Safety Data Sheet: Calcined Manganese Carbonate for Industrial Brick Coloring

Revision Date: 2026-03-20

1. Identification

Product Name: Calcined Manganese Carbonate for Industrial Brick Coloring **Chemical Name:** Manganese(II) carbonate (Calcined) **Synonyms:** Calcined Manganese Carbonate, Manganese Carbonate (heated) **CAS No.:** 598-62-9 (for Manganese Carbonate, primary component) **Molecular Formula:** $MnCO_3$ (primary component, partially converted to MnO/Mn_2O_3 after calcination) **Molecular Weight:** 114.95 g/mol (for $MnCO_3$)

Identified uses of the substance or mixture: Industrial brick coloring, Roof tiles and ceramic tiles coloration, Facing bricks, Clay body pigmentation, Construction materials, Laboratory chemicals, Manufacture of substances.

Details of the supplier of the safety data sheet: 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:** +8618273793022 **Website:** manganesesupply.com

2. Hazard(s) Identification

GHS Classification: Not a dangerous substance according to GHS for many jurisdictions. However, it is generally handled as potentially irritating to eyes and the respiratory system. Chronic exposure may affect the central nervous system (manganism).

Hazard Statements: H373: May cause damage to organs (central nervous system) through prolonged or repeated exposure if inhaled.

Precautionary Statements: Prevention: P260: Do not breathe dust/fume/gas/mist/vapours/spray. **Response:** P314: Get medical advice/attention if you feel unwell. **Disposal:** P501: Dispose of contents/container to an approved waste disposal plant.

Other hazards which do not result in classification: Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source, is a potential dust explosion hazard.

3. Composition/Information on Ingredients

Chemical Name	CAS No.	EC No.	Concentration (%)
Manganese(II) carbonate	598-62-9	209-930-0	≥ 98 (as $MnCO_3$ equivalent)
Manganese (Mn)	7439-96-5	231-105-1	≥ 44
Iron (Fe)	7439-89-6	231-096-4	≤ 0.05–0.10
Calcium (Ca)	7440-70-2	231-179-5	≤ 0.30
Magnesium (Mg)	7439-95-4	231-104-6	≤ 0.30
Lead (Pb)	7439-92-1	231-100-4	≤ 10 ppm
Arsenic (As)	7440-38-2	231-148-6	≤ 5 ppm
Cadmium (Cd)	7440-43-9	231-152-4	≤ 5 ppm

4. First-Aid Measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed: May cause irritation to eyes, skin, and respiratory tract. Prolonged or repeated exposure to manganese dusts or fumes may cause manganism, a neurological disorder with symptoms similar to Parkinson's disease.

Indication of any immediate medical attention and special treatment needed: Treat symptomatically. Supportive measures are recommended.

5. Fire-Fighting Measures

Extinguishing media: Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards arising from the substance or mixture: Carbon oxides, Manganese oxides.

Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions: Do not let product enter drains.

Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. Handling and Storage

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. For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Store in a cool, dry place.

8. Exposure Controls/Personal Protection

Control parameters: Occupational Exposure Limits: Consult local regulatory authorities for specific occupational exposure limits for manganese and its compounds.

Exposure controls: Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment: Eye/face protection: Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. Physical and Chemical Properties

Appearance: Light brown to dark brown powder (due to calcination) **Odor:** Odorless **Odor Threshold:** Not applicable **pH:** Neutral to slightly basic in suspension **Melting point/freezing point:** Decomposes at approx. 200-500°C (releasing CO_2), further changes occur during calcination. **Initial boiling point and boiling range:** Not applicable **Flash point:** Non-flammable **Evaporation rate:** Not applicable **Flammability (solid, gas):** The product is not flammable. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source, is a potential dust explosion hazard. **Upper/lower flammability or explosive limits:** Not applicable **Vapor pressure:** Not applicable **Vapor density:** Not applicable **Relative density:** Not available **Bulk Density:** 0.9–1.3 g/cm^3 **Water solubility:** Insoluble in water, soluble in dilute acids. **Solubility in Dilute Acid:** Not specified, but expected to be soluble. **Partition coefficient: n-octanol/water:** Not applicable **Auto-ignition temperature:** Not applicable **Decomposition temperature:** > 200°C (initial decomposition of $MnCO_3$) **Viscosity:** Not applicable **Explosive properties:** Not explosive **Oxidizing properties:** Not oxidizing

10. Stability and Reactivity

Reactivity: No data available.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: No data available.

Conditions to avoid: Heat, dust formation.

Incompatible materials: Strong acids, strong oxidizing agents.

Hazardous decomposition products: Carbon oxides, Manganese oxides. Other decomposition products - no data available.

11. Toxicological Information

Acute toxicity: Oral LD50: No data available. **Inhalation LC50:** No data available. **Dermal LD50:** No data available.

Skin corrosion/irritation: May cause skin irritation.

Serious eye damage/eye irritation: May cause eye irritation.

Respiratory or skin sensitisation: No data available.

Germ cell mutagenicity: No data available.

Carcinogenicity: IARC: 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 data available.

Specific target organ toxicity - single exposure: No data available.

Specific target organ toxicity - repeated exposure: Prolonged or repeated exposure to manganese dusts or fumes may cause manganism, a neurological disorder affecting the central nervous system.

Aspiration hazard: No data available.

Additional Information: RTECS: OP0350000 Manganese poisoning (manganism) can result from chronic overexposure to manganese dust or fumes. Symptoms include weakness, lethargy, emotional disturbances, and a Parkinson-like syndrome.

12. Ecological Information

Toxicity: Toxicity to fish: No data available. **Toxicity to daphnia and other aquatic invertebrates:** No data available. **Toxicity to algae:** No data available.

Persistence and degradability: Inorganic substance, not readily biodegradable.

Bioaccumulative potential: Manganese can bioaccumulate in aquatic organisms, but its potential for biomagnification is generally low.

Mobility in soil: Low mobility in soil due to low water solubility.

Other adverse effects: No data available.

13. Disposal Considerations

Waste treatment methods: Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging: Dispose of as unused product.

14. Transport Information

DOT (US): Not regulated as a hazardous material. **IMDG:** Not regulated as a hazardous material. **IATA:** Not regulated as a hazardous material.

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture: USA: SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. **SARA 313 Components:** The following components are subject to reporting levels established by SARA Title III, Section 313: Manganese compounds (CAS No. 7439-96-5) - applies to manganese and its compounds. **SARA $^{311}/_{312}$ Hazards:** Chronic Health Hazard.

California Prop 65: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

EU Regulations: REACH: This substance is not subject to registration according to Regulation (EC) No $^{1907}/_{2006}$ (REACH).

16. Other Information

Further information: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BTLnewmaterial and its Affiliates shall not

be held liable for any damage resulting from handling or from contact with the above product.

References: [1] GHS: Globally Harmonized System of Classification and Labelling of Chemicals (Rev. 8, 2019) [https://unece.org/ghs-rev8-2019] [2] PubChem: Manganese Carbonate [https://pubchem.ncbi.nlm.nih.gov/compound/Manganese-carbonate] [3] National Institute for Occupational Safety and Health (NIOSH) [https://www.cdc.gov/niosh/]