

TECHNICAL DATASHEET (TDS)

Manganese Dioxide (MnO₂) as a Curing Agent for Liquid Polysulfides

1. COMPANY INFORMATION

- **Company Name:** BTLnewmaterial
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2. PRODUCT DESCRIPTION

Manganese Dioxide as a Curing Agent for Liquid Polysulfides is a high-purity MnO₂ grade specifically engineered to initiate and accelerate the oxidative curing reaction of liquid polysulfide sealants and coatings. With a typical purity exceeding 90%, it ensures reliable crosslinking and stable performance in demanding industrial applications, including aerospace and construction.

3. TECHNICAL SPECIFICATIONS

| Parameter | Typical Value |
|-------------------------|----------------------------------|
| MnO ₂ Purity | 90% – 95% |
| Appearance | Black/Dark Grey Powder |
| Particle Size (D50) | 5 – 15 µm |
| Specific Surface Area | 40 – 80 m ² /g |
| Moisture Content | ≤ 1.0% |
| Bulk Density | 0.6 – 0.9 g/cm ³ |
| Crystal Phase | Predominantly γ-MnO ₂ |

4. KEY FEATURES

- **High Oxidative Activity:** Enables efficient and rapid crosslinking of liquid polysulfide polymers.
- **Consistent Purity:** Ensures stable and predictable curing performance across different production batches.
- **Optimized Dispersion:** Controlled particle size allows for easy and uniform distribution within sealant formulations.
- **Enhanced Reactivity:** High surface area facilitates maximum contact between MnO₂ particles and reactive polymer chains.
- **Stability:** Low moisture content minimizes the risk of instability during storage and formulation.

5. APPLICATIONS

- **Aerospace Sealants:** Promotes durable, fuel-resistant curing for aircraft structures.
- **Construction Sealants:** Used in expansion joints to ensure long-term elasticity and consistent curing.

- **Industrial Coatings:** Improves crosslink density and chemical resistance in heavy-duty coatings.
 - **Tank & Pipeline Sealants:** Supports robust curing in aggressive chemical environments.
 - **Multi-component Systems:** Provides controlled curing kinetics for various liquid polysulfide formulations.
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6. PACKAGING & SUPPLY

- **Standard Packaging:** 25 kg fiber drums with inner PE liner.
 - **Shipping:** Export-grade packaging suitable for international long-distance transport.
 - **Samples:** Laboratory samples (100g – 1kg) available upon request for evaluation.
 - **Customization:** Tailored solutions for particle size and purity are available.
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7. STORAGE & SHELF LIFE

- **Storage:** Store in a cool, dry, and well-ventilated area in original sealed containers.
 - **Shelf Life:** 24 months from the date of manufacture when stored under recommended conditions.
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Disclaimer: The information provided in this TDS 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.