

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier:

Product name: ZINC CHLORIDE
REACH registration number: 01-2119472431-44-XXXX
CAS number: 7646-85-7
EU index number: 030-003-00-2
EC number: 231-592-0

Relevant identified uses of the substance or mixture and uses advised against:

Identified uses: Raw material

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Classification (EC 1272/2008):

Physical hazards: Not Classified
Health hazards: Acute Tox. 4 - H302 Acute Tox. 4 - H312 Skin Corr. 1B - H314 Eye Dam. 1 - H318 STOT SE 3 - H335
Environmental hazards: Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410 2.2. Label elements EC number 231-592-0

Pictogram:



Signal word: Danger

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Hazard statements: H302+H312 Harmful if swallowed or in contact with skin.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements: P260 Do not breathe dust.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405 Store locked up.
P501 Dispose of contents/ container in accordance with national regulations.

Other hazards:

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

Product name: ZINC CHLORIDE
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4. FIRST AID MEASURES

Description of first aid measures:

Inhalation: Get medical attention immediately. Move affected person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.

Ingestion: Get medical attention immediately. Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink.

Skin contact: Rinse immediately with plenty of water. Get medical attention if any discomfort continues.

Eye contact: Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.

Most important symptoms and effects, both acute and delayed:

General information: No additional symptoms or effects are anticipated.

Indication of any immediate medical attention and special treatment needed:

Specific treatments: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: The product is non-combustible. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

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Special hazards arising from the substance or mixture:

Specific hazards: Thermal decomposition or combustion products may include the following substances:
Hydrogen chloride (HCl).

Advice for firefighters:

Protective actions during firefighting: Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Wear protective clothing as described in Section 8 of this safety data sheet. Avoid generation and spreading of dust. Avoid inhalation of dust and contact with skin and eyes.

Environmental precautions: Do not discharge into drains or watercourses or onto the ground.

Methods and material for containment and cleaning up:

Methods for cleaning up: Avoid generation and spreading of dust. Remove mechanically. Collect and place in suitable waste disposal containers and seal securely.

Reference to other sections: For personal protection, see Section 8. For waste disposal, see Section 13.

7. HANDLING AND STORAGE

Precautions for safe handling:

Usage precautions: Wear protective clothing as described in Section 8 of this safety data sheet. Avoid generation and spreading of dust. Avoid inhalation of dust and contact with skin and eyes. In case of insufficient ventilation, wear suitable respiratory equipment. Provide adequate ventilation. Do not eat, drink or smoke when using this product. Wash skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Remove contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities:

Storage precautions: Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store away from the following materials: Alkalis. Provide acid-resistant floor.

Specific end use(s):

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Occupational exposure limits: Long-term exposure limit (8-hour TWA): WEL 1 mg/m³

Short-term exposure limit (15-minute): WEL 2 mg/m³

WEL = Workplace Exposure Limit

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DNEL: Industry - Inhalation; Long term systemic effects: 1 mg/m³
Industry - Dermal; Long term systemic effects: 8.3 mg/kg/day
General population - Inhalation; Long term systemic effects: 1.3 mg/m³
General population - Dermal; Long term systemic effects: 8.3 mg/kg/day
General population - Oral; Long term systemic effects: 0.83 mg/kg/day

PNEC: STP; 100 µg/l
Soil; 35.6 mg/kg
Sediment (Marine water); 56.5 mg/kg
Sediment (Freshwater); 117.8 mg/kg
Marine water; 6.1 µg/l
Fresh water; 20.6 µg/l

Exposure controls:

Protective equipment:



Appropriate engineering controls: Provide adequate general and local exhaust ventilation.

Eye/face protection: Wear tight-fitting, dust-resistant, chemical splash goggles if airborne dust is generated. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection: It is recommended that chemical-resistant, impervious gloves are worn. To protect hands from chemicals, gloves should comply with European Standard EN374. Wear protective gloves made of the following material: Nitrile rubber.

Other skin and body protection: Acid-resistant protective clothing.

Hygiene measures: Wash contaminated skin thoroughly after handling. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.

Environmental exposure controls: Avoid release to the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance: Crystalline solid.
Colour: White.
Odour: Odourless.
pH: pH (diluted solution): >5 (100g/l @ 20°C)
Melting point: 287°C
Initial boiling point and range: 732°C
Vapour pressure: 1.33 hPa @ 428°C
Relative density: 2.93 @ 22°C
Bulk density: 1800
Solubility (ies): 851 g/l water @ 20°C
Decomposition Temperature: ~360°C
Oxidising properties: Not classified as oxidising.

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10. STABILITY AND REACTIVITY

Reactivity: There are no known reactivity hazards under conditions of normal use.

Chemical stability:

Stability: Stable at normal ambient temperatures and when used as recommended.

Possibility of hazardous reactions: Reacts with alkali.

Conditions to avoid: Avoid excessive heat. Moisture.

Incompatible materials:

Materials to avoid: Metals. Sulphides. Cyanides.

Hazardous decomposition products: There are no anticipated hazardous decomposition products associated with this material.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity – oral:

Acute toxicity oral (LD₅₀ mg/kg): 1,100.0

Species: Rat

ATE oral (mg/kg): 500.0

Acute toxicity – dermal:

Acute toxicity dermal (LD₅₀ mg/kg): 2,000.0

Species: Rat

ATE dermal (mg/kg): 2,000.0

Acute toxicity – inhalation:

Acute toxicity inhalation (LC₅₀ dust/mist mg/l): 2,000.0

Species: Rat

Skin corrosion/irritation:

Skin corrosion/irritation: Causes burns.

Serious eye damage/irritation:

Serious eye damage/irritation: Risk of serious damage to eyes.

Respiratory sensitisation:

Respiratory sensitisation: Not sensitising.

Skin sensitisation:

Skin sensitisation: Not sensitising.

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Inhalation: Dust may irritate respiratory system or lungs.
Ingestion: May cause irritation.
Skin contact: Causes severe burns.
Eye contact: Causes severe burns.

12. ECOLOGICAL INFORMATION

Toxicity:

Acute aquatic toxicity:

LE(C)₅₀: 0.1 < L(E)C₅₀ ≤ 1

Acute toxicity – fish:

LC₅₀, 96 hours: 439 µg/l,

LC₅₀, 96 hours: 0.78 mg/l, Pimephales promelas (Fat-head Minnow).

LC₅₀, 96 hours: 0.169 mg/l, Onchorhynchus mykiss (Rainbow trout).

Acute toxicity - aquatic invertebrates: LC₅₀, 48 hours: 1220 µg/l, Daphnia magna.

EC₅₀, 48 hours: 0.147 - 0.413 mg/l, Ceriodaphnia dubia.

Acute toxicity - aquatic plants: IC₅₀, 72 hours: 0.136 mg/l, Selenastrum capricornutum.

Persistence and degradability: No data available.

Bioaccumulative potential: No information available.

Mobility in soil:

Mobility: No data available.

Results of PBT and vPvB assessment:

Results of PBT and vPvB assessment: Not applicable.

Other adverse effects: Do not discharge product unmonitored into the environment.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Disposal methods:

Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Confirm disposal procedures with environmental engineer and local regulations. Uncleaned empty packages should be disposed of in the same manner as the contents.

Waste class:

Hazardous Waste

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14. TRANSPORT INFORMATION

UN number:
UN No. (ADR/RID) 2331
UN No. (IMDG) 2331
UN No. (ICAO) 2331
UN No. (ADN) 2331

UN proper shipping name:

Proper shipping name (ADR/RID): ZINC CHLORIDE, ANHYDROUS

Proper shipping name (IMDG): ZINC CHLORIDE, ANHYDROUS

Proper shipping name (ICAO): ZINC CHLORIDE, ANHYDROUS

Proper shipping name (ADN): ZINC CHLORIDE, ANHYDROUS

Transport hazard class(es):

ADR/RID class: 8

ADR/RID classification code: C2

ADR/RID label 8 IMDG class: 8

ICAO class/division: 8

ADN class: 8

Transport labels:



Packing group:

ADR/RID packing group: III

IMDG packing group: III

ICAO packing group: III

ADN packing group: III

Environmental hazards:

Environmentally hazardous substance/marine pollutant:



Special precautions for user:

EmS: F-A, S-B

ADR transport category: 3

Emergency Action Code: 2X

Hazard Identification Number (ADR/RID): 80

Tunnel restriction code: (E)

Transport in bulk according to Annex II of MARPOL and the IBC Code:

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15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

Chemical safety assessment: A chemical safety assessment has been carried out.

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

General information: Only trained personnel should use this material. Since empty containers retain product residue, follow label warnings, even after container is emptied. For further Health and Safety information contact: Health and Safety Officer. Labels should not be removed from containers until they have been cleaned and no product remains within.

Hazard statements in full:

- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.
- H335 May cause respiratory irritation.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

Legal disclaimer: The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.