

Technical Datasheet (TDS)

Natural Manganese Sand Filter Media

Company Information

- **Company Name:** BTLnewmaterial
 - **Address:** Room 706, No. 154, Wuyi East Road, Niezhou Residential Committee, Caizichi Sub-district Office, Leiyang City, Hengyang City, Hunan Province, China
 - **Email:** lixifirm@outlook.com
 - **Phone/WhatsApp:** +8618273793022
 - **Website:** manganesesupply.com
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Product Description

Natural manganese sand filter media is a high-quality granular filtration material primarily composed of natural manganese ore. With a typical MnO_2 content of 30–40%, it is specifically designed for the catalytic oxidation and removal of dissolved iron (Fe^{2+}) and manganese (Mn^{2+}) from groundwater, well water, and municipal water supplies.

Key Features

- **High Catalytic Activity:** Rich MnO_2 content ensures efficient oxidation of iron and manganese.
- **Physical Stability:** High mechanical strength with low crush and wear rates.
- **Optimized Filtration:** Stable particle grading and high porosity ($\geq 40\%$) for effective water flow and solids retention.
- **Long Service Life:** Durable natural mineral structure resistant to chemical degradation.

- **Excellent Backwashing:** Designed for effective cleaning with minimal media loss.

Technical Specifications

Parameter	Unit	Typical Value
MnO ₂ Content	%	30.0 – 40.0
SiO ₂ Content	%	Balance
Bulk Density	g/cm ³	1.4 – 1.8
Particle Size	mm	0.5–1.0 / 1.0–2.0 / 2.0–4.0
Uniformity Coefficient	-	≤ 1.6
Crush Rate	%	≤ 2.0
Wear Rate	%	≤ 1.5
Porosity	%	≥ 40.0
Appearance	-	Dark Brown/Black Granules
Solubility in HCl	%	≤ 3.5

Applications

- **Groundwater Treatment:** Removal of dissolved iron and manganese through catalytic oxidation.
- **Municipal Water Plants:** Improving water clarity and meeting regulatory standards for heavy metals.
- **Industrial Water Systems:** Pre-treatment for boilers, cooling towers, and RO systems.
- **Well Water Filtration:** Domestic and agricultural filtration for odor and stain reduction.
- **Drinking Water Treatment:** Elimination of metallic taste and discoloration.

Packaging & Supply

- **Standard Packaging:** 25 kg or 50 kg PP/PE woven bags.
 - **Bulk Packaging:** 1,000 kg or 1,250 kg Jumbo bags (Big Bags).
 - **Palletization:** Optional palletized export packaging with shrink-wrap.
 - **Availability:** Global shipping available; samples provided upon request for laboratory testing.
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Disclaimer: The information provided in this Technical Datasheet is based on our current knowledge and experience. Users should conduct their own tests to determine the suitability of the product for their specific application.