



Material Safety Data Sheet

CARUS MANGANESE BLACK

Section 1 Chemical Product and Company Identification

CARUS MANGANESE BLACK

MANUFACTURER'S NAME: CARUS CORPORATION	TELEPHONE NUMBER FOR INFORMATION: (815) 223-1500 Fax: (815) 224-6697
MANUFACTURING FACILITY: Carus Corporation 1500 Eighth Street P. O. Box 1500 LaSalle, IL 61301	CHEMTREC TELEPHONE NO. (800) 424-9300 EMERGENCY TELEPHONE NO. (800) 435-6856

Section 2 Composition and Information on Ingredients

SYNONYMS: Pyrolusite, Manganese dioxide			
CLASS: Inorganic oxides			
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS):			
Health Hazard	1		
Flammability Hazard	0		
Reactivity Hazard	0		
Personal Protection Index	E (Safety Glasses, Gloves, and Dust Respirator)		
<u>Hazardous Ingredients</u>			
<u>Material or Component</u>	<u>CAS No.*</u>	<u>%</u>	<u>Hazard Data</u>
Manganese Dioxide	1313-13-9	78-84 %	PEL** C**** 5 mg Mn per cubic meter of air TLV-TWA*** 0.2 mg Mn per cubic meter of air
Alumina	1344-28-1	1-3%	TLV-TWA*** 10 mg per cubic meter of air (total)
Silicon Dioxide (Quartz)	14808-60-7	2-4%	TLV-TWA*** 0.05 mg per cubic meter of air (respirable)
Ferric Oxide	1309-37-1	3-5%	TLV-TWA*** 5 mg per cubic meter of air
Barium Oxide	1304-28-5	1-2%	TLV-TWA*** 0.5 mg Ba per cubic meter of air
* See Section 16			



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Section 3 Hazards Identification

<p>EFFECTS OF ACUTE EXPOSURE</p> <ol style="list-style-type: none"> 1. Inhalation May cause nose, throat and lung irritation. 2. Skin Contact May cause skin irritation or dehydrating of skin. 3. Eye Contact May cause eye irritation. 4. Ingestion Irritating to mouth, throat, and stomach.
<p>EFFECTS OF CHRONIC EXPOSURE</p> <p>Prolonged inhalation of manganese compounds above the TLV-TWA may cause lung irritation or central nervous system disorders. The symptoms simulate Parkinson's disease.</p>
<p>CARCINOGENICITY</p> <p>NTP: not listed IARC Monographs: not listed OSHA Regulated: not listed</p>
<p>MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE</p> <p>Dust or fine powder may further irritate mucous membranes or open wounds.</p>

Section 4 First Aid Measures

<p>EMERGENCY AND FIRST AID PROCEDURES</p> <ol style="list-style-type: none"> 1. Eyes Immediately flush eyes with large amounts of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Seek medical attention. 2. Skin Flush contaminated areas with large amounts of water. Remove contaminated clothing. Wash clothing before reuse. 3. Inhalation Remove person to fresh air. If breathing is difficult, administer oxygen. Seek medical attention. 4. Ingestion <u>Never give anything by mouth to an unconscious or convulsing person.</u> If conscious, give large quantities of water. Do not induce vomiting. Seek medical attention.
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Section 5 Fire Fighting Measures

FLASHPOINT None
FLAMMABLE OR EXPLOSIVE LIMITS Lower: Nonflammable Upper: Nonflammable
EXTINGUISHING MEDIA Water spray is most effective. Use dry chemical, CO ₂ , or foam if water cannot be used.
SPECIAL FIREFIGHTING PROCEDURES Wear self-contained breathing apparatus to protect from fumes which may be generated in a fire.
UNUSUAL FIRE AND EXPLOSION HAZARDS Carus Manganese Black is noncombustible but may increase the burning rate of materials if involved in a fire.

Section 6 Accidental Release Measures

<p>STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED Clean up spills immediately by scooping Manganese black into a metal drum. Avoid dust generation. Cover loosely. Recycle or dispose of in an approved landfill. Flush contaminated floors with abundant quantities of water into sewer, if permitted by federal, state, or local regulations.</p>

Section 7 Handling and Storage

Store in a cool, dry area. Segregate from easily oxidizable materials and organic compounds.
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Section 8 Exposure Controls and Personal Protection

<p>VENTILATION REQUIREMENTS Provide sufficient mechanical and/or local exhaust to maintain exposure levels below TLV-TWA limits for manganese and respirable silica.</p>
<p>RESPIRATORY PROTECTION In cases where dust exposure may exist, the use of NIOSH-MSHA dust and mist respirator or an air-supplied respirator is advised. Engineering or administrative controls should be implemented to control dust.</p>
<p>EYE PROTECTION Primary eye protection (safety glasses or goggles).</p>
<p>GLOVES Rubber or plastic gloves should be worn.</p>
<p>OTHER PROTECTIVE EQUIPMENT Normal work clothing is sufficient.</p>

Section 9 Physical and Chemical Properties

BOILING POINT: Not applicable	VAPOR PRESSURE: Not applicable
SOLUBILITY IN WATER: Insoluble	PERCENT VOLATILE BY VOL.: Not volatile
BULK DENSITY: 120-130 lb/cu. ft.	
MELTING POINT: Begins to decompose with evolution of oxygen at 535°C (995°F)	
APPEARANCE AND ODOR: Black powder or granular material, odorless	



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Section 10 Stability and Reactivity

STABILITY Stable under normal conditions.
CONDITIONS TO AVOID Contact with incompatible materials or heat (535°C/995°F)
INCOMPATIBLE MATERIALS Carus Manganese Black may act as an oxidizer under certain conditions. Segregate from oxidizable materials and organic compounds. Reacts with hydrochloric acid to evolve chlorine gas.
HAZARDOUS DECOMPOSITION PRODUCTS None
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION Material is not known to polymerize.

Section 11 Toxicological Information

Most diagnosed cases of manganese toxicity in humans have been reported following long-term exposures to airborne concentrations of manganese above the TLV-TWA. The usual form of chronic manganese toxicity involves the central nervous system.

Reports of adverse effects in humans from ingestion of manganese are rare.

Section 12 Ecological Information

Inorganic manganese compounds have negligible vapor pressures but exist in air as suspended particulate matter, which settle under the influence of gravity.

The transport of manganese in water is influenced by the solubility of the form present. Insoluble forms, such as manganese dioxide, are transported as sediments.

The biomagnification of manganese in the food chain does not appear to be significant.

Section 13 Disposal considerations

Carus Manganese Black is not considered a hazardous waste under 40 CFR 261. Dispose of material, which cannot be recycled, in a landfill approved to accept chemical waste.

Section 14 Transport Information

Proper Shipping Name:	Carus Manganese Black
ID Number:	Not regulated by DOT
Product R.Q. (lb.)	None



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Section 15 Regulatory Information

SARA Title III

Sec. 311/312 Hazard Categories: Acute and chronic.

Sec. 313 Reportable as manganese compounds (N450) and barium compounds (N040).

RCRA

Carus Manganese Black is not a hazardous waste.

CERCLA

Carus Manganese Black has no RQ (Reportable Quantity).

Section 16 Other Information

*Chemical Abstracts Service Number

**OSHA Permissible Exposure Limit, 29 CFR 1910.1000. Table Z-1

***American Conference of Governmental Hygienists (ACGIH), 1999 Time Weighted Average Concentration

****Ceiling Exposure Limit not to be exceeded under any circumstances.

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