



Paradise Minerals

One of the biggest manufacturer and exporter of Minerals

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MANGANOUS OXIDE

Safety Data Sheet (SDS)

Premium Grade for Submerged Arc Welding (SAW) Flux Manufacturing

Product Name: Manganous Oxide
Chemical Name: Manganese (II) Oxide
Chemical Formula: MnO
CAS No.: 1344-43-0
EC No.: 215-695-8
UN Number: Not Regulated

Product Overview

Paradise Minerals supplies **high-purity Manganous Oxide (MnO)**, specially processed for **Submerged Arc Welding (SAW) Flux** manufacturing. The product offers high manganese content, excellent chemical stability, and controlled particle size, making it an ideal raw material for premium welding flux formulations requiring superior metallurgical performance.

Key Features

- ✓ High Purity Manganous Oxide (MnO)
- ✓ Excellent Chemical Stability
- ✓ Controlled Particle Size Distribution
- ✓ Low Moisture Content
- ✓ High Reactivity in Flux Formulations

- ✓ Consistent Batch Quality
- ✓ Suitable for SAW Flux Manufacturing

Typical Applications

- Submerged Arc Welding (SAW) Flux
- Agglomerated Welding Flux
- Welding Consumables
- Metallurgical Industry
- Steel Manufacturing
- Ceramic Industry
- Glass Industry
- Chemical Processing

Typical Physical Properties

Property	Value
Chemical Formula	MnO
Appearance	Green to Greyish Green Powder
Physical Form	Fine Powder
Odour	Odourless
Bulk Density	1.5–2.5 g/cm ³ (Approx.)
Specific Gravity	5.4
Melting Point	Approximately 1,780°C
Solubility	Insoluble in Water
Moisture	Low
Stability	Stable Under Normal Conditions

Typical Chemical Composition*

Component	Typical Value (%)
Manganese Oxide (MnO)	≥99.0
Iron (Fe ₂ O ₃)	≤0.30
Silicon Dioxide (SiO ₂)	≤0.20
Calcium Oxide (CaO)	≤0.10
Magnesium Oxide (MgO)	≤0.10
Loss on Ignition (LOI)	≤0.50

***Typical values. Actual composition may vary depending on product grade and customer specification.**

Safety Information

Manganous Oxide is **not flammable**, but dust generated during handling may cause irritation to the eyes, skin, and respiratory tract. **Prolonged or repeated inhalation of manganese-containing dust should be avoided**, as excessive exposure may affect the nervous system over time.

First Aid Measures

Eye Contact

Flush eyes with clean water for at least 15 minutes. Seek medical attention if irritation persists.

Skin Contact

Wash thoroughly with soap and water.

Inhalation

Move the affected person to fresh air. Seek medical attention if breathing difficulties or symptoms persist.

Ingestion

Rinse mouth with water. Do not induce vomiting. Obtain medical advice if discomfort occurs.

Fire Fighting Measures

- Non-Combustible Material
- Suitable Extinguishing Media:
 - Water Spray
 - Dry Chemical Powder
 - Foam
 - Carbon Dioxide (CO₂)

Handling & Storage

- Avoid breathing dust.
 - Minimize dust generation during handling.
 - Ensure adequate local exhaust ventilation.
 - Store in a cool, dry, and well-ventilated area.
 - Keep containers tightly closed.
 - Protect from moisture and contamination.
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Exposure Controls & Personal Protection

Eye Protection: Chemical Safety Goggles

Respiratory Protection: N95/P2 Dust Mask or Approved Respirator

Hand Protection: Chemical Resistant Gloves

Foot Protection: Safety Shoes

Protective Clothing: Industrial Workwear Recommended

Stability & Reactivity

Chemical Stability: Stable under recommended storage conditions.

Conditions to Avoid:

- Excessive dust formation
- Strong acids
- Strong oxidizing agents

Hazardous Decomposition Products:

May produce manganese oxide fumes if exposed to extremely high temperatures.

Environmental Information

- Avoid uncontrolled release into soil and waterways.
- Prevent dust dispersion into the environment.
- Dispose of waste in accordance with local environmental regulations.

Transportation Information

Not classified as dangerous goods under:

- IMDG Code
 - ADR
 - IATA
 - RID
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Why Choose Paradise Minerals?

- ✓ High Purity Manganous Oxide
- ✓ Consistent Chemical Composition
- ✓ Controlled Particle Size Distribution
- ✓ Excellent Performance in SAW Flux
- ✓ Reliable Bulk Supply
- ✓ Strict Quality Assurance
- ✓ Trusted Industrial Mineral Supplier Since **1981**