

# TECHNICAL DATASHEET (TDS)

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**Product Name:** Water-Soluble Manganese Sulfate ( $\text{MnSO}_4 \cdot \text{H}_2\text{O}$ )

**Grade:** Foliar Spray Grade

**Manufacturer:** BTLnewmaterial

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## 1. Company Information

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**Company Name:** BTLnewmaterial

**Email:** lixifirm@outlook.com

**Phone:** +8618273793022

**Website:** [manganesesupply.com](http://manganesesupply.com)

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## 2. Product Description

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Water-Soluble Manganese Sulfate for Foliar Spray Formulations is a high-purity, white to light pink crystalline powder ( $\text{MnSO}_4 \cdot \text{H}_2\text{O}$ ). With a **manganese content of 31–32%**, it is specifically engineered for rapid dissolution in water, ensuring maximum nutrient absorption through leaf surfaces. This product serves as an ideal source for liquid fertilizers and professional agricultural nutrient systems, designed to correct manganese deficiencies efficiently in various crops.

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### 3. Technical Specifications

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Parameter	Typical Value
MnSO <sub>4</sub> · H <sub>2</sub> O Purity	≥ 98%
Manganese (Mn) Content	31.0% – 32.0%
Water Solubility	≥ 99.0%
Moisture (H <sub>2</sub> O)	≤ 0.5%
Particle Size	100 – 200 mesh
Bulk Density	0.9 – 1.3 g/cm <sup>3</sup>
Iron (Fe)	≤ 0.05%
Calcium (Ca)	≤ 0.3%
Magnesium (Mg)	≤ 0.3%
Lead (Pb)	≤ 10 ppm
Copper (Cu)	≤ 5 ppm
Zinc (Zn)	≤ 5 ppm

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### 4. Key Features

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This Water-Soluble Manganese Sulfate offers several **key features** that enhance its performance and utility in agricultural applications. Its **high solubility** ensures rapid and complete dissolution, effectively preventing nozzle clogging in spray equipment. The product provides **superior bioavailability** through readily available Mn<sup>2+</sup> ions, facilitating immediate plant uptake and efficient correction of manganese deficiencies. Furthermore, **purity control** is maintained with low levels of iron, calcium, and magnesium, which helps prevent nutrient antagonism. **Safety** is a paramount concern, with strictly controlled heavy metal content (Pb, Cu, Zn) to support sustainable agricultural practices. Lastly, its **stability** is ensured by a consistent particle size, which allows for uniform dispersion in liquid blends.

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## 5. Applications

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Water-Soluble Manganese Sulfate is widely utilized across various agricultural **applications**. It is highly effective in **foliar fertilizers**, where direct leaf application enables rapid correction of manganese deficiency. The product serves as a stable component in **liquid nutrients**, suitable for both suspension and clear solution formulations. In **hydroponics and fertigation systems**, it provides a high-purity input for precision nutrient delivery. Essential for overall **crop nutrition**, it plays a crucial role in enzyme activation, photosynthesis, and nitrogen metabolism. Its compatibility with a wide range of other water-soluble fertilizers also makes it ideal for **micronutrient blending**.

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## 6. Packaging & Supply

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For **packaging and supply**, the product is typically provided in **standard 25 kg kraft paper bags** equipped with an internal PE moisture barrier to ensure product integrity. For larger requirements, **bulk options** such as palletized export packaging or jumbo bags are available upon request. The product is suitable for **shipping** via 20GP/40HQ containerized transport. For optimal **storage**, it should be kept in a cool, dry, and well-ventilated area, with containers tightly closed to prevent moisture absorption, as the product is hygroscopic.

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## 7. Disclaimer

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The information provided in this Technical Datasheet is based on our current knowledge and experience. It is the user's responsibility to ensure the product's suitability for their specific application and to comply with all relevant local regulations. BTLnewmaterial disclaims any liability for damages resulting from improper use or handling of the product.