Technical Datasheet: Metallurgical Grade MnO for Low-Carbon Manganese Steel Production

Company Information

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Product Description

Metallurgical Grade Manganese Oxide (MnO) is a high-purity alloying and refining agent specifically designed for the production of low-carbon manganese steel. It provides a consistent source of manganese with minimal impurities, ensuring superior mechanical properties and structural integrity in the final steel products.

Key Features

- **High Manganese Yield:** Contains ≥60% manganese for efficient alloying and refining.
- **Low Impurity Profile:** Strictly controlled levels of Arsenic, Lead, and Cadmium to prevent melt contamination.

- **Optimized Particle Size:** Typically 50–150 mesh to ensure rapid and uniform distribution in steel melts.
- **Versatile Application:** Ideal for both low-carbon steel production and ferroalloy manufacturing.

Technical Specifications

Chemical Composition

Parameter	Specification
Manganese (Mn)	≥ 60%
Arsenic (As)	≤ 5 ppm
Lead (Pb)	≤ 10 ppm
Cadmium (Cd)	≤ 5 ppm
Iron (Fe)	< 0.5% (Typical)
Silica (SiO2)	< 2.0% (Typical)

Physical Properties

Property	Value
Appearance	Dark Brown to Black Granular/Powder
Odor	Odorless
Particle Size	50 – 150 mesh (Customizable)
Bulk Density	Approx. 2.0 - 2.5 g/cm^3
Melting Point	~1,564°C (2,847°F)
Solubility in Water	Insoluble

Applications

- Production of low-carbon manganese steel.
- Refining agent in steelmaking processes.
- Raw material for ferro-manganese and silicomanganese alloys.
- Alloying element for high-strength structural steels.

Packaging & Supply

- **Packaging:** Standard 25kg or 50kg bags, or 1000kg bulk bags (Jumbo bags).
- **Storage:** Store in a cool, dry, and well-ventilated area. Keep away from moisture and direct sunlight to maintain product integrity.
- **Shelf Life:** 12 months or more when stored under recommended conditions.
- **Supply Ability:** Reliable global supply with technical assistance for metallurgical batch calculations.

Disclaimer: The information provided in this TDS is based on our current knowledge and experience. Users should conduct their own metallurgical trials to determine the optimal dosage and performance for their specific steelmaking requirements.