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Hefei TNJ Chemical Industry Co.,Ltd.
B911 Xincheng Business Center,
Qianshan Rd. Hefei 230022 China
Tel : (0086) 551 65418695
Fax: (0086) 551 65418697
Email: info@tnjchem.com
Site: www.tnjchem.com

Material Safety Data Sheet

Aluminium chloride

Section 1: Chemical Product and Company Identification

Product Name: Aluminium chloride

Catalog Codes: AC217460000; AC217460025; AC217460050; AC217461000; AC217465000

CAS#: 7446-70-0

TSCA: Not available

CI#: Not available

Synonym: Aluminium trichloride

Molecular formula: AlCl₃

Identified uses: Laboratory chemicals, Manufacture of substances Chemical Formula

Contact Information for Emergency: (0086) 551 65418681

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B911 Xincheng Business Center

Tel : (0086) 551 65418695

Qianshan Road, Hefei

Fax: (0086) 551 65418697

230004 Anhui

Email: info@tnjchem.com

China

Site: www.tnjchem.com

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	Weight %
Aluminium chloride	7446-70-0	>95

Section 3: Hazards Identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Signal Word

Danger

Hazard Statements

May be corrosive to metals

Causes severe skin burns and eye damage

May cause respiratory irritation

May cause damage to organs through prolonged or repeated exposure



Precautionary Statements

Prevention

Do not breathe dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling

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

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Response

Immediately call a POISON CENTER or doctor/physician

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Ingestion

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Reacts violently with water

Contact with water liberates toxic gas

Section 4: First Aid Measures	
Eye Contact	
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.	
Skin Contact	
Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.	
Inhalation	
Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.	
Ingestion	
Do not induce vomiting. Call a physician or Poison Control Center immediately.	
Most important symptoms/effects	
Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation	
Notes to Physician	
Treat symptomatically	

Section 5: Fire and Explosion Data			
Suitable Extinguishing Media	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.		
Unsuitable Extinguishing Media	DO NOT USE WATER		
Flash Point	No information available		
Method -	No information available		
Autoignition Temperature	No information available		
Explosion Limits			
Upper	No data available		
Lower	No data available		
Sensitivity to Mechanical Impact	No information available		
Sensitivity to Static Discharge	No information available		
Specific Hazards Arising from the Chemical			
Water reactive. Contact with water liberates toxic gas. Corrosive Material. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.			
Hazardous Combustion Products	Hydrogen chloride Hydrogen chloride gas		
Protective Equipment and Precautions for Firefighters			
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.			
NFPA			
Health	Flammability	Instability	Physical hazard
3	0	2	W

Section 6: Accidental Release Measures

Personal Precautions

Wear self-contained breathing apparatus and protective suit. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing.

Environmental Precautions

Avoid release to the environment. See Section 12 for additional ecological information.

Methods for Containment and Clean Up

Wear self-contained breathing apparatus and protective suit. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Do not expose spill to water.

Section 7: Handling and Storage

Handling

Use only under a chemical fume hood. Wear personal protective equipment. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Do not ingest. Do not allow contact with water. Protect from moisture.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection

Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent.

Gloves

Personal Protection in Case of a Large Spill

Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Crystals solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 133.34 g/mole

Color: White to yellowish.

pH (1% soln/water): Not available.

Boiling Point: Not available.

Melting Point: Sublimes.

Critical Temperature: Not available.

Specific Gravity: 2.44 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Not available.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with metals.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Reacts violently with water especially when water is added to the product.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.

Toxicity to Animals:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.

Acute oral toxicity (LD50): 3805 mg/kg [Mouse.]. Acute toxicity of the dust (LC50): 5 8 hours [Human/30 min].

Chronic Effects on Humans: Causes damage to the following organs: lungs, mucous membranes.

Other Toxic Effects on Humans:

Very hazardous in case of skin contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Section 14: Transport Information

DOT Classification: Class 8: Corrosive material

Identification: : Aluminum Chloride, Anhydrous UNNA: UN1726 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

Pennsylvania RTK: Aluminum chloride, anhydrous Massachusetts RTK: Aluminum chloride, anhydrous TSCA 8(b) inventory:

Aluminum chloride, anhydrous

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):

CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic

effects (VERY TOXIC). CLASS E: Corrosive solid.

DSCL (EEC): R36/38- Irritating to eyes and skin.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 0

Reactivity: 0

Personal Protection: j

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

Other Special Considerations: Not available.

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