditions to Avoid:	None under normal conditions.
Incompatibility (materials to avoid):	Components in product can react violently with hydrogen peroxide, calcium hypochlorite or fluorine.
Hazardous Decomposition or Byproducts:	None under normal conditions.
Hazardous Polymerization:	Will not occur.

Section VI: Health Hazard Data

Primary Route of Exposure:	Inhalation
Relevant Routes of Exposure:	EYE CONTACT: Particulate is a physical eye irritant. SKIN CONTACT: Low toxicity by skin contact. INHALATION: Chronic overexposure by inhalation of airborne particulate may irritate upper respiratory system as well as the throat. Possible slurred speech, and/or unsteady gait from extremely high exposure. INGESTION: If ingested in sufficient quantity, may cause gastrointestinal disturbances. Symptoms may include irritation, nausea, vomiting, abdominal pain, and diarrhea.

Acute and Chronic effects of Exposure:	Irritation from excessive exposure to skin, eyes, nose, throat and respiratory system. Exposure via inhalation to heavy concentrations of dust containing manganese compounds for as little as three months have affected the central nervous system. The excessive inhalation of manganese compounds usually begins with complaints of languor and sleepiness. This is followed by weakness in the legs and the development of stolid, mask-like faces. The patient speaks with a slow monotonous voice. Then muscular twitching appears varying from a fine tremor of the hands to coarse, rhythmical movements of the arms, legs, and trunk. There is a slight increase in tendon reflexes, ankle and patellar clonus, and a typical Parkinsonian slapping gate.
Signs and Symptoms of Exposure:	(Dust) tearing of eyes, burning sensation in the throat, cough, chest discomfort.
Aggravation of Pre-existing Conditions:	The excessive inhalation of mineral dust may aggravate pre-existing chronic lung conditions such as, but not limited to, bronchitis, emphysema, and asthma.
Emergency and First Aid Procedures:	EYE CONTACT: Flush eyes immediately with water for at least 15 minutes. Seek medical attention if irritation persists. SKIN CONTACT: Immediately wash affected area with mild soap and water to remove any dust adhering to the skin. Seek medical attention if irritation develops or persists. INHALATION: If exposed to excessive levels of dust or fumes, remove to fresh air and seek medical attention if cough or other symptoms develop. If not breathing, give artificial respiration or give oxygen by trained personnel, and get medical attention. IF INGESTED: If ingested in sufficient quantity and victim is conscious, give 1-2 glasses of water or milk. Never give anything by mouth to an unconscious person. Leave decision to induce vomiting to qualified medical personnel, since particles may be aspirated into the lungs. Seek immediate medical attention.

Section VII: Precautions for Safe Handling and Use

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:	CONTAINMENT: Product is dry solid (granular or powder) and not readily soluble in water. However, prevent spilled product from entering streams, water bodies, and wastewater systems. CLEANUP: Vacuum or sweep up dry material and place in a container for reuse. Avoid creating excessive airborne dust. Cleanup personnel need to wear approved respiratory protection (air-purifying or air-supply), gloves, long-sleeved clothing and goggles to prevent irritation from contact and inhalation. EVACUATION: Isolate hazard area. Keep unnecessary and unprotected personnel from entering. POTENTIAL ENVIRONMENTAL EFFECTS: No data available on any adverse effects of this material on the environment.
Waste Disposal Method:	COLLECTION: If possible, collect and reuse spilled product. DISPOSAL METHOD: Follow all applicable Federal, State, and local laws, rules, and regulations regarding the proper disposal of this material.
Handling and Storing Precautions:	Minimize dust generation and accumulation. Avoid breathing dust. Avoid contact with skin and eyes. Store in a cool, dry area. Keep container closed when not in use.

Section VIII: Control Measures

Engineering Controls:	If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limits listed in Section 2 .
Eye Protection:	Corrosive to eyes. Wear protective safety goggles when dust generation is likely.
Skin Protection:	Wear clothing sufficient to cover the skin, safety shoes, and leather gloves for hand protection against dry material.
Respiratory Protection:	Use NIOSH/MSHA approved respiratory protection (air purifying or air supplying) when concentrations are above exposure limit value. A respiratory protection program that meets OSHA 29 CFR part 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant the use of a respirator.
Work and Hygienic Practices:	Wash thoroughly after using product. Wash contaminated clothing. Wash hands before eating or drinking.

SARA Title III Section 313 Supplier Notification

This product contains chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372.45:

Component: Manganese Compounds

CAS#: 7439-96-5

% by Weight: 35