

Zinc Chloride

Safety Data Sheet

SECTION 1: Identification

1.1. Product identifier

Product name : Zinc Chloride

1.2. Recommended use and restrictions on use

Manufacturing

1.3. Supplier

Zaclon LLC
2981 Independence Road
Cleveland, OH 44115
T 800-356-7327

1.4. Emergency telephone number

Emergency number : Chemtrec 1 800 424 9300

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

GHS-US/CAN Classification

Acute toxicity (oral) Category 4	H302
Skin corrosion/irritation Category 1B	H314
Hazardous to the aquatic environment - Acute Hazard Category 1	H400
Hazardous to the aquatic environment - Chronic Hazard Category 1	H410

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US/CAN labeling

Hazard pictograms :



Signal word :

Danger

Hazard statements :

H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H335 - May cause respiratory irritation
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements :

P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P264 - Wash thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301+P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER/doctor/...
P312 - Call a POISON CENTER/doctor if you feel unwell
P330 - If swallowed, rinse mouth
P363 - Wash contaminated clothing before reuse
P391 - Collect spillage
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No additional information available

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2.4. Unknown acute toxicity (GHS-CA)

No data available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-CAN classification	GHS-US classification
Zinc chloride	(CAS No) 7646-85-7	94 - 100	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : For even minor contact, immediately remove contaminated clothing. Wash skin thoroughly with mild soap and water.
- First-aid measures after eye contact : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- First-aid measures after ingestion : Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do not induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : May cause respiratory tract irritation.
- Symptoms/injuries after skin contact : Causes severe skin burns.
- Symptoms/injuries after eye contact : Causes serious eye damage.
- Symptoms/injuries after ingestion : Harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : In a remote area, use water fog. Carbon dioxide (CO₂). Powder. Foam.
- Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : None known.
- Explosion hazard : None known.

5.3. Advice for firefighters

- Protection during firefighting : Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Stop the flow of material, if this is without risk.
- Methods for cleaning up : Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Avoid raising powdered materials into airborne dust. To clean the floor and all objects contaminated by this material, use water.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with eyes, skin and clothing. Use personal protective equipment as required. Wash thoroughly after handling.

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Do not expose to temperatures exceeding 50°C/122°F. Keep only in original container. Store in dry protected location to prevent any moisture contact. Storage area: Store at ambient temperature. Store in tightly closed containers. Store under dry conditions. Store in a place accessible by authorized persons only. Store away from heat/moisture.

7.3. Specific end use(s)

Manufacturing

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Zinc chloride (7646-85-7)		
USA - ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³ (fume)
USA - ACGIH	ACGIH STEL (mg/m ³)	2 mg/m ³ (fume)
USA - OSHA	OSHA PEL (TWA) (mg/m ³)	1 mg/m ³ (fume)
Canada (Quebec)	VEMP (mg/m ³)	1 mg/m ³ (fume)
Alberta	OEL STEL (mg/m ³)	2 mg/m ³ (fume)
Alberta	OEL TWA (mg/m ³)	1 mg/m ³ (fume)
British Columbia	OEL STEL (mg/m ³)	2 mg/m ³ (fume)
British Columbia	OEL TWA (mg/m ³)	1 mg/m ³ (fume)
Manitoba	OEL STEL (mg/m ³)	2 mg/m ³ (fume)
Manitoba	OEL TWA (mg/m ³)	1 mg/m ³ (fume)
New Brunswick	OEL STEL (mg/m ³)	2 mg/m ³ (fume)
New Brunswick	OEL TWA (mg/m ³)	1 mg/m ³ (fume)
New Foundland & Labrador	OEL STEL (mg/m ³)	2 mg/m ³ (fume)
New Foundland & Labrador	OEL TWA (mg/m ³)	1 mg/m ³ (fume)
Nova Scotia	OEL STEL (mg/m ³)	2 mg/m ³ (fume)
Nova Scotia	OEL TWA (mg/m ³)	1 mg/m ³ (fume)
Nunavut	OEL STEL (mg/m ³)	2 mg/m ³ (fume)
Nunavut	OEL TWA (mg/m ³)	1 mg/m ³ (fume)
Northwest Territories	OEL STEL (mg/m ³)	2 mg/m ³ (fume)
Northwest Territories	OEL TWA (mg/m ³)	1 mg/m ³ (fume)
Ontario	OEL STEL (mg/m ³)	2 mg/m ³ (fume)
Ontario	OEL TWA (mg/m ³)	1 mg/m ³ (fume)
Prince Edward Island	OEL STEL (mg/m ³)	2 mg/m ³ (fume)
Prince Edward Island	OEL TWA (mg/m ³)	1 mg/m ³ (fume)
Saskatchewan	OEL STEL (mg/m ³)	2 mg/m ³ (fume)
Saskatchewan	OEL TWA (mg/m ³)	1 mg/m ³ (fume)
Yukon	OEL STEL (mg/m ³)	2 mg/m ³ (fume)
Yukon	OEL TWA (mg/m ³)	1 mg/m ³ (fume)

8.2. Exposure controls

Appropriate engineering controls : Local exhaust and general ventilation must be adequate to meet exposure standards.

Hand protection : Wear impervious gloves to minimize skin contact.

Eye protection : Protective goggles.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : White powder

Odor : Odorless

Odor threshold : No data available

pH : No data available

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Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 287 °C
Freezing point	: No data available
Boiling point	: 732 °C
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 2.93 g/cm ³
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

None.

10.5. Incompatible materials

Cyanides, strong alkalis

10.6. Hazardous decomposition products

Hydrochloric acid fumes. ZnO.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Oral: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

ATE CA (oral)	500 mg/kg body weight
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Zinc chloride (7646-85-7)	
LD50 oral rat	1100 mg/kg

Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Eye damage, category 1, implicit
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified

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Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life with long lasting effects.
Aquatic acute : Very toxic to aquatic life.
Aquatic chronic : Very toxic to aquatic life with long lasting effects.

Zinc chloride (7646-85-7)

BCF fish 1	16000
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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Zinc chloride (7646-85-7)

BCF fish 1	16000
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

14.1. Basic shipping description

In accordance with TDG

TDG

UN-No. (TDG) : UN2331
Packing group : III - Minor Danger
TDG Primary Hazard Classes : 8 - Class 8 - Corrosives
Transport document description : UN2331 ZINC CHLORIDE, ANHYDROUS, 8, III
Proper Shipping Name (TDG) : ZINC CHLORIDE, ANHYDROUS

Hazard labels (TDG) : 8 - Corrosive substances



Explosive Limit and Limited Quantity Index : 5 kg
Excepted quantities (TDG) : E1
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 25 kg
Marine pollutant : Yes (IMDG only)



14.2. Transport information/DOT

DOT

DOT NA no. : UN2331
UN-No.(DOT) : 2331
Packing group (DOT) : III - Minor Danger

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Transport document description : UN2331 Zinc chloride, anhydrous, 8, III
 Proper Shipping Name (DOT) : Zinc chloride, anhydrous
 Contains Statement Field Selection (DOT) :
 Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
 Division (DOT) : 8
 Hazard labels (DOT) : 8 - Corrosive



Dangerous for the environment : Yes
 Marine pollutant : Yes



DOT Special Provisions (49 CFR 172.102) : IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).
 IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.
 T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)
 TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx) : None
 DOT Packaging Non Bulk (49 CFR 173.xxx) : 213
 DOT Packaging Bulk (49 CFR 173.xxx) : 240
 DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 25 kg
 DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 100 kg
 DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
 Other information : No supplementary information available.

14.3. Air and sea transport

IMDG

UN-No. (IMDG) : 2331
 Proper Shipping Name (IMDG) : ZINC CHLORIDE, ANHYDROUS
 Transport document description (IMDG) : UN 2331 ZINC CHLORIDE, ANHYDROUS, 8, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
 Class (IMDG) : 8 - Corrosive substances
 Packing group (IMDG) : III - substances presenting low danger

IATA

UN-No. (IATA) : 2331
 Proper Shipping Name (IATA) : Zinc chloride, anhydrous
 Transport document description (IATA) : UN 2331 Zinc chloride, anhydrous, 8, III, ENVIRONMENTALLY HAZARDOUS
 Class (IATA) : 8 - Corrosives
 Packing group (IATA) : III - Minor Danger

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SECTION 15: Regulatory information

15.1. Canada National regulations

Zinc chloride (7646-85-7)

Listed on the Canadian DSL (Domestic Substances List)

15.2. US Federal regulations

Zinc chloride (7646-85-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.3. US State regulations

Zinc chloride (7646-85-7)

U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Full text of H-phrases:

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product