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MATERIAL SAFETY DATA SHEET

CHEMTEL EMERGENCY PHONE NUMBERS

UNITED STATES: 1 800 255 3924

OUTSIDE NORTH AMERICAN CONTINENT: 813 979 0626 (CALL COLLECT)

MANGANOUS CARBONATE

Effective Date:08/10/04; supercedes 11/02/01

1. Product Identification

Synonyms: Manganese carbonate; carbonic acid, manganese (2+) salt (1:1); rhodochrosite
CAS No.: 598-62-9
Molecular Weight: 114.94
Chemical Formula: MnCO3

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Manganese Carbonate	598-62-9	90 - 100%	Yes

3. Hazards Identification

Emergency Overview

CAUTION! CHRONIC INHALATION HAZARD. MAY AFFECT CENTRAL NERVOUS SYSTEM, BLOOD AND RESPIRATORY SYSTEM.

J.T. Baker SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 1 - Slight
Flammability Rating: 0 - None
Reactivity Rating: 1 - Slight
Contact Rating: 0 - None
Lab Protective Equip: GOGGLES; LAB COAT
Storage Color Code: Orange (General Storage)

Potential Health Effects

Inhalation: Acute poisoning can occur from excessive inhalation causing symptoms noted under Chronic Exposure.
Ingestion: Extremely large oral dosages may produce gastrointestinal disturbances and acute poisoning as noted under Chronic Exposure.
Skin Contact: No adverse effects expected.
Eye Contact: No adverse effects expected but dust may cause mechanical irritation.

Chronic Exposure: Chronic manganese poisoning can result from excessive inhalation and ingestion exposure and involves impairment of the central nervous system. Early symptoms include sluggishness, sleepiness, and weakness in the legs. Advanced cases have shown fixed facial expression, emotional disturbances, spastic gait, and falling. Illness closely resembles Parkinson's Disease. Kidney effects, blood changes and manganese psychosis also may occur as a result of chronic exposure. Chronic inhalation exposure can cause lung damage.
Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance. A nutritional iron deficiency leaves the body more susceptible to manganese build-up.

4. First Aid Measures

Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.
Ingestion: If large amounts were swallowed, give water to drink and get medical advice.
Skin Contact: Wash exposed area with soap and water. Not expected to require first aid measures.
Eye Contact: Wash thoroughly with running water. Get medical advice if irritation develops.

5. Fire Fighting Measures

Fire: Not considered to be a fire hazard.
Explosion: Not considered to be an explosion hazard.
Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.
Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Clean-up personnel require protective clothing and respiratory protection from dust. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Material discolors on contact with air. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:
- OSHA Permissible Exposure Limit (PEL):
5 mg/m3 Ceiling for manganese compounds as Mn
- ACGIH Threshold Limit Value (TLV):
0.2 mg/m3 (TWA) for manganese, elemental and inorganic compounds as Mn
Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.
Personal Respirators (NIOSH Approved):
If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest.. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
Skin Protection:
Wear protective gloves and clean body-covering clothing.

Eye Protection:
Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Fine, pink, light brown powder.
Odor: Odorless.
Solubility: Insoluble in water.
Density: 3.125
pH: No information found.
% Volatiles by volume @ 21C (70F): 0
Boiling Point: Not applicable.
Melting Point: > 200C (> 392F)
Vapor Density (Air=1): No information found.
Vapor Pressure (mm Hg): No information found.
Evaporation Rate (BuAc=1): No information found.

10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage. Discolors slowly in air. Slowly decomposes in air to manganous oxide with evolution of carbon dioxide gas.
Hazardous Decomposition Products: At higher temperatures (7300C) forms manganous oxides, carbon dioxide and carbon monoxide.
Hazardous Polymerization: Will not occur.
Incompatibilities: Contact with acids may generate carbon dioxide gas. Oxidizes toxic sulfur dioxide to the more toxic sulfur trioxide and causes violent decomposition of hydrogen peroxide.
Conditions to Avoid: Excessive dust generation. Incompatibles.

11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

--------\Cancer Lists\----------

Ingredient	---NTP Carcinogen--- Known	Anticipated	IARC Category
Manganese Carbonate (598-62-9)	No	No	None

12. Ecological Information

Environmental Fate: No information found.
Environmental Toxicity: No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

--------\Chemical Inventory Status - Part 1\----------

Ingredient	TSCA	EC	Japan	Australia
Manganese Carbonate (598-62-9)	Yes	Yes	Yes	Yes

--------\Chemical Inventory Status - Part 2\----------

Ingredient	Korea	--Canada-- DSL	NDSL	Phil.
Manganese Carbonate (598-62-9)	Yes	Yes	No	Yes

\-------\Federal, State & International Regulations - Part 1\----------

Ingredient	-SARA 302- RQ	TPQ	------SARA 313------ List	Chemical Catg.
Manganese Carbonate (598-62-9)	No	No	No	Manganese co

\-------\Federal, State & International Regulations - Part 2\----------

Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)
Manganese Carbonate (598-62-9)	1	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: No Chronic: Yes Fire: No Pressure: No
Reactivity: No (Pure / Solid)

Australian Hazchem Code: None allocated.
Poison Schedule: None allocated.
WHMIS:
This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: **0** Flammability: **0** Reactivity: **1**
Revision Information: No Changes.
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