

MSDS Number: **Z2280** * * * * * *Effective Date: 03/01/01* * * * * * *Supersedes: 07/13/00*

MSDS**Material Safety Data Sheet**

From: Mallinckrodt Baker, Inc.
222 Red School Lane
Phillipsburg, NJ 08865

M Mallinckrodt
CHEMICALS



24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. and Canada
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers 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 (1-800-582-2537) for assistance.

ZINC CHLORIDE

1. Product Identification

Synonyms: Zinc Chloride, Zinc Dichloride, Zinc Butter
CAS No.: 7646-85-7
Molecular Weight: 136.30
Chemical Formula: ZnCl₂
Product Codes:
J.T. Baker: 4321, 4322, 4324, 4326
Mallinckrodt: 8772, 8780

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Zinc Chloride	7646-85-7	97 - 100%	Yes

3. Hazards Identification

Emergency Overview

DANGER! CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT. HARMFUL IF SWALLOWED OR INHALED. AFFECTS THE CARDIOVASCULAR SYSTEM.

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

Health Rating: 2 - Moderate

Flammability Rating: 0 - None

Reactivity Rating: 2 - Moderate

Contact Rating: 3 - Severe (Corrosive)

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

Storage Color Code: White (Corrosive)

Potential Health Effects

Inhalation:

Extremely destructive to tissues of the mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.

Ingestion:

Toxic. May cause irritation or corrosion to the gastrointestinal tract with abdominal pain, nausea, and vomiting. May cause delayed death occurring from strictures of the esophagus and pylorus.

Skin Contact:

May cause severe irritation, skin burns and ulcerations. Solutions are corrosive. Symptoms include redness and pain.

Eye Contact:

May cause redness, pain, and blurred vision. Splashes from solutions may cause eye damage.

Chronic Exposure:

Repeated skin contact can cause varying degrees of problems ranging from dermatitis to ulcerations. Repeated Inhalation can cause occupational asthma.

Aggravation of Pre-existing Conditions:

Dermatitis, cardiac and respiratory disorders.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

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:

Use protective clothing and breathing equipment appropriate for the surrounding fire.

6. Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. 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:

Zinc chloride:

OSHA Permissible Exposure Limit (PEL):

1 mg/m³ (TWA) 8H, as fume.

ACGIH Threshold Limit Value (TLV):

1 mg/m³ (TWA); 2 mg/m³ (STEL) for fume

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, a full facepiece respirator with dust/mist filter 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. 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 impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

White crystalline granules.

Odor:

Odorless.

Solubility:

423 g/100 g water @ 25C (77F)

Density:

2.91

pH:

ca. 4 Aqueous solution

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

732C (1350F)

Melting Point:

290C (554F)

Vapor Density (Air=1):

Not applicable.

Vapor Pressure (mm Hg):

1 @ 428C (802F)

Evaporation Rate (BuAc=1):

Not applicable.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

When heated to decomposition it emits toxic fumes of chlorine and zinc oxide.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Cyanides and sulfides, powdered zinc. When mixed with potassium, a weak explosion will occur on impact.

Conditions to Avoid:

Incompatibles.

11. Toxicological Information

Oral rat LD50: 350 mg/kg. Investigated as a tumorigen, mutagen, reproductive effector.

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Zinc Chloride (7646-85-7)	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

Domestic (Land, D.O.T.)

Proper Shipping Name: ZINC CHLORIDE, ANHYDROUS

Hazard Class: 8

UN/NA: UN2331

Packing Group: III

Information reported for product/size: 110LB

International (Water, I.M.O.)

Proper Shipping Name: ZINC CHLORIDE, ANHYDROUS

Hazard Class: 8

UN/NA: UN2331

Packing Group: III

Information reported for product/size: 110LB

International (Air, I.C.A.O.)

Proper Shipping Name: ZINC CHLORIDE, ANHYDROUS

Hazard Class: 8

UN/NA: UN2331

Packing Group: III

Information reported for product/size: 110LB

15. Regulatory Information

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-----\Chemical Inventory Status - Part 1\-----
Ingredient                                     TSCA  EC   Japan  Australia
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Zinc Chloride (7646-85-7)                       Yes  Yes  Yes    Yes
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-----\Chemical Inventory Status - Part 2\-----
Ingredient                                     Korea  DSL  NDSL  Phil.
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Zinc Chloride (7646-85-7)                       Yes   Yes  No    Yes
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-----\Federal, State & International Regulations - Part 1\-----
Ingredient                                     -SARA 302-  -----SARA 313-----
RQ  TPQ  List  Chemical Catg.
-----
Zinc Chloride (7646-85-7)                       No   No   No    Zinc compoun
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-----\Federal, State & International Regulations - Part 2\-----			
Ingredient	CERCLA	-RCRA-	-TSCA-
Zinc Chloride (7646-85-7)	1000	261.33	8 (d)
		No	No

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

Australian Hazchem Code: 2X

Poison Schedule: S6

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: 3 Flammability: 0 Reactivity: 0

Label Hazard Warning:

DANGER! CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT. HARMFUL IF SWALLOWED OR INHALED. AFFECTS THE CARDIOVASCULAR SYSTEM.

Label Precautions:

Do not get in eyes, on skin, or on clothing.

Do not breathe dust.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

Label First Aid:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. In all cases get medical attention immediately.

Product Use:

Laboratory Reagent.

Revision Information:

MSDS Section(s) changed since last revision of document include: 8.

Disclaimer:

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