ZINC CHLORIDE

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME:  ZINC CHLORIDE
COMMON SYNONYMS: ZINC DICHLORIDE; BUTTER OF ZINC
CHEMICAL FAMILY: ZINC COMPOUNDS
FORMULA:  ZnCl2
FORMULA WT. 136.28
CAS NO.: 7646-95-7
NIOSH/RTECS NO.: ZH1400000
PRODUCT USE: LABORATORY REAGENT
PRODUCT CODES: 4326, 4324, 4321

PRECAUTIONARY LABELING

BAKER SAF-T-DATA* SYSTEM

HEALTH  -  2  MODERATE
FLAMMABILITY  -  0  NONE
REACTIVITY  -  2  MODERATE
CONTACT  -  3  SEVERE (CORROSIVE)

LABORATORY PROTECTIVE EQUIPMENT

GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

U.S. PRECAUTIONARY LABELING

DANGER
CAUSES BURNS. HARMFUL IF SWALLOWED OR INHALED. LABORATORY TEST RESULTS INDICATE MATERIAL MAY BE MUTAGENIC.
DO NOT GET IN EYES, ON SKIN, OR CLOTHING. DO NOT BREATHE DUST. KEEP IN TIGHTLY CLOSED CONTAINER. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING.

INTERNATIONAL LABELING

CAUSES BURNS.
KEEP CONTAINER TIGHTLY CLOSED AND DRY. AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF SOAP AND WATER.

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ZINC CHLORIDE

Z2280 <04
EFFECTIVE: 05/01/89

PAGE: 2
ISSUED: 05/17/89

PRECAUTIONARY LABELING (CONTINUED)

SAF-T-DATA* STORAGE COLOR CODE: WHITE (CORROSIVE)

SECTION II - COMPONENTS

COMPONENT CAS NO. WEIGHT % OSHA/PEL ACGIH/TLV
ZINC CHLORIDE 7646-85-7 97-100 1 MG/M3 1 MG/M3

SECTION III - PHYSICAL DATA

BOILING POINT: 732 C (1349 F) (AT 760 MM HG)
MELTING POINT: 290 C (554 F) (AT 760 MM HG)
SPECIFIC GRAVITY: 2.91 (H2O=1)
SOLUBILITY(H2O): APPRECIABLE (>10%)
PH: N/A
ODOR THRESHOLD (P.P.M.): N/A
COEFFICIENT WATER/OIL DISTRIBUTION: N/A
APPEARANCE & ODOR: WHITE TO OFF-WHITE GRANULES. ODORLESS.

VAPOR PRESSURE (MMHG): N/A
VAPOR DENSITY (AIR=1): 4.7
EVAPORATION RATE: N/A
% VOLATILES BY VOLUME: 0 (21 C)

PHYSICAL STATE: SOLID

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (CLOSED CUP): N/A
AUTOIGNITION TEMPERATURE: N/A
FLAMMABLE LIMITS:  UPPER - N/A  LOWER - N/A

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA (CONTINUED)

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. MOVE CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. USE WATER TO KEEP FIRE-EXPOSED CONTAINERS COOL.

UNUSUAL FIRE & EXPLOSION HAZARDS
CLOSED CONTAINERS EXPOSED TO HEAT MAY EXPLODE.

TOXIC GASES PRODUCED
HYDROGEN CHLORIDE, ZINC FUMES

EXPLOSION DATA-SENSITIVITY TO MECHANICAL IMPACT
NONE IDENTIFIED.

EXPLOSION DATA-SENSITIVITY TO STATIC DISCHARGE
NONE IDENTIFIED.

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE (TLV/TWA): 1 MG/M³

TLV IS FOR ZINC CHLORIDE FUME.

SHORT-TERM EXPOSURE LIMIT (STEL): 2 MG/M³

STEL IS FOR ZINC CHLORIDE FUME.

PERMISSIBLE EXPOSURE LIMIT (PEL): 1 MG/M³

PEL IS FOR ZINC CHLORIDE FUME.

TOXICITY OF COMPONENTS

ORAL RAT LD50 FOR ZINC CHLORIDE
350 MG/KG

ORAL MOUSE LD50 FOR ZINC CHLORIDE
350 MG/KG

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SECTION V - HEALTH HAZARD DATA (CONTINUED)

INTRAPERITONEAL MOUSE LD50 FOR ZINC CHLORIDE 31 MG/KG
SUBCUTANEOUS MOUSE LD50 FOR ZINC CHLORIDE 330 MG/KG
Carcinogenicity: NTP: NO IARC: NO Z LIST: NO OSHA REG: NO

Carcinogenicity
NONE IDENTIFIED.

Reproductive Effects
Tests on laboratory animals indicate material may be mutagenic and embryotoxic.

Effects of Overexposure

Inhalation: Headache, coughing, difficult breathing, chest pains, severe lung irritation, pulmonary edema

Skin Contact: Severe irritation or burns

Eye Contact: Severe irritation or burns

Skin Absorption: None identified

Ingestion: Nausea, vomiting, gastrointestinal irritation, burns to mouth and throat

Chronic Effects: Damage to liver, kidneys, lungs

Target Organs
Respiratory system, lungs, eyes, skin, GI tract, liver, kidneys

Medical Conditions Generally Aggravated by Exposure
Lung disease

Primary Routes of Entry
Inhalation, ingestion, eye contact, skin contact

Emergency and First Aid Procedures

Ingestion: Call a physician. If swallowed, do not induce vomiting. If conscious, give water, milk, or milk of magnesia.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

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SECTION V - HEALTH HAZARD DATA (CONTINUED)

SKIN CONTACT: IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE RE-USE.

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: YES CONTAINS ZINC CHLORIDE (RQ = 1000 LBS)
TOXIC CHEMICALS: YES CONTAINS ZINC
GENERIC CLASS: C15
TSCA INVENTORY: YES

SECTION VI - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: MOISTURE, DUSTING
INCOMPATIBLES: POTASSIUM, CYANIDES, SULFIDES
DECOMPOSITION PRODUCTS: CHLORINE, OXIDES OF ZINC, HYDROGEN CHLORIDE

SECTION VII - SPILL & DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN THE EVENT OF A SPILL OR DISCHARGE
WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. WITH CLEAN SHOVEL, CAREFULLY PLACE MATERIAL INTO CLEAN, DRY CONTAINER AND COVER; REMOVE FROM AREA. FLUSH SPILL AREA WITH WATER.

DISPOSAL PROCEDURE
DISPOSE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.

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ZINC CHLORIDE

SECTION VII - SPILL & DISPOSAL PROCEDURES (CONTINUED)

EPA HAZARDOUS WASTE NUMBER: D002 (CORROSIVE WASTE)

SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

VENTILATION: USE GENERAL OR LOCAL EXHAUST VENTILATION TO MEET TLV REQUIREMENTS.

RESPIRATORY PROTECTION: RESPIRATORY PROTECTION REQUIRED IF AIRBORNE CONCENTRATION EXCEEDS TLV. AT CONCENTRATIONS UP TO 9 PPM, A HIGH-EFFICIENCY PARTICULATE RESPIRATOR IS RECOMMENDED. ABOVE THIS LEVEL, A SELF-CONTAINED BREATHING APPARATUS IS ADVISED.

EYE/SKIN PROTECTION: SAFETY GOGGLES, UNIFORM, APRON, RUBBER GLOVES ARE RECOMMENDED.

SECTION IX - STORAGE AND HANDLING PRECAUTIONS

SAF-T-DATA* STORAGE COLOR CODE: WHITE (CORROSIVE)

STORAGE REQUIREMENTS
KEEP CONTAINER TIGHTLY CLOSED. STORE IN CORROSION-PROOF AREA. ISOLATE FROM INCOMPATIBLE MATERIALS.

SPECIAL PRECAUTIONS
MATERIAL IS HYGROSCOPIC.

SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

DOMESTIC (D.O.T.)

PROPER SHIPPING NAME: ORM-E, SOLID, N.O.S. (ZINC CHLORIDE)

HAZARD CLASS: ORM-E

UN/NA: NA9188 REPORTABLE QUANTITY: 1000 LBS

LABELS: NONE

REGULATORY REFERENCES: 49CFR 172.101; 173.500; 173.510

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ZINC CHLORIDE

ZINC CHLORIDE, ANHYDROUS

HAZARD CLASS: 8
UN: UN2331
MARINE POLLUTANTS: YES
LABELS: CORROSIVE
REGULATORY REFERENCES: 49CFR 172.102; PART 176; IMO

I.M.O. PAGE: 8237
PACKAGING GROUP: III

AIR (I.C.A.O.)

PROPER SHIPPING NAME: ZINC CHLORIDE, ANHYDROUS
HAZARD CLASS: 8
UN: UN2331
LABELS: CORROSIVE
REGULATORY REFERENCES: 49CFR 172.101; 173.6; PART 175; ICAO/IATA

U.S. CUSTOMS HARMONIZATION NUMBER: 28273600005

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