

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name **ECP Limited**
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Product	Aluminium Chloride				Code	1140
CAS#	HSNO#	UN #	DG Class/es	Packing group #	Tracking?	Handlers Certificate?
7446-70-0	HSR003594	1726	8	II	No	No

Recommended use: Laboratory Investigations

2. Hazards identification

2.1 GHS Classification

Substances and mixtures, which in contact with water, emit flammable gases (Category B)

Acute toxicity, Oral (Category E)

Acute toxicity, Dermal (Category E)

Skin corrosion (Category A)

Serious eye damage (Category A)

Aquatic toxicity (Acute or Chronic) (Category A)

2.2 GHS Label elements, including precautionary statements



Signal word **Danger**

Pictogram

Hazard statement(s)

H261 In contact with water releases flammable gases.

H303 May be harmful if swallowed.

H313 May be harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

Precautionary statement(s)

Prevention

P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire.

P231 + P232 Handle under inert gas. Protect from moisture.

P260 Do not breathe dust or mist.

P264 Wash skin thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

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 victim to fresh air and keep at rest in a position 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.

P335 + P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P391 Collect spillage.

Storage

P402 + P404 Store in a dry place. Store in a closed container.

P405 Store locked up.

P422 Store contents under inert gas.

Disposal

P501 Dispose of contents/container to an approved waste disposal plant.

2.3 Other hazards

Reacts violently with water.

3. Composition/information on ingredients

Component	Concentration
Aluminium chloride anhydrous	
CAS No.	7446-70-0
	<=100%

4. First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.

Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, prolonged or repeated exposure can cause., Damage to the lungs.

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

Dry powder Carbon dioxide (CO₂) Dry powder Dry sand

Unsuitable extinguishing media

Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas.

Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water.

Keep in suitable, closed containers for disposal.

7. Handling and storage

7.1 Precautions for safe handling Avoid formation of dust and aerosols. Provide appropriate exhaust

ventilation at places where dust is formed. 7.2 Conditions for safe storage, including any

incompatibilities Keep container tightly closed in a dry and well-ventilated place. Never allow

product to get in contact with water during storage. Store under inert gas. Vent periodically. Handle

and open container with care. Reacts violently with water. 7.3 Specific end use(s) No data available

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Component	CAS No	Value	Control parameters	Basis
Aluminium chloride anhydrous	7446-70-0	WES-TWA	5 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Body Protection

Complete suit protecting against chemicals. Flame retardant protective clothing. 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 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.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance

Form: powder

Colour: light yellow

b) Odour

No data available

c) Odour Threshold

No data available

d) pH

2.4 at 100 g/l at 20 °C

e) Melting point/freezing point

Melting point/range: 190 °C - lit.

f) Initial boiling point and boiling range

187.7 °C at 1,003 hPa

g) Flash point

Not applicable

h) Evaporation rate

No data available

i) Flammability (solid, gas)

No data available

j) Upper/lower flammability or explosive limits

No data available

k) Vapour pressure

1.33 hPa at 100 °C < 1.33 hPa at 20 °C

l) Vapour density

No data available

m) Relative density

2.4400 g/cm³

n) Water solubility

Decomposes in contact with water.

o) Partition coefficient: n-octanol/water

No data available

p) Auto-ignition temperature

No data available

q) Decomposition temperature

No data available

r) Viscosity

No data available

10. Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

Reacts violently with water.

10.4 Conditions to avoid

Exposure to moisture

10.5 Incompatible materials

Strong oxidizing agents, Alcohols, Mixtures of nitrobenzene and aluminium chloride are thermally unstable and may lead to explosive decomposition due to a multi-step decomposition reaction occurring above 90 degrees C, which self-accelerates with high exothermicity producing azo- and azoxy polymers.

Water.

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas,

Aluminium oxide

Other decomposition products - No data available

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 3,450 mg/kg

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Eyes - Human - Severe eye irritation

Respiratory or skin sensitisation

Guinea pig - Did not cause sensitisation on laboratory animals. - Maximisation Test

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

Potential health effects

Inhalation

May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion

May be harmful if swallowed. Causes burns.

Skin

May be harmful if absorbed through skin. Causes skin burns.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, prolonged or repeated exposure can cause:, Damage to the lungs.

Additional Information

RTECS: BD0525000

12. Ecological information

12.1 Toxicity

Toxicity to fish static test

LC50 - *Salmo gairdneri* - 36.6 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates static test

EC50 - *Daphnia magna* (Water flea) - 27.3 mg/l - 48 h Method: EG 84/449

Toxicity to algae

EC50 - *Pseudokirchneriella subcapitata* (green algae) - 0.57 mg/l - 96 h 12.2

Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

Harmful to aquatic life.

13. Disposal considerations

13.1 Waste treatment methods

Product

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	1726	1726	1726
14.2	UN Proper Shipping name	ALUMINIUM CHLORIDE, ANHYDROUS	ALUMINIUM CHLORIDE, ANHYDROUS	Aluminium chloride, anhydrous
14.3	Transport Hazard Class	8	8	8
14.4	Packaging group	II	II	II
14.5	Environmental Hazards	Yes	Yes	No

14.6	Special precautions for user	No data available
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15. Regulatory information

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

National regulatory information

HSNO Approval Code: HSR003594

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006

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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