

SAFETY DATA SHEET (SDS)

Granular Manganese Carbonate (MnCO₃)

In accordance with GHS (Globally Harmonized System of Classification and Labelling of Chemicals)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

- **Product Name:** Granular Manganese Carbonate
- **Chemical Formula:** MnCO₃
- **CAS Number:** 598-62-9
- **EINECS Number:** 209-942-9
- **IUPAC Name:** Manganese(II) carbonate

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

- **Identified Uses:** Sustained-release manganese source for fertilizer blending, soil amendment, and specialty agriculture.
- **Uses Advised Against:** No specific uses advised against.

1.3 Details of the Supplier of the Safety Data Sheet

Supplier	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	+8618273793022
Website	manganesesupply.com

1.4 Emergency Telephone Number

- **Emergency Contact:** +8618273793022 (Available during business hours)
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SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

- **GHS Classification:** Not classified as a hazardous substance or mixture according to GHS, OSHA (29 CFR 1910.1200), or EU Regulation (EC) No. 1272/2008.

2.2 GHS Label Elements

- **Signal Word:** None
- **Hazard Statements:** None
- **Precautionary Statements:**
 - **P261:** Avoid breathing dust/fume/gas/mist/vapors/spray.
 - **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.

2.3 Other Hazards

- May cause mild irritation to eyes, skin, and respiratory tract through mechanical action of dust (if granules are crushed).
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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Ingredient	CAS No.	EC No.	Concentration (%)
Manganese Carbonate	598-62-9	209-942-9	90% - 95% (43-44% Mn)

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

- **General Advice:** Show this safety data sheet to the doctor in attendance.
- **Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek medical attention if symptoms persist.
- **Skin Contact:** Wash with soap and plenty of water. Remove contaminated clothing. Seek medical attention if irritation develops.
- **Eye Contact:** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Remove contact lenses if present. Seek medical attention if irritation persists.
- **Ingestion:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek medical attention if large amounts are swallowed.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

- Mild irritation of the eyes, skin, and respiratory tract.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

- Treat symptomatically.
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SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media

- **Suitable Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
- **Unsuitable Extinguishing Media:** None known.

5.2 Special Hazards Arising from the Substance or Mixture

- Not combustible. Decomposition at high temperatures may release manganese oxides and carbon oxides.

5.3 Advice for Firefighters

- Wear self-contained breathing apparatus and full protective gear. Use water spray to cool unopened containers.
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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

- Use personal protective equipment. Avoid dust formation. Ensure adequate ventilation. Avoid breathing dust.

6.2 Environmental Precautions

- Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and Material for Containment and Cleaning Up

- Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling

- Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

- Store in a cool, dry, well-ventilated place. Keep container tightly closed. Store away from strong acids and oxidizing agents.
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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

- **Occupational Exposure Limits (Mn compounds):**
 - **ACGIH TLV:** 0.02 mg/m³ (respirable), 0.1 mg/m³ (inhalable).
 - **OSHA PEL:** 5 mg/m³ (ceiling).

8.2 Exposure Controls

- **Engineering Controls:** Ensure adequate ventilation, especially in confined areas.
 - **Personal Protective Equipment:**
 - **Eye/Face Protection:** Safety glasses with side-shields.
 - **Skin Protection:** Handle with gloves. Use suitable protective clothing.
 - **Respiratory Protection:** Where protection from nuisance levels of dusts is desired, use type N95 (US) or type P1 (EN 143) dust masks.
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

Property	Value
Appearance	Pale pink to light brown granules
Odor	Odorless
pH (1% solution)	6.0 - 8.0
Melting Point	Decomposes before melting (> 200°C)
Boiling Point	Not applicable
Flash Point	Not applicable
Relative Density	3.12 g/cm ³
Bulk Density	1.2 - 1.5 g/cm ³
Solubility in Water	Low water solubility (0.0065 g/L at 25°C)
Auto-ignition Temperature	Not applicable

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

- Stable under recommended storage conditions. Reacts with acids to release carbon dioxide gas.

10.2 Chemical Stability

- Stable under normal temperatures and pressures.

10.3 Possibility of Hazardous Reactions

- Reacts with strong acids to release carbon dioxide gas.

10.4 Conditions to Avoid

- Moisture, dust formation (if crushed), and incompatible materials.

10.5 Incompatible Materials

- Strong acids, strong oxidizing agents.

10.6 Hazardous Decomposition Products

- Manganese oxides, carbon oxides.
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SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

- **Acute Toxicity:** LD50 Oral (Rat) > 2000 mg/kg.
 - **Skin Corrosion/Irritation:** No skin irritation (Rabbit).
 - **Serious Eye Damage/Irritation:** Mild eye irritation (Rabbit).
 - **Respiratory or Skin Sensitization:** No sensitizing effects known.
 - **Germ Cell Mutagenicity:** Negative.
 - **Carcinogenicity:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.
 - **Reproductive Toxicity:** No evidence of reproductive toxicity.
 - **Specific Target Organ Toxicity (Repeated Exposure):** Long-term exposure to manganese dust may affect the central nervous system (Manganism).
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SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

- Not expected to be harmful to aquatic organisms at typical environmental concentrations.

12.2 Persistence and Degradability

- The product is an inorganic substance and not subject to biodegradation.

12.3 Bioaccumulative Potential

- Low potential for bioaccumulation.

12.4 Mobility in Soil

- Low mobility in soil due to low solubility in water and granular form.
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SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

- **Product:** Offer surplus and non-recyclable solutions to a licensed disposal company.
 - **Contaminated Packaging:** Dispose of as unused product. Follow local regulations.
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SECTION 14: TRANSPORT INFORMATION

14.1 UN Number

- **ADR/RID/IMDG/IATA:** Not regulated.

14.2 UN Proper Shipping Name

- **ADR/RID/IMDG/IATA:** Not dangerous goods.

14.3 Transport Hazard Class(es)

- **ADR/RID/IMDG/IATA:** Not applicable.

14.4 Packing Group

- **ADR/RID/IMDG/IATA:** Not applicable.

14.5 Environmental Hazards

- **ADR/RID/IMDG/IATA:** No.
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SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

- **TSCA (USA):** Listed on the inventory.
 - **REACH (EU):** Registered or exempt.
 - **IECSC (China):** Listed on the inventory.
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SECTION 16: OTHER INFORMATION

16.1 Revision Information

- **Issue Date:** March 25, 2026
- **Version:** 1.0 (Granular Grade)

16.2 Abbreviations and Acronyms

- **GHS:** Globally Harmonized System
- **CAS:** Chemical Abstracts Service
- **LD50:** Lethal Dose, 50%
- **TLV:** Threshold Limit Value

16.3 Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, and disposal and is not to be considered a warranty or quality specification.