

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Manganese Dioxide**

AR060, AR062

This product is intended for laboratory use.

Alpha Resources Inc. 3090 Johnson Rd. Stevensville, MI 49127 (269)465-5559

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word: WARNING

SECTION 2— HAZARDS IDENTIFICATION**Hazards:** Acute toxicity, Oral (Category 4), Acute toxicity, inhalation (Category 4)**Hazard Statements:** Harmful if swallowed (H302), harmful if inhaled (H332)**Precautionary Statements:** Avoid breathing dust/fume/gas/mist/vapors/spray (P261), wash skin thoroughly after handling (P264), don't eat/drink/smoke when using this product (P270), use only outdoors or in well-ventilated area (P271), wear protective gloves/protective clothing (P280), if swallowed: call a poison center or doctor if you feel unwell (P301+P312), if on skin: wash with plenty of soap and water (P302+P352), call a poison center or doctor/physician if you feel unwell (P312), rinse mouth (P330), wash contaminated clothing before reuse (P363), and dispose of contents/container to an approved waste disposal plant (P501).**SECTION 3— COMPOSITION, INFORMATION ON INGREDIENTS****Hazardous substance required for disclosure.**

Component	CAS #	Common %
Manganese Dioxide	1313-13-9	<100
Kaolin	1332-58-7	<10

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with applicable provision of paragraph (i).

SECTION 4— FIRST AID MEASURES

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). Seek medical attention

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).

If on skin: Wash with plenty of water. (P302+P352). If persists seek medical attention and bring label.

If swallowed: Wash out mouth with water if the person is able to do so. Call a doctor or poison center.

SECTION 5 — FIRE FIGHTING MEASURES

Appropriate Extinguishing Media: Use regular dry chemical, appropriate foam, CO₂ or water spray.

Inappropriate Extinguishing Media: N/A

Specific Hazards Arising from Chemical: Manganese/Manganese Oxides

Fire Fighting Instructions: Evacuate area. Firefighters should use standard protective equipment including self-contained breathing apparatus.

Flash Point: N/A

Auto-ignition temperature: N/A

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use suitable personal protective equipment when cleaning up any spills. This should include chemical-resistant gloves, rubber boots, respirator, and safety eye protection.

Clean-up Method: Collect the material and dispose of according to local, regional, state, and federal regulations. Using damp cloth wipe up spill area. Avoid dust generation and breathing in vapors, mist, or gas.

SECTION 7 — HANDLING AND STORAGE

Handling: The potential for combustible dust formation should be taken into consideration before additional processing occurs. Avoid any contact with bare skin, clothing, and eyes. Avoid inhaling dust. Wash all areas after handling material. Proper ventilation is required when using this product.

Storage: This product should be stored in a cool, dry place and kept sealed (P233) when not in use. Don't release into environment.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limit Values:

Manganese Dioxide, OSHA (PEL); 5mg/m³

ACGIH (TLV); 0.2mg/m³

Kaolin, OSHA (PEL); N/A

ACGIH (resp.); 10mg/m³

Engineering Controls: Proper ventilation must be available to be certain exposure limits are not exceeded.

Personal Protection: Wear a NIOSH applicable certified respirator to limit exposure to materials.

Hand Protection: Glove suitability will differ depending on the end use of product.

Eye protection: Safety glasses with side shields or safety goggles are necessary if splashing is possible. Eye wash station should be in close proximity to work area. Safety shower should also be nearby.

Skin and Body Protection: Chemical and oil resistant clothing are recommended for extended periods of contact.

Hygiene: Wash hands and areas of possible exposure after handling material especially before eating, drinking, and smoking. The work clothing should also be washed regularly to remove any contaminants. Dispose of contaminated clothing that can't be deemed safe.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health, and environmental considerations only and may not represent the products specifications. Contact supplier for additional information.

Appearance: Black powder

Odorless

Specific Gravity: 5@20°C

Melting Point: 535 °C

Relative Density: 5gm/cm³

Vapor Density: N/A

Vapor pressure: N/A

Solubility: Insoluble in water

Boiling Point: Decomposes

Flash point: N/A

Auto-Ignition Temperature: N/A

Explosive limits, LEL (vol.%): N/A

Explosive limits, UEL (vol.%): N/A

SECTION 10 — STABILITY AND REACTIVITY

Stable material at normal laboratory conditions.

Avoid: Keep away from incompatible materials and moisture.

Incompatible: Strong acids, strong reducing agents, and organic materials.

Hazardous Decomposition Products: No data available

Hazardous Polymerization: None

SECTION 11 — TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Oral LD, Rat;>3478 mg/kg Inhalation TC_{Lo}, mouse; 49mg/m³ (7hr) [75d pre/ 1-18d(preg)]

Rabbit intravenous LD_{Lo}: 45mg/kg Inhalation TC_{Lo}, rat;1800µg/m³ (24h/35d-c)

Acute toxicity: no data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation and irritation to the mucous membranes.

Ingestion May be harmful if swallowed. Caustic effect on mouth, esophagus, and stomach. Can cause kidney damage.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Long term exposure to high concentrations of Manganese dust could lead to a disease of the central nervous system called Manganism.

SECTION 12 — ECOLOGICAL INFORMATION

Don't release into the environment.

Eco-toxicity Data: No data

Mobility in Soil: No data

Bio-accumulative Potential: No data

Persistence and Degradability: No data

SECTION 13 — DISPOSAL CONSIDERATIONS

Waste disposal should be done in compliance with existing federal, state and local environmental regulations. Do not contaminate any streams, lakes, or ponds.

SECTION 14 — TRANSPORT INFORMATION

Not regulated for land/air/sea transport by DOT/TDG/IMDG/IATA

SECTION 15 — REGULATORY INFORMATION

U.S. Regulations:

CERCLA Sections 102a/103 (40 CFR 302.4): Not regulated.

SARA Title III Section 302 (40 CFR 355.30): Not regulated.

SARA Title III Section 304 (40 CFR 355.40): Not regulated.

SARA Title III Section 313 (40 CFR 372.65): Manganese Compounds (Category code N458)

OSHA Process Safety (29 CFR 1910.119): Not regulated.

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21):

ACUTE HEALTH: Yes

CHRONIC HEALTH: Yes

FIRE: Yes

REACTIVE: No

PRESSURE: No

State Regulations: California Proposition 65: Not listed.

U.S. TSCA Inventory: Listed

TSCA 12(b), Export Notification: Not listed.

Canadian Regulations: WHMIS: C, D2A, and D2B

SECTION 16 — OTHER INFORMATION

The data and information as stated was furnished by the manufacturer/vendor/supplier of this product. Alpha Resources Inc. cannot warrant the accuracy of this information and shall not be responsible or liable for any damage that may result, should any of the information be erroneous.
