



Paradise Minerals

One of the biggest manufacturer and exporter of Minerals

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MATERIAL SAFETY DATA SHEET (MSDS)

1. Product Identification

Product Name: High MnO Slug

Application: Raw Material for Submerged Arc Welding (SAW) Flux Manufacturing

Product Form: Granules / Powder

Chemical Nature: Manganese Oxide Rich Mineral Slag

2. Composition / Information on Ingredients

Component	CAS No.	Typical Content (%)
Manganese Oxide (MnO)	1344-43-0	40–70
Silicon Dioxide (SiO ₂)	7631-86-9	10–30
Iron Oxide (Fe ₂ O ₃)	1309-37-1	5–20
Calcium Oxide (CaO)	1305-78-8	1–10
Magnesium Oxide (MgO)	1309-48-4	0–10

Composition may vary depending on source and manufacturing process.

3. Hazard Identification

- Not classified as hazardous under normal handling.
- Dust may cause irritation to eyes and respiratory tract.
- Prolonged exposure to manganese-containing dust should be avoided.

4. First Aid Measures

Inhalation: Move to fresh air. Seek medical attention if irritation persists.

Skin Contact: Wash with soap and water.

Eye Contact: Flush with clean water for at least 15 minutes.

Ingestion: Rinse mouth with water. Obtain medical advice if discomfort occurs.

5. Fire Fighting Measures

- Product is **non-flammable**.
- Use extinguishing media suitable for surrounding fire.
- No hazardous combustion products expected.

6. Accidental Release Measures

- Avoid dust generation.
- Sweep or vacuum material.
- Collect in suitable containers for reuse or disposal.

7. Handling and Storage

- Avoid breathing dust.
- Wear appropriate PPE.
- Store in a cool, dry place.
- Keep containers tightly closed to prevent moisture absorption.

8. Exposure Controls / Personal Protection

Respiratory Protection: Dust mask (N95/P2) where dust is generated.

Eye Protection: Safety goggles.

Hand Protection: Protective gloves.

Skin Protection: Protective work clothing.

9. Physical & Chemical Properties

Property	Value
Appearance	Black to Dark Brown Granules/Powder
Odour	Odourless
pH	Not Applicable
Solubility	Insoluble in Water
Specific Gravity	3.0–4.5
Melting Point	>1200°C
Flammability	Non-Flammable

10. Stability & Reactivity

- Stable under normal conditions.
 - Avoid strong acids.
 - No hazardous polymerization.
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11. Toxicological Information

- Low acute toxicity.
 - Dust may irritate eyes, skin and respiratory tract.
 - Long-term inhalation of manganese dust should be minimized.
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12. Ecological Information

- Insoluble mineral material.
 - Not expected to cause significant environmental hazards under normal use.
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13. Disposal Considerations

Dispose according to local, state and national regulations.

14. Transport Information

- **UN Number:** Not Regulated
 - **Hazard Class:** Not Classified
 - **Packing Group:** Not Applicable
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15. Regulatory Information

Not classified as a dangerous substance for transport under ADR/RID/IMDG/IATA.

16. Intended Use

High MnO Slag is used as a mineral additive in the manufacture of **Submerged Arc Welding (SAW) Flux**, where manganese oxide contributes to weld metal chemistry and deoxidation. Manganese-bearing constituents are commonly used in SAW flux formulations.