

Technical Data Sheet: MnO2 Filter Media

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1. Product Description

MnO2 Filter Media for Potable Water Purification is a high-purity manganese dioxide granular material ($\text{MnO}_2 \geq 75\text{--}85\%$) designed for catalytic oxidation and removal of iron and manganese in drinking water systems. This product ensures stable filtration performance in both municipal and industrial potable water treatment units. It is suitable for use in gravity filters and pressure filtration vessels.

2. Technical Specifications

Parameter	Specification Range
MnO ₂ Content	75–85%
Bulk Density	1.8–2.2 g/cm ³
Apparent Density	3.6–4.0 g/cm ³
Particle Size	0.5–1.0 mm / 0.8–1.6 mm / 1.0–2.0 mm
Uniformity Coefficient	≤1.6
Crushing Strength	≥90%
Porosity	≥25%
Recommended Bed Depth	800–1200 mm
Operating pH Range	6.5–9.0

3. Key Features

- High catalytic efficiency for the oxidation of dissolved Fe^{2+} and Mn^{2+} in potable water.
- Consistent particle grading, leading to low pressure drop and stable filtration cycles.
- Strong mechanical strength with minimal attrition loss.
- Extended service life under continuous backwashing operations.
- Complies with potable water purification system requirements.
- Supports both gravity and pressure filtration designs.

4. Applications

- **Municipal Drinking Water Plants:** Effectively removes iron and manganese to meet potable water standards.
- **Groundwater Treatment Systems:** Ideal for well water with high iron and manganese content.
- **Residential and Commercial Filtration Units:** Enhances water clarity and reduces discoloration.
- **Industrial Process Water Pretreatment:** Stabilizes feedwater quality prior to reverse osmosis (RO) systems.
- Utilized in pressure sand filters and multimedia filtration beds.

5. Packaging & Supply

- Available in 25 kg woven bags with an inner PE liner.
- Also supplied in 1 MT jumbo bags (FIBC).
- Palletized export packaging options are available.
- Suitable for containerized sea freight and bulk export supply.
- Stable monthly production capacity ensures reliability for long-term contracts.

6. Customization & Technical Support

Particle size distribution and MnO₂ content can be customized based on raw water analysis and specific system design requirements. Technical support services include guidance on filtration parameters, recommendations for bed configuration, and backwash rate calculations. Laboratory testing assistance and sample supply are available for pilot evaluations.