



# Fisher Scientific

Part of Thermo Fisher Scientific

## Material Safety Data Sheet

Creation Date 10-Sep-2010

Revision Date 06-Feb-2013

Revision Number 2

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name**

**Aluminium chloride**

**Cat No.**

AC217460000; AC217460025; AC217460050; AC217461000;  
AC217465000

**Synonyms**

Aluminium trichloride

**Recommended Use**

Laboratory chemicals

**Company**

Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

**Entity / Business Name**

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

**Emergency Telephone Number**

For information in the US, call: 001-800-  
ACROS-01  
For information in Europe, call: +32 14 57 52  
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Emergency Number, Europe: +32 14 57 52 99  
Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-  
424-9300  
CHEMTREC Phone Number, Europe: 001-  
703-527-3887

### 2. HAZARDS IDENTIFICATION

**DANGER!**

#### Emergency Overview

Causes severe eye and skin irritation with possible burns. Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. Water reactive.

**Appearance** Yellow

**Physical State** Solid

**Odor** pungent

**Target Organs**

Skin, Respiratory system, Eyes, Gastrointestinal tract (GI)

**Potential Health Effects**

**Acute Effects**

**Principle Routes of Exposure**

**Eyes**

**Skin**

**Inhalation**

**Ingestion**

Causes severe eye irritation and possible burns.

Contact causes severe skin irritation and possible burns.

May be harmful if inhaled. May cause irritation of respiratory tract.

May be harmful if swallowed.

**Chronic Effects**

Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions**      Gastrointestinal tract. Preexisting eye disorders. Skin disorders.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Component	CAS-No	Weight %
Aluminum chloride	7446-70-0	>95

### 4. FIRST AID MEASURES

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
<b>Inhalation</b>	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.
<b>Ingestion</b>	Do not induce vomiting. Call a physician or Poison Control Center immediately.
<b>Notes to Physician</b>	Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

<b>Flash Point</b>	No information available.
<b>Method -</b>	No information available.
<b>Autoignition Temperature</b>	No information available.
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Suitable Extinguishing Media</b>	CO <sub>2</sub> , dry chemical, dry sand, alcohol-resistant foam.
<b>Unsuitable Extinguishing Media</b>	No information available.
<b>Hazardous Combustion Products</b>	No information available.
<b>Sensitivity to mechanical impact</b>	No information available.
<b>Sensitivity to static discharge</b>	No information available.
<b>Specific Hazards Arising from the Chemical</b>	Keep product and empty container away from heat and sources of ignition. Water reactive.

#### 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. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**                      **Health 3**                      **Flammability 0**                      **Instability 2**                      **Physical hazards N/A**

### 6. ACCIDENTAL RELEASE MEASURES

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<b>Personal Precautions</b>	Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
<b>Environmental Precautions</b>	Should not be released into the environment.
<b>Methods for Containment and Clean Up</b>	Sweep up or vacuum up spillage and collect in suitable container for disposal.

**7. HANDLING AND STORAGE**

<b>Handling</b>	Use only under a chemical fume hood. Wear personal protective equipment. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Do not ingest.
<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

<b>Engineering Measures</b>	Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Exposure Guidelines</b>	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Aluminum chloride		(Vacated) TWA: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Aluminum chloride	TWA: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	

*NIOSH IDLH: Immediately Dangerous to Life or Health*

**Personal Protective Equipment****Eye/face Protection**

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 and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State</b>	Solid
<b>Appearance</b>	Yellow
<b>Odor</b>	pungent
<b>Odor Threshold</b>	No information available.
<b>pH</b>	2.4 100 g/L aq.sol.
<b>Vapor Pressure</b>	No information available.
<b>Vapor Density</b>	No information available.
<b>Viscosity</b>	No information available.
<b>Boiling Point/Range</b>	No information available.
<b>Melting Point/Range</b>	194°C / 381.2°F
<b>Decomposition temperature</b>	No information available.
<b>Flash Point</b>	No information available.
<b>Evaporation Rate</b>	No information available.
<b>Specific Gravity</b>	2.440

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Solubility	No information available.
g Pow	No data available
Molecular Weight	133.34
Molecular Formula	Al Cl <sub>3</sub>

**10. STABILITY AND REACTIVITY**

Stability	Moisture sensitive.
Conditions to Avoid	Incompatible products. Excess heat. Exposure to moist air or water.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Hydrogen chloride gas
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions .	None under normal processing..

**11. TOXICOLOGICAL INFORMATION**Acute ToxicityComponent Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Aluminum chloride	380 mg/kg ( Rat )	2 g/kg ( Rabbit )	Not listed

Irritation	No information available.
Toxicologically Synergistic Products	No information available.
<u>Chronic Toxicity</u>	
Carcinogenicity	There are no known carcinogenic chemicals in this product
Sensitization	No information available.
Mutagenic Effects	No information available.
Reproductive Effects	No information available.
Developmental Effects	No information available.
Teratogenicity	No information available.
Other Adverse Effects	See actual entry in RTECS for complete information.
Endocrine Disruptor Information	No information available

**12. ECOLOGICAL INFORMATION**Ecotoxicity

**12. ECOLOGICAL INFORMATION**

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Aluminum chloride	Not listed	Gambusia affinis: LC50=27.1 mg/L 97h	Not listed	EC50: 3.9 mg/L 48h EC50: 27.3 mg/L 48h

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available

Mobility No information available

**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

**14. TRANSPORT INFORMATION****DOT**

UN-No 1726  
 Proper Shipping Name ALUMINUM CHLORIDE, ANHYDROUS  
 Hazard Class 8  
 Packing Group II

**TDG**

UN-No 1726  
 Proper Shipping Name ALUMINUM CHLORIDE, ANHYDROUS  
 Hazard Class 8  
 Packing Group II

**IATA**

UN-No 1726  
 Proper Shipping Name ALUMINIUM CHLORIDE, ANHYDROUS  
 Hazard Class 8  
 Packing Group II

**IMDG/IMO**

UN-No 1726  
 Proper Shipping Name ALUMINUM CHLORIDE, ANHYDROUS  
 Hazard Class 8  
 Packing Group II

**15. REGULATORY INFORMATION**

International Inventories

15. REGULATORY INFORMATION											
Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Aluminum chloride	X	X	-	231-208-1	-		X	X	X	X	X

**Legend:**

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

**TSCA 12(b)** Not applicable

**SARA 313**

Not applicable

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	Yes

**Clean Water Act**

Not applicable

**Clean Air Act**

Not applicable

**OSHA**

Not applicable

**CERCLA**

Not Applicable

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Aluminum chloride	X	X	X	-	X

**U.S. Department of Transportation**

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N



**U.S. Department of Homeland Security**

This product contains the following DHS chemicals:

Component	DHS Chemical Facility Anti-Terrorism Standard
Aluminum chloride	2000 lb STQ

**Other International Regulations**

Mexico - Grade No information available

Canada

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

**WHMIS Hazard Class**

E Corrosive material

D2B Toxic materials

**16. OTHER INFORMATION**

Prepared By Regulatory Affairs  
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Revision Summary (M)SDS sections updated 2 3

**Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS