Technical Datasheet

Product: MnO_2 Flux for High-Purity Metal Smelting

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1. Product Description

MnO_2 Flux for High-Purity Metal Smelting is a high-purity manganese dioxide material used as an oxidizing and fluxing agent in metallurgical refining processes. With typical MnO_2 purity of 90–95%, it assists in impurity oxidation, slag formation, and improved separation during high-temperature metal smelting operations.

2. Key Features

- Strong oxidation capability under high-temperature smelting conditions, promoting efficient impurity removal.
- Controlled particle size distribution enables consistent mixing with metallurgical charge materials.
- Stable MnO_2 purity ensures predictable flux performance in high-temperature furnaces.
- High surface reactivity accelerates slag formation and improves metal–slag separation.
- MnO_2 Flux for High-Purity Metal Smelting supports efficient refining in specialty alloy and high-purity metal production.
- Low moisture content minimizes unwanted gas generation during furnace operation.

3. Technical Specifications

Parameter	Typical Value
MnO_2 Purity	90–95%
Particle Size	100–325 mesh
Surface Area	15–35 m^2/g
Moisture	≤1.0%
Bulk Density	0.8–1.1 g/cm^3
Crystal Phase	Predominantly Pyrolusite

4. Applications

- High-purity metal smelting – MnO_2 acts as an oxidizing flux that assists in removing sulfur, carbon, and other impurities from molten metals.
- Thermite and metallothermic reactions – manganese dioxide improves reaction stability and oxidation efficiency in high-temperature reduction systems.
- Specialty alloy production – assists in refining processes where controlled oxidation is required for alloy quality.
- Laboratory-scale metallurgical research – suitable for experimental smelting and metallurgical process development.
- MnO_2 Flux for High-Purity Metal Smelting – used in refining high-grade metals where impurity removal and clean slag formation are critical.

5. Packaging & Supply

Standard packaging is **25 kg fiber drums with inner PE liner** or **25 kg kraft paper bags with moisture protection**. Export packaging is suitable for international sea freight and palletized shipment. Laboratory samples (100 g–1 kg) are available for metallurgical testing and evaluation.

6. Customization & Technical Support

We can provide particle size adjustment, purity customization, and bulk supply based on smelting process requirements. Technical consultation is available to help optimize flux ratios and furnace operating conditions for improved metallurgical performance.