

# TECHNICAL DATASHEET (TDS)

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## Specialty MnCO<sub>3</sub> Powder for Liquid Fertilizer Production

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High-Purity, High-Reactivity Manganese Source for Soluble Formulations

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### 1. COMPANY INFORMATION

Company Name	BTLnewmaterial
Website	<a href="http://manganesesupply.com">manganesesupply.com</a>
Email	lixifirm@outlook.com
Phone	+8618273793022
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### 2. PRODUCT DESCRIPTION

Specialty MnCO<sub>3</sub> Powder is a high-purity manganese carbonate specifically engineered for the production of liquid fertilizers and foliar sprays. Unlike standard grades, this powder features an ultra-fine particle size and exceptional acid solubility, allowing for rapid and complete conversion into soluble manganese salts or chelates (such as Mn-EDTA or Mn-Citrate). Its low impurity profile, particularly regarding iron and heavy metals, ensures the stability and clarity of final liquid formulations, preventing precipitation and nozzle clogging during application.

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### 3. KEY FEATURES

- **Rapid Reactivity:** Ultra-fine particle size ( $D_{50} < 10 \mu\text{m}$ ) ensures fast dissolution in dilute acids.
  - **High Acid Solubility:** Guaranteed  $\geq 99.5\%$  solubility in mineral and organic acids for maximum efficiency.
  - **Low Impurities:** Controlled iron (Fe) and sulfate ( $\text{SO}_4$ ) levels to prevent side reactions and sediment in liquid storage.
  - **Safe for Foliar Application:** Minimal heavy metal content (Pb, As, Cd, Hg) ensures crop safety and environmental compliance.
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### 4. TECHNICAL SPECIFICATIONS

#### 4.1 Chemical Composition

Parameter	Specification	Typical Value
Manganese (Mn)	43.0% - 44.5%	44.1%
Acid Solubility ( $\text{HCl}/\text{H}_2\text{SO}_4$ )	$\geq 99.5\%$	99.8%
Iron (Fe)	$\leq 0.01\%$	0.006%
Sulfate ( $\text{SO}_4$ )	$\leq 0.02\%$	0.012%
Chloride (Cl)	$\leq 0.02\%$	0.010%
Lead (Pb)	$\leq 10 \text{ ppm}$	$< 5 \text{ ppm}$
Arsenic (As)	$\leq 5 \text{ ppm}$	$< 2 \text{ ppm}$
Cadmium (Cd)	$\leq 5 \text{ ppm}$	$< 1 \text{ ppm}$
Mercury (Hg)	$\leq 0.1 \text{ ppm}$	$< 0.01 \text{ ppm}$

## 4.2 Physical Properties

Property	Description
Appearance	Pale pink to light brown fine powder
Particle Size	100% passing 325 mesh (45 µm)
Median Particle Size (D50)	< 10 µm
Molecular Weight	114.95 g/mol
CAS Number	598-62-9
Bulk Density	0.8 - 1.1 g/cm <sup>3</sup>

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## 5. APPLICATIONS

- **Liquid Fertilizer Formulation:** Primary raw material for producing soluble manganese solutions and specialty foliar fertilizers.
  - **Chelation Process:** Ideal precursor for manufacturing manganese chelates (EDTA, DTPA, Amino Acids) due to its high purity and reactivity.
  - **Hydroponics:** Used in the preparation of nutrient solutions where precise manganese concentrations are required.
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## 6. PACKAGING & STORAGE

- **Standard Packaging:** 25kg, 50kg, or 1000kg (Jumbo) moisture-proof woven bags with PE inner liners.
  - **Storage:** Store in a cool, dry, and well-ventilated warehouse. Keep containers tightly sealed to prevent moisture absorption and potential oxidation.
  - **Shelf Life:** 24 months from the date of manufacture when stored in original, unopened packaging.
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**Disclaimer:** The information provided in this Technical Datasheet is based on our current knowledge and experience. Manufacturers are encouraged to conduct their

own laboratory tests to optimize reaction parameters for their specific liquid fertilizer formulations.