

Technical Data Sheet: MnO₂ Powder for Neutralizing Green Tints in Glass

Company Name: BTLnewmaterial **Email:** lixifirm@outlook.com **Phone:** +8618273793022 **Website:** manganesesupply.com

1. Product Description

MnO₂ Powder for Neutralizing Green Tints in Glass is a high-purity manganese dioxide grade ($\text{MnO}_2 \geq 85\text{--}92\%$) specifically designed as a decolorizing agent in glass manufacturing. This product effectively oxidizes ferrous iron (Fe^{2+}) to ferric iron (Fe^{3+}), thereby significantly reducing undesirable green coloration and enhancing the optical clarity of both flat and container glass products.

2. Technical Specifications

The following table outlines the typical technical specifications for BTLnewmaterial's MnO₂ Powder for Neutralizing Green Tints in Glass. These specifications can be adjusted to meet specific furnace types and glass formulation requirements.

Parameter	Typical Range
MnO ₂ Content (%)	85 – 92
Mn (Total) (%)	55 – 63
Fe (%)	≤ 0.5
Moisture (%)	≤ 2.0
Insoluble Matter (%)	≤ 3.0
Particle Size (D50)	5 – 25 μm
325 Mesh Passing (%)	≥ 99
Bulk Density (g/cm ³)	0.8 – 1.2
Loss on Ignition (%)	≤ 8.0

3. Key Features

- **High Oxidation Efficiency:** Exhibits high efficiency in converting Fe²⁺ to Fe³⁺ within molten glass, crucial for effective decolorization.
- **Consistent Performance:** Stable MnO₂ content ensures reliable and consistent performance in glass manufacturing processes.
- **Uniform Dispersion:** Fine particle distribution facilitates uniform dispersion when mixed in the batch, preventing localized color variations.
- **Low Impurity Levels:** Contains minimal impurities, which helps prevent secondary coloration and maintains glass quality.
- **Versatile Application:** Suitable for a wide range of glass production lines, including continuous float glass and container glass.
- **Improved Storage Stability:** Controlled moisture content contributes to enhanced storage stability of the product.

4. Applications

- **Float Glass Production:** Significantly improves transparency by reducing iron-related green tints, leading to clearer glass.
- **Container Glass Manufacturing:** Enhances color neutrality in clear bottles, making them more aesthetically pleasing.
- **Optical and Specialty Glass:** Supports precise color control, which is critical for high-performance optical and specialty glass products.
- **Recycled Glass (Cullet) Processing:** Helps compensate for iron variability often found in recycled glass, ensuring consistent color outcomes.
- **Architectural and Automotive Glass:** Ensures a consistent visual appearance, meeting the stringent quality requirements for these applications.

5. Packaging & Supply

BTLnewmaterial offers flexible packaging and supply options to meet diverse customer needs:

- **Standard Packaging:** Available in 25 kg woven PP bags with an inner liner for protection.
- **Bulk Packaging:** Also supplied in 1000 kg jumbo bags (FIBC) for larger volume requirements.
- **Export Ready:** All packaging is palletized and shrink-wrapped, making it suitable for sea freight and long-distance international shipments.
- **Documentation:** Standard HS code and all necessary export documentation are provided to ensure smooth international trade.

6. Customization & Technical Support

BTLnewmaterial provides customization options and comprehensive technical support:

- **Customization:** MnO₂ content, particle size distribution, and impurity limits can be tailored to specific glass batch chemistry and furnace operating conditions.

- **Technical Support:** Includes expert application guidance, assistance with batch calculations, and compatibility evaluation with existing glass formulations.
- **Samples:** Laboratory samples and Certificates of Analysis (COA) are available upon request to facilitate product evaluation.