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Material Safety Data Sheet

1. Product and Company Identification

Product Name : Zinc Chloride (Granular)
Identification of the product : Powder
Chemical formula : $ZnCl_2$
Synonyms : Zinc Dichloride, Zinc Butter
CAS No. : 7646-85-7

2. Composition, Information on Ingredients

Composition :

Ingredient	CAS NO.	% by weight
Zinc Chloride	7646-85-7	> 90

3. Hazards Identification

Physical / Chemical hazards : Corrosive , no other significant chemical hazard.

Environmental hazards : Toxic to aquatic organism. May cause long term adverse effects in the aquatic environment. Hygroscopic (absorbs moisture from the air). Corrosive to metal.

Potential Health Effects : Causes burns by exposure routes. Harmful if swallowed.

- Inhalation : Causes chemical burns to the respiratory tract.
- Skin : Causes skin burns.
- Eye : Causes eye burns.
- Ingestion : Harmful if swallowed. Causes gastrointestinal tract burns.
- Chronic : Repeated skin contact can cause varying degrees of problems ranging from dermatitis to ulcerations. Repeated Inhalation can cause occupational asthma.

4. First Aid Measures

Inhalation	: If haled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Skin	: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
Eye	: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Ingestion	: If swallowed, do Not induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.
Chronic	: No information found.

5. Fire Fighting Measures

General Information	: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
Extinguishing Media	: Use foam, dry chemical, or carbon dioxide.
Flash Point	: Not applicable
Autoignition Temperature	: Not applicable
Explosion Limits, Lower	: Not available
Upper	: Not available

6. Accidental Release Measures

Personal precautions	: Wear suitable gloves and eye/face protection.
Methods for cleaning up	: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

7. Handling and storage

Handling	: Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only in a chemical fume hood.
Storage	: Store in a cool, dry place. Store in a tightly closed container. Corrosive area. Do not store

in metal containers. Store protected from moisture.

8. Exposure Controls, Personal Protection

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA-Final PELs
Zinc Chloride	1 mg/m ³ TWA (fume); 2 mg/m ³ STEL (fume)	1 mg/m ³ TWA (fume) 50 mg/m ³ IDLH (fume)	1 mg/m ³ TWA (fume)

Personal Protective Equipment

- Eyes : Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Skin : Wear appropriate protective gloves to prevent skin exposure.
- Clothing : Wear appropriate protective clothing to prevent skin exposure.
- Respirators : A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

9. Physical and Chemical Properties

- Appearance : Crystalline powder/granule
- Colour : White/Pale yellow
- Odour : Odourless
- pH value : 5 (100g/L aq.sol.)
- Boiling point (°C) : 732 deg C
- Melting point (°C) : 293 deg C
- Solubility in water : 432 g/100 ml (@25 deg C).
- Specific Gravity / Density : 2.91

10. Stability and Reactivity

- Stability : Absorbs moisture or water from air.
- Materials to avoid : Metals, strong oxidizing agents.
- Conditions to avoid : Incompatible materials, dust generation, exposure to moist air or water.
- Hazardous decomposition products : Hydrogen chloride, when heated to decomposition it emits toxic fumes of chlorine and zinc oxide.

Hazardous polymerization : Will not occur.

11. Toxicological Information

Toxicity to animals : LD50 / oral / rat = 350 mg/kg., LD50 / oral / mouse = 329 mg/kg.
Chronic Effects on Humans : Severe skin, eye irritation.
Other Toxic Effects on Humans : Tumorigenic, Teratogenic, Mutagenic and Neurotoxic effects have occurred in experiment animals.
Carcinogenicity : Not listed by ACGIH, IARC, NTP, or CA Prop 65.
Reproductive Effects : Adverse reproductive effects have occurred in experimental animals.

12. Ecological Information

Ecotoxicity : No data available. No information available.
Physical : No information available.
Environmental Toxicity : No information available.

13. Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series : None listed.

RCRA U-Series : None listed.

14. Transport Information

UN/NA : UN2331
DOT : 8 (Corrosive)
IMDG / ADR Class : 8 (Corrosive)
IATA Class : 8 (Corrosive)
UN Packing group : III

15. Regulatory Information

US FEDERAL

TSCA

CAS# 7646-85-7 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 7646-85-7 : 1000 lb final RQ ; 454 kg final RQ.

SARA Section 302 Extremely Hazardous Substance

None of the Chemicals in this product have a TPQ.

SARA Codes

CAS# 7646-85-7 : immediate.

Section 313

This material contains Zinc chloride (listed as Zinc compounds), >97%, (CAS# 7646-85-7) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act :

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act :

CAS# 7646-85-7 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA. CAS# 7646-85-7 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA :

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 7646-85-7 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European / International Regulations**European Labeling in Accordance with EC Directives****Hazard Symbols:**

C N

Risk Phrases:

R 22 Harmful if swallowed.

R 34 Causes burns.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger / Protection)

CAS# 7646-85-7: 1

Canada – DSL/NDSL

CAS# 7646-85-7 is listed on Canada's DSL List.

Canada – WHMIS

This product has a WHMIS classification of E, D1B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 7646-85-7 is listed on the Canadian Ingredient Disclosure List.

16. Other Information

Product Use : Industrial
MSDS Creation date (dd/mm/yy) : 16/01/08
Last Updated : Revision 1, Date : 30/09/11
Effective date (dd/mm/yy) : 06/10/11

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