

Technical Data Sheet (TDS)

Product Name: Manganese Carbonate (Glass Pigment Grade)

Chemical Formula: $MnCO_3$

CAS Number: 598-62-9

Molecular Weight: 114.95 g/mol

1. Supplier Information

Attribute	Details
Company Name	BTLnewmaterial
Address	Room 706, No. 154, Wuyi East Road, Niezhou Residential Committee, Caizichi Sub-district Office, Leiyang City, Hengyang City, Hunan Province, China
Email	lixifirm@outlook.com
Phone/WhatsApp	+86 18273793022
Website	manganesesupply.com

2. Product Description

Manganese Carbonate ($MnCO_3$) is a high-purity, pale pink to light brown crystalline powder specifically processed for the glass and ceramics industries. It occurs naturally as the mineral rhodochrosite and is manufactured through controlled chemical precipitation to ensure consistent quality and low impurity levels. In glass manufacturing, it acts as a critical colorant and oxidizing agent, facilitating the development of precise purple and pink hues.

3. Key Technical Parameters

Parameter	Unit	Specification	Typical Value
Manganese (Mn) Content	%	≥ 43.5	44.2
Iron (Fe)	%	≤ 0.005	0.003
Sulfate (SO ₄)	%	≤ 0.05	0.03
Chloride (Cl)	%	≤ 0.01	0.006
Lead (Pb)	%	≤ 0.001	0.0005
Water Insoluble	%	≤ 0.05	0.02
Moisture (H ₂ O)	%	≤ 0.5	0.3

4. Physical Properties

Property	Description
Appearance	Pale pink to light brown fine powder
Odor	Odorless
Density	3.125 g/cm ³
Solubility	Insoluble in water and ethanol; soluble in dilute inorganic acids
Decomposition Temp.	Starts at approx. 200°C (decomposes to MnO and CO ₂)

5. Key Features

- **Ultra-Low Iron Content:** Essential for maintaining the purity of purple and pink glass pigments without unwanted green or brown tinting.
- **High Thermal Stability:** Decomposes predictably during the melting process, ensuring uniform color distribution in high-temperature furnaces.
- **Strict Impurity Control:** Minimal levels of Ca, Mg, and heavy metals (Pb, As, Cd) ensure compliance with environmental standards and process stability.

- **Consistent Particle Size:** Optimized for rapid dispersion and reaction within the glass batch.
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6. Applications

- **Glass Pigments:** Primary colorant for producing purple, pink, and violet glass. Also used as a decolorizer to neutralize the green tint caused by iron impurities in clear glass.
 - **Ceramic Glazes:** Used in ceramic frit and glaze formulations to achieve specific color effects and improve chemical durability.
 - **Chemical Synthesis:** Intermediate for the production of other manganese salts and high-purity manganese oxides.
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7. Packaging & Supply

- **Standard Packaging:** 25 kg woven bags with PE inner liner; 1000 kg or 1250 kg jumbo bags (FIBC).
 - **Storage:** Store in a cool, dry, well-ventilated area. Keep containers tightly closed and protected from moisture and physical damage.
 - **Shelf Life:** 24 months from the date of manufacture when stored under recommended conditions.
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Disclaimer: The information provided in this Technical Data Sheet is based on our current knowledge and experience. It does not relieve the user from carrying out their own tests and trials.