



Material Safety Data Sheet
Aluminum chloride hexahydrate

MSDS# 00905

Section 1 - Chemical Product and Company Identification

MSDS Name: Aluminum chloride hexahydrate
Catalog Numbers: A573-212, A573-500, A576-12, A576-212, A576-50, A576-500
Synonyms: Trichloroaluminum hexahydrate; Aluminum (III) chloride hexahydrate.

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300

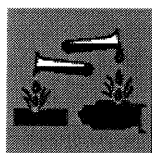
Section 2 - Composition, Information on Ingredients

Risk Phrases:

CAS#: 7784-13-6
Chemical Name: Aluminum chloride hexahydrate
%: 100
EINECS#: unlisted
Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: C



Risk Phrases: 34

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Water-reactive. Causes eye and skin burns. Causes digestive and respiratory tract burns. Target Organs: Eyes, skin, mucous membranes.

Potential Health Effects

Eye: Causes eye burns.
Skin: Causes skin burns.
Ingestion: Causes gastrointestinal tract burns. Aluminum may be readily absorbed from the gastrointestinal tract.
Inhalation: Causes chemical burns to the respiratory tract.
Chronic: Effects may be delayed.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.
Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
Ingestion: If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Autoignition Temperature: Not available.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: ; Special Hazard: -W-

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Use only in a well-ventilated area. Do not allow water to get into the container because of violent reaction.

Handling: Minimize dust generation and accumulation. Do not breathe dust, mist, or vapor. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Discard contaminated shoes.

Storage: Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from water. Corrosives area. Keep away from strong bases. Separate from organic materials.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Aluminum chloride, anhydrous	none listed	2 mg/m ³ TWA (as Al) (listed under Aluminum, soluble salts).	none listed
Aluminum chloride hexahydrate	none listed	2 mg/m ³ TWA (as Al) (listed under Aluminum, soluble salts).	none listed

OSHA Vacated PELs: Aluminum chloride, anhydrous: 2 mg/m³ TWA (as Al, listed under Aluminum) (listed under Aluminum, soluble salts) Aluminum chloride hexahydrate: 2 mg/m³ TWA (as Al, listed under Aluminum) (listed under Aluminum, soluble salts)

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Color: white

Odor: pungent odor - odorless

pH: Acidic in solution.

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: 181 deg C (357.80°F)

Decomposition Temperature:

Solubility in water: Soluble

Specific Gravity/Density: 2.39

Molecular Formula: AlCl₃.6H₂O

Molecular Weight: 241.43

Section 10 - Stability and Reactivity

Chemical Stability:	Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid:	Dust generation, contact with water, excess heat.
Incompatibilities with Other Materials	Water, organic materials, Aluminum chloride reacts violently with water producing hydrochloric acid and heat..
Hazardous Decomposition Products	Hydrogen chloride, hydrogen chloride, aluminum oxide.
Hazardous Polymerization	Has not been reported.

Section 11 - Toxicological Information

RTECS#:	CAS# 7446-70-0: BD0525000 CAS# 7784-13-6: BD0530000
LD50/LC50:	RTECS: CAS# 7446-70-0: Draize test, rabbit, skin: 10%/6D (Intermittent); Oral, mouse: LD50 = 1130 mg/kg; Oral, rat: LD50 = 3450 mg/kg; Skin, rabbit: LD50 = >2 gm/kg; . RTECS: CAS# 7784-13-6: Oral, mouse: LD50 = 1990 mg/kg; Oral, rat: LD50 = 3311 mg/kg; .
Carcinogenicity:	Aluminum chloride, anhydrous - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. Aluminum chloride hexahydrate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: No information available.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: ALUMINUM CHLORIDE, ANHYDROUS

Hazard Class: 8

UN Number: UN1726
Packing Group: II
Canada TDG
Shipping Name: ALUMINUM CHLORIDE, ANHYDROUS (Aluminum chloride hexahydrate)
Hazard Class: 8
UN Number: UN1726
Packing Group: II

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 34 Causes burns.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 7446-70-0: 1

CAS# 7784-13-6: 1

Canada

CAS# 7446-70-0 is listed on Canada's DSL List

Canadian WHMIS Classifications: E

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7446-70-0 is listed on Canada's Ingredient Disclosure List

CAS# 7784-13-6 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 7446-70-0 is listed on the TSCA Inventory.

CAS# 7784-13-6 is not on the TSCA Inventory because it is a hydrate. It is considered to be on the CAS number for the anhydrous form in on the Inventory (40CFR720.3(u)(2)).

REVIEWED

DATE: 29 March 2012
Chatterford

Section 16 - Other Information

MSDS Creation Date: 12/10/1998

Revision #8 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information 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.
