Safety Data Sheet (SDS / MSDS)

Ultra Low Iron Manganese Carbonate ($MnCO_3$)

Section 1: Identification

Entity	Details
Product Name	Ultra Low Iron Manganese Carbonate
Chemical Name	Manganese(II) Carbonate
CAS Number	598-62-9
Synonyms	Rhodochrosite (synthetic), Manganous carbonate
Supplier Name	BTLnewmaterial
Email	lixifirm@outlook.com
Phone/WhatsApp	+8618273793022
Website	manganesesupply.com
Address	Room 706, No. 154, Wuyi East Road, Niezhou Residential Committee, Caizichi Sub-district Office, Leiyang City, Hengyang City, Hunan Province, China
Emergency Phone	+8618273793022
Recommended Use	Industrial chemical, precursor for high-purity manganese salts, battery material production.

Section 2: Hazard Identification

2.1 GHS Classification

- **Eye Irritation:** Category 2B
- **Specific Target Organ Toxicity - Repeated Exposure (Inhalation):** Category 2 (Brain/Central Nervous System)

2.2 GHS Label Elements

- **Signal Word:** Warning
- **Pictogram:** Health Hazard (GHS08)

2.3 Hazard Statements

- **H320:** Causes eye irritation.
- **H373:** May cause damage to the central nervous system through prolonged or repeated exposure if inhaled.

2.4 Precautionary Statements

- **P260:** Do not breathe dust.
- **P264:** Wash hands and skin thoroughly after handling.
- **P280:** Wear protective gloves/eye protection/face protection.
- **P305+P351+P338:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- **P314:** Get medical advice/attention if you feel unwell.
- **P501:** Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3: Composition/Information on Ingredients

Component	CAS No.	EC No.	Weight %
Manganese Carbonate ($MnCO_3$)	598-62-9	209-942-9	≥ 92.0
Iron (Fe)	7439-89-6	231-096-4	≤ 0.001
Inert Impurities	N/A	N/A	Balance

Section 4: First-Aid Measures

- **Eye Contact:** Flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids. Remove contact lenses if present. Seek medical attention if irritation persists.
- **Skin Contact:** Wash skin with soap and water. Remove contaminated clothing. Seek medical attention if irritation develops.
- **Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if symptoms occur.
- **Ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek medical attention.
- **Most Important Symptoms:** Chronic inhalation of manganese dust can lead to “manganism,” a condition similar to Parkinson’s disease.

Section 5: Fire-Fighting Measures

- **Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
- **Specific Hazards:** During fire, hazardous decomposition products such as carbon oxides (CO, CO_2) and manganese oxides may be released.
- **Protective Equipment:** Wear self-contained breathing apparatus (SCBA) and full protective clothing for firefighting.

Section 6: Accidental Release Measures

- **Personal Precautions:** Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.
- **Environmental Precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains or water sources.
- **Cleanup Methods:** Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7: Handling and Storage

- **Handling:** Provide appropriate exhaust ventilation at places where dust is formed. Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
- **Storage:** Keep container tightly closed in a dry and well-ventilated place. Store in a cool place. Hygroscopic. Protect from moisture and direct sunlight.

Section 8: Exposure Controls/Personal Protection

8.1 Control Parameters (Manganese Compounds, as Mn)

- **ACGIH TLV:** 0.02 mg/m^3 (respirable fraction); 0.1 mg/m^3 (inhalable fraction).
- **OSHA PEL:** 5 mg/m^3 (Ceiling).

8.2 Exposure Controls

- **Engineering Controls:** Use local exhaust ventilation or other engineering controls to maintain airborne levels below exposure limits.
- **Eye Protection:** Safety glasses with side-shields or chemical goggles.
- **Skin Protection:** Wear chemical-resistant gloves and protective clothing.
- **Respiratory Protection:** Use a NIOSH-approved dust mask or respirator (e.g., N95) if dust levels exceed exposure limits.

Section 9: Physical and Chemical Properties

Property	Value
Physical State	Solid (Powder)
Color	Light pink to pale brown
Odor	Odorless
pH (at 5% slurry)	7.0 - 8.5
Melting Point	Decomposes at > 200°C
Boiling Point	N/A
Flash Point	Non-flammable
Density	3.12 g/cm^3
Bulk Density	0.6 - 1.0 g/cm^3
Solubility in Water	Insoluble (0.0065 g/L at 25°C)
Solubility in Acids	Soluble in dilute mineral acids
Molecular Weight	114.95 g/mol

Section 10: Stability and Reactivity

- **Reactivity:** Stable under recommended storage conditions.
- **Chemical Stability:** Stable under normal temperatures and pressures.
- **Possibility of Hazardous Reactions:** No dangerous reactions known under normal use.
- **Conditions to Avoid:** Exposure to moisture. High temperatures (leads to decomposition).
- **Incompatible Materials:** Strong acids, strong oxidizing agents.
- **Hazardous Decomposition Products:** Carbon dioxide, Manganese oxides.

Section 11: Toxicological Information

- **Acute Toxicity:** LD_{50} Oral (Rat) > 2,000 mg/kg.
- **Skin Corrosion/Irritation:** May cause mild skin irritation.
- **Serious Eye Damage/Irritation:** Causes eye irritation.
- **Respiratory or Skin Sensitization:** Not known to be a sensitizer.
- **Germ Cell Mutagenicity:** Negative.
- **Carcinogenicity:** Not listed as a carcinogen by IARC, NTP, or OSHA.
- **Reproductive Toxicity:** No data available.
- **Chronic Exposure:** Prolonged inhalation of manganese dust can cause central nervous system damage (Manganism).

Section 12: Ecological Information

- **Toxicity:** Low toxicity to aquatic organisms. LC_{50} (Fish) > 100 mg/L (96h).
- **Persistence and Degradability:** Inorganic substance; does not biodegrade.
- **Bioaccumulative Potential:** Low potential for bioaccumulation.
- **Mobility in Soil:** Low mobility in soil due to low water solubility.

Section 13: Disposal Considerations

- **Product:** Offer surplus and non-recyclable solutions to a licensed disposal company.
- **Contaminated Packaging:** Dispose of as unused product in accordance with local regulations.

Section 14: Transport Information

- **DOT (US):** Not dangerous goods.
- **IMDG:** Not dangerous goods.
- **IATA:** Not dangerous goods.
- **ADR/RID:** Not dangerous goods.

Section 15: Regulatory Information

- **TSCA:** Listed on the United States TSCA Inventory.
- **SARA 313:** This material contains Manganese, which is subject to the reporting requirements of Section 313 of SARA Title III.
- **DSL/NDSL:** Listed on the Canadian Domestic Substances List.
- **IECSC:** Listed on the Inventory of Existing Chemical Substances in China.

Section 16: Other Information

- **Revision Date:** March 27, 2026
- **Prepared By:** BTLnewmaterial Technical Department
- **Abbreviations:**
  - CAS: Chemical Abstracts Service
  - GHS: Globally Harmonized System
  - TLV: Threshold Limit Value
  - PEL: Permissible Exposure Limit

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