

Technical Datasheet (TDS)

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Product Name: Dispersible MnO₂ Powder for Epoxy Resin Systems

1. Product Description

Dispersible MnO₂ Powder for Epoxy Resin Systems is a high-purity manganese dioxide designed for uniform dispersion in epoxy matrices used in coatings, adhesives, and composite materials. With typical MnO₂ purity above 90%, this grade provides catalytic activity, improved thermal stability, and enhanced functional performance in epoxy formulations. The controlled particle morphology enables stable mixing and consistent performance in industrial resin systems.

2. Technical Specifications

Parameter	Typical Value
MnO ₂ Purity	90–95%
Particle Size (D50)	1–5 μm
Specific Surface Area	80–180 m ² /g
Moisture	≤ 3%
Bulk Density	0.5–0.8 g/cm ³
Crystal Phase	Amorphous / γ-MnO ₂

3. Key Features

- **High Surface Area:** MnO₂ particles provide strong catalytic and surface reactivity in epoxy systems.
- **Optimized Morphology:** Allows easy wetting and dispersion in epoxy resin formulations.
- **Consistency:** Stable chemical composition ensures consistent batch-to-batch performance.
- **Compatibility:** Supports improved compatibility with polymer matrices and composite materials.
- **Low Moisture:** Minimizes interference with epoxy curing reactions.
- **Fine Structure:** Allows uniform distribution during mechanical mixing or high-shear dispersion.

4. Applications

- **Epoxy Composite Materials:** Enhances thermal stability and functional properties.
- **Flame-retardant Systems:** Promotes catalytic charring and improves fire resistance.
- **Coatings and Adhesives:** Improves durability and surface functionality.
- **Electronic Encapsulation:** Suitable as an inorganic filler for stable encapsulation.
- **Polymer Research:** Ideal for studying catalytic or structural effects in composites.

5. Packaging & Supply

- **Standard Packaging:** 25 kg fiber drum with PE inner liner.
- **Shipping:** Export-grade packaging suitable for international transport.
- **Samples:** Laboratory evaluation samples available upon request.

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 applications.