

**MANGANESE OXIDE
SAFETY DATA SHEET**

DATE OF LAST REVISION: 07/13/15

Section 1: Identification

Product Name: Manganese Oxide

Company: Angstrom Sciences, Inc.
40 South Linden Street
Duquesne, PA 15110

For more information call: 412-469-8466

(Monday - Friday 9:00 AM -5:00 PM EST)

Section 2: HAZARD IDENTIFICATION

Signal Word: Warning



Hazard Statements:

302 + H332: Harmful if swallowed or if inhaled.

Precautionary Statements:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray

P264: Wash thoroughly after handling

P304 + P340: If Inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P301 + P312: If Swallowed: Call a Poison Center or doctor/physician if you feel unwell.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

HMIS Health Ratings (0-4):

Health: 2

Flammability: 0

Physical: 1

Section 3: Composition/Information on Ingredients

Chemical characterization: Ceramic

Additional Names: None

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Manganese Oxide (MnO)

CAS# Description: 1344-43-0

Percentage: 100 wt%

EC number: NIL

Manganese Oxide (MnO₂)

CAS Description: 1313-13-9

Percentage: 100 wt%

EC#: NIL

Manganese Oxide (Mn₂O₃)

CAS# Description: 39432-47-8

Percentage: 100 wt%

EC#: NIL

Section 4: FIRST AID MEASURES

General Treatment: Seek medical attention if symptoms persist.

Special Treatment: None

Important Symptoms: None

Eye Contact: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Skin Contact: Wash affected area with mild soap and water. Remove any contaminated clothing.

Inhalation: Remove to fresh air. If required, give artificial respiration. Seek medical advice.

Ingestion: Give one to two glasses of water and induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing Media: No special restrictions - Use suitable extinguishing agent for surrounding material and type of fire.

Flammability: Non-Flammable

Special Fire Fighting Procedure: Use full-face, self contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.

Environmental Precautions: Isolate runoff to prevent environmental pollution.

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Section 7: HANDLING AND STORAGE

Handling Precautions for safe handling: Wash thoroughly after handling

Conditions for safe storage, including any incompatibilities Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in Section 10.

Work/Hygienic Maintenance: Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

Ventilation: Provide sufficient ventilation to maintain concentration at or below threshold limit.

Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Permissible Exposure Limits: 5 mg/m³ as Mn, long-term value

Threshold Limit Value: 0.02 mg/m³ as Mn, long-term value

Special Equipment: Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Respiratory Protection: Dust respirator

Protective Gloves: Nitrile rubber, NBR 0.11 mm thick

Eye Protection: Safety glasses or goggles, Full face protection

Body Protection: Protective work clothing. Wear close-toed shoes and long sleeves/pants.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Form:	Powder
Color:	Black
Odor:	Odorless
Water Solubility:	Insoluble, rusts
Boiling Point:	N/A
Melting Point:	N/A
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	N/A
Molecular Weight:	N/A

Section 10: STABILITY AND REACTIVITY

Reactivity: Reacts with acids and oxidizing agents

Chemical Stability: Stable under recommended storage conditions

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Incompatible Conditions: None
Hazardous Decomposition Products: Metal oxide fume

Section 11: TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eyes: May cause irritation

Skin: May cause irritation

Ingestion: May cause irritation

Inhalation: May cause irritation

Chronic: Chronic exposure to manganese may cause impairment to the central nervous system. Symptoms include sluggishness, sleepiness, muscle weakness, and loss of facial muscle control, edema, emotional disturbances, spastic gait and falling.

Signs & Symptoms: N/A
Aggravated Medical Conditions: N/A
Median Lethal Dose: 3478 mg/kg for rat by mouth
Carcinogen: N/A

Section 12: ECOLOGICAL INFORMATION

Aquatic Toxicity: Low

Persistence Bioaccumulation Toxicity: No

Very Persistent, Very Bioaccumulative: No

Notes: N/A

Section 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state, national, and international regulations

Section 14: TRANSPORT INFORMATION

Hazardous: Not hazardous for transportation
Hazard Class: N/A
Packing Group: N/A
UN Number: N/A
Proper Shipping Name: N/A

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Section 15: REGULATORY INFORMATION

Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	No

Section 16: OTHER INFORMATION

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.