Safety Data Sheet

Date of Issue: 15.07.2024 Date of Expiry: 15.07.2029

1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : **ECP Limited**
Address : PO Box 34125, Birkenhead, Auckland 0746
Telephone : +64 9 480 4386
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Emergency phone number : 0800 243 622 (24 hours)

Product Name	**Zinc Chloride anhydrous**
Product Code	55101 , 55108
CAS No.	7646-85-7

Recommended use : Laboratory Investigations

2: Hazard's identification

2.1 GHS Classification
Corrosive to Metals (Category 1)
Acute toxicity, Oral (Category 3)
Skin corrosion/irritation (Category 1C)
Serious eye damage/eye irritation (Category 1)
Hazardous to the aquatic environment - acute hazard (Category 1)
Hazardous to the aquatic environment - chronic hazard (Category 1)

2.2 GHS Label elements, including precautionary statements
Pictogram

Signal Word : Danger

Hazard Statements
H290 May be corrosive to metals.
H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements
Prevention
P260 Do not breathe dust.
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

Rinse mouth.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P391 Collect spillage.

3: Composition/information on ingredients

3.1 Substances

Formula	:	Cl2Zn
Molecular weight	:	136.30 g/mol
CAS-No.	:	7646-85-7
EC-No.	:	231-592-0
Index-No.	:	030-003-00-2

4: First aid measures

4.1 Description of first-aid measures

General advice
First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Call in physician.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact
After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Hydrogen chloride gas
Zinc/zinc oxides
Not combustible.
Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections
For disposal see section 13.

7: Handling and storage

7.1 Precautions for safe handling
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Storage conditions
Handle under nitrogen, protect from moisture. Store under nitrogen.
Tightly closed. Dry.
strongly hygroscopic

Storage class
Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8: Exposure controls/personal protection

8.1 Control parameters
Occupational Exposure Limits Table

Component	CAS No.	Value	Control parameters	Basis
Zinc Chloride	7646-85-7	WES-TWA	1 mg/m3	New Zealand. Workplace Exposure Standards for

				Atmospheric Contaminants
		WES-STEL	2 mg/m3	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

8.2 Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

Control of environmental exposure

Do not let product enter drains.

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	:	Solid
Appearance	:	White deliquescent crystals or powder.
Odour	:	Slightly pungent.
Melting Point	:	283 °C
Boiling Point	:	732 °C
Solubility in Water	:	Very soluble.
Solubility in Organic Solvents	:	Soluble in alcohol, glycerol and ether.
Specific Gravity	:	2.91 @ 25 °C
pH	:	pH 5 (10% solution)
Vapour Pressure	:	1 mm @ 428 °C
Flammability	:	Non combustible material.
Molecular Weight	:	136.30

10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions
Contact with acids or acid fumes will evolve highly toxic chloride fumes. Can react violently with potassium.

10.4 Conditions to avoid
Exposure to moisture.

10.5 Incompatible materials
Strong oxidizing agents, potassium, acids and acid fumes. Do not use metal equipment or containers.

10.6 Hazardous decomposition products
In the event of fire: see section 5

11: Toxicological information

11.1 Information on toxicological effects
Acute Toxicity – Oral LD50 Oral - Rat - male - 1,100 mg/kg
(OECD Test Guideline 401)

Ingestion
Harmful if swallowed. May cause nausea, vomiting, inflammation, and burns of mucous membranes of the mouth, pharynx, and oesophagus, and stomach, ulceration of the stomach. Symptoms include pain, metallic taste, vomiting, diarrhoea, drop in blood pressure, tachycardiovascular disorders collapse, and disturbed electrolyte balance. Risk of perforation in the oesophagus and stomach. Damage to kidneys.

Inhalation
Harmful if inhaled, causes burns. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May cause nausea, vomiting, dizziness, conjunctivitis, irritation of the nose and throat, coughing, copious sputum, dyspnoea, chest pain, damage to the mucous membranes of the nasopharynx and respiratory tract, fever, cyanosis, tachypnoea, pulmonary edema, bronchopneumonia, pulmonary fibrosis, lung damage and death.

Skin
Causes burns. May be harmful if absorbed through the skin. Avoid contact with skin.

Eye
Causes burns. Major exposure may lead to inflammation of the cornea. Avoid contact with eyes.

Respiratory Sensitisation
Not classified based on available information.

Skin Sensitization
Not classified based on available information.

Germ Cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

Reproductive Toxicity
Not classified based on available information.

STOT – Single exposure
Not classified based on available information.

STOT – Repeated exposure
Not classified based on available information.

Chronic effects
Chronic inhalation may lead to asthma. Chronic ingestion may cause disordered digestion and constipation.

Serious eye damage/irritation
H314 Causes severe skin burns and eye damage.

Mutagenicity
Not classified based on available information

Skin Corrosion/Irritation
Skin Corrosion/Irritation: Category 1A
H314 Causes severe skin burns and eye damage.

Other information
Inhalation of dust or fumes of zinc salts or metal cause 'metal fume fever', which is characterised by chills, fever, tightness of the chest and coughing.

12: Ecological information

12.1 Toxicity
Ecotoxicity
Highly toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment. Hazard for drinking water supplies.

Persistence and Degradability
Methods for the determination of biodegradability are not applicable to inorganic substances.

Environmental Protection
Do not allow to enter waters, waste water, or soil!

Acute Toxicity - Fish
static test LC50 - Oncorhynchus mykiss (rainbow trout) - 0.169 mg/l - 96 h

Acute Toxicity – Daphnia
static test EC50 - Ceriodaphnia dubia (water flea) - 0.67 mg/l - 48 h (OECD Test Guideline 202)

13: Disposal considerations

13.1 Waste treatment methods
Product
Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

14: Transport Information Table

	ADR/RID – European	IMDG International	IATA – DGR International Air

		packaging certification	Maritime Dangerous Goods Code	Travel Association – Dangerous Goods Regulations
14.1	**UN Number**	2331	2331	2331
14.2	**UN Proper Shipping name**	ZINC CHLORIDE, ANHYDROUS	ZINC CHLORIDE, ANHYDROUS	ZINC CHLORIDE, ANHYDROUS
14.3	**Transport Hazard Class**	8	8	8
14.4	**Packaging group**	III	III	III
14.5	**Environmental Hazards**	Yes	Yes	no
14.6	**Special precautions for user**	none		
14.7	**Incompatible materials**	Strong oxidizing agents, potassium, acids and acid fumes. Do not use metal equipment or containers.		

Other Regulations :
HAZCHEM CODE : 2x

15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulatory information
HSNO Approval Code: HSR001554
Tracking Required: not required
Approved Handler Cert.: not required

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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