



J.T. Baker Inc.
222 Red School Lane
Phillipsburg, NJ 08865

24-Hour Emergency Telephone 908-859-2151
National Response Center 800-424-8802
Chemtrec 800-424-9300

National Response In Canada
CANUTEC 613-996-6666

Outside U.S. and Canada
Chemtrec 202-483-7616

MATERIAL SAFETY DATA SHEET

FICHE
SIGNALÉTIQUE

HOJAS DE DATOS
DE SEGURIDAD

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals. All non-emergency questions should be directed to Customer Service (1-800-JTBAKER) for assistance.

M0767 -04
Effective: 03/09/92

Manganous Chloride, 4-Hydrate

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J.T.BAKER INC., 222 Red School Lane, Phillipsburg, NJ 08865

SECTION I - PRODUCT IDENTIFICATION

Product Name: Manganous Chloride, 4-Hydrate
Common Synonyms: Manganese Dichloride, Tetrahydrate
Chemical Family: Manganese Compounds
Formula: $MnCl_2 \cdot 4H_2O$
Formula Wt.: 197.90
CAS No.: 13446-34-9
NIOSH/RTECS No.: 009650000
Product Use: Laboratory Reagent
Product Codes: 2540,2540

PRECAUTIONARY LABELING

BAKER SAF-T-DATA* System

HEALTH 1 SLIGHT	FLAMMABILITY 0 NONE	REACTIVITY 1 SLIGHT	CONTACT 1 SLIGHT
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Laboratory Protective Equipment



U.S. Precautionary Labeling

During use avoid contact with eyes, skin, clothing. Wash thoroughly after handling. When not in use keep in tightly closed container.

International Labeling

Avoid contact with eyes. After contact with skin, wash immediately with plenty of water. Keep container tightly closed.



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===== PRECAUTIONARY LABELING (CONTINUED) =====

SAF-T-DATA* Storage Color Code: Orange (general storage)

===== SECTION II - COMPONENTS =====

Component	CAS No.	Weight %	OSHA/PEL mg/m ³	ACGIH/TLV mg/m ³
Manganous Chloride, 4-Hydrate	13446-34-9	90-100	5	5

TLV is for Manganese, Dust and compounds, as Mn. PEL (Ceiling) is for Manganese compounds, as Mn.

===== SECTION III - PHYSICAL DATA =====

Boiling Point: 1190°C (2174°F)
(at 760 mm Hg)

Vapor Pressure (mmHg): N/A

Melting Point: 88°C (190°F)
(at 760 mm Hg)

Vapor Density (air=1): N/A

Specific Gravity: 2.98
(H₂O=1)

Evaporation Rate: N/A

Solubility(H₂O): Appreciable (>10%)

% Volatiles by Volume: 0
(21°C)

pH: N/A

Odor Threshold (ppm): N/A

Physical State: Solid

Coefficient Water/Oil Distribution: N/A

Appearance & Odor: Pink crystals.

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

Flash Point (Closed Cup): N/A

Autoignition Temperature: N/A



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SECTION IV - FIRE AND EXPLOSION HAZARD DATA (CONTINUED)

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Flammable Limits: Upper - N/A Lower - N/A

Fire Extinguishing Media

Use extinguishing media appropriate for surrounding fire.

Special Fire-Fighting Procedures

Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode.

Unusual Fire & Explosion Hazards

None identified.

Toxic Gases Produced

hydrogen chloride

Explosion Data-Sensitivity to Mechanical Impact

None identified.

Explosion Data-Sensitivity to Static Discharge

None identified.

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SECTION V - HEALTH HAZARD DATA

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Threshold Limit Value (TLV/TWA): 5 mg/m³

TLV is for Manganese, Dust and compounds, as Mn.

Short-Term Exposure Limit (STEL): Not Established

Permissible Exposure Limit (PEL): 5 mg/m³

PEL (Ceiling) is for Manganese compounds, as Mn.

Toxicity of components

Intraperitoneal Rat LD ₅₀ for Manganous Chloride, 4-Hydrate	1484 mg/kg
Intraperitoneal Rat LD ₅₀ for Manganous Chloride, 4-Hydrate	138 mg/kg
Intraperitoneal Mouse LD ₅₀ for Manganous Chloride, 4-Hydrate	190 mg/kg



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SECTION V - HEALTH HAZARD DATA (CONTINUED)
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Intravenous Mouse LD₅₀ for Manganous Chloride, 4-Hydrate 710 mg/kg
Carcinogenicity: NTP: No IARC: No Z List: No OSHA Reg: No

Carcinogenicity
None identified.

Reproductive Effects
None identified.

Effects of Overexposure

- INHALATION: none identified
- SKIN CONTACT: none identified
- EYE CONTACT: none identified
- SKIN ABSORPTION: none identified
- INGESTION: none identified
- CHRONIC EFFECTS: none identified

Target Organs
none identified

Medical Conditions Generally Aggravated by Exposure
none identified

Primary Routes of Entry
none indicated

Emergency and First Aid Procedures

- INGESTION: If swallowed and the person is conscious, immediately give large amounts of water. Get medical attention.
- INHALATION: If a person breathes in large amounts, move the exposed person to fresh air.
- SKIN CONTACT: In case of contact, immediately wash skin with plenty of soap and water for at least 15 minutes.



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SECTION V - HEALTH HAZARD DATA (CONTINUED)

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EYE CONTACT: In case of eye contact, immediately flush with plenty of water for at least 15 minutes.

SARA/TITLE III HAZARD CATEGORIES and LISTS

Acute: Yes Chronic: Yes Flammability: No Pressure: No Reactivity: No

Extremely Hazardous Substance: No

CERCLA Hazardous Substance: No

SARA 313 Toxic Chemicals: Yes Contains Manganese

Generic Class: Generic Class Removed from CFR: 7/1/91

TSCA Inventory: Yes

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SECTION VI - REACTIVITY DATA

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Stability: Stable Hazardous Polymerization: Will not occur

Conditions to Avoid: none documented

Incompatibles: none identified

Decomposition Products: hydrogen chloride

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SECTION VII - SPILL & DISPOSAL PROCEDURES

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Steps to be Taken in the Event of a Spill or Discharge

Wear suitable protective clothing. Carefully sweep up and remove.

Disposal Procedure

Dispose in accordance with all applicable federal, state, and local environmental regulations.

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SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

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Ventilation: Use adequate general or local exhaust ventilation to keep fume or dust levels as low as possible.



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SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT (CONTINUED)
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Respiratory Protection: Respiratory protection required if airborne concentration exceeds TLV. At concentrations above 5 mg/m³, a dust/mist respirator is recommended.

Eye/Skin Protection: Safety goggles, proper gloves are recommended.

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SECTION IX - STORAGE AND HANDLING PRECAUTIONS
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SAF-T-DATA* Storage Color Code: Orange (general storage)

Storage Requirements

Keep container tightly closed. Suitable for any general chemical storage area.

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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION
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Domestic (D.O.T.)

Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)

International (I.M.O.)

Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)
Marine Pollutants: No

AIR (I.C.A.O.)

Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)

U.S. Customs Harmonization Number: 28273900002

N/A = Not Applicable or Not Available
N/E = Not Established

The information in this Material Safety Data Sheet meets the requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and the Canadian WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. This document is intended only as a guide to the appropriate precautionary handling of
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the material by a person trained in, or supervised by a person trained in, chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes.

Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, Baker cannot warn of all of the potential dangers of use or interaction with other chemicals or materials. Baker warrants that the chemical meets the specifications set forth on the label.

BAKER DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE.

The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Baker will periodically revise this Material Safety Data Sheet.

Note: CHEMTREC, CANUTEC, and NATIONAL RESPONSE CENTER emergency telephone numbers are to be used ONLY in the event of CHEMICAL EMERGENCIES involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to Customer Service (1-800-JTBAKER) for assistance.

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Approved by Quality Assurance Department.