

Technical Data Sheet (TDS)

Pyrolusite Ore for Ferro-Manganese Alloy Manufacturing

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1. Product Description

Pyrolusite ore for ferro-manganese alloy manufacturing is a naturally occurring manganese dioxide mineral used as a manganese source in metallurgical smelting processes. This ore typically contains 70–90% MnO_2 and provides stable manganese input during high-temperature reduction in ferro-manganese production. Its consistent composition makes it suitable for steelmaking and alloy manufacturing operations.

2. Key Features

- High manganese content supports efficient ferro-manganese alloy production in blast furnace and electric furnace operations.
- Stable mineral structure ensures predictable reduction behavior during high-temperature smelting.
- Low impurity levels reduce contamination risks in alloy metallurgy.
- Good thermal stability allows the material to withstand temperatures above 900 °C before reduction.
- Pyrolusite ore for ferro-manganese alloy manufacturing provides a reliable manganese source for metallurgical-grade ferro-manganese production.
- Lump particle size improves furnace permeability and stable gas flow during smelting.

3. Technical Specifications

Parameter	Typical Value
MnO ₂ Purity	75–90%
Mn Content (Mn)	45–63%
Particle Size	10–80 mm (lump)
Moisture	≤2%
Bulk Density	2.0–2.6 g/cm ³
Crystal Phase	Natural Pyrolusite (β-MnO ₂)

4. Applications

- **Ferro-manganese alloy production** – pyrolusite ore supplies manganese oxide that is reduced with carbon during smelting to produce ferro-manganese alloys used in steelmaking.
- Steel deoxidizer manufacturing – manganese derived from the ore improves steel strength and toughness.
- Alloy research and metallurgical testing – natural manganese oxide ore provides consistent material for laboratory furnace experiments.
- Metallurgical flux blending – manganese oxide content assists in slag formation and impurity removal.
- **Pyrolusite ore for ferro-manganese alloy manufacturing** – widely used by ferroalloy plants to maintain stable manganese content in the final alloy.

5. Packaging & Supply

- Standard packaging: bulk shipment or 1 MT jumbo bags suitable for metallurgical raw materials.
- Export packaging available with moisture protection and reinforced loading.
- Laboratory samples available for metallurgical testing and furnace evaluation.

6. Customization & Technical Support

The manufacturer can provide customized particle size ranges, manganese content selection, and bulk supply for ferroalloy plants. Technical consultation is available for smelting process optimization and raw material compatibility testing.