

Aluminum Sulfate ACS

SECTION 1. IDENTIFICATION

Product Identifier	Aluminum Sulfate ACS
Other Means of Identification	Cake alum, Dialuminum sulfate octadecahydrate
Product Code(s)	AL5620
Product Family	Inorganic Solid
Recommended Use	Laboratory and industrial use.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	CANUTEC CANADA, 613-996-6666, 24 Hours
SDS No.	0384
Date of Preparation	February 19, 2016

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Eye irritation - Category 2A

Label Elements



Signal Word:
Warning

Hazard Statement(s):
Causes serious eye damage.

Precautionary Statement(s):

Prevention:

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

Response:

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 CENTRE or doctor.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers
Aluminum sulfate octadecahydrate	7784-31-8	> 99	Cake alum, Dialuminum sulfate octadecahydrate

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. Get immediate medical advice or attention.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

Eye Contact

Immediately call a Poison Centre or doctor. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open.

Ingestion

Do not induce vomiting. Rinse mouth with water. If exposed or concerned, call a Poison Centre or doctor.

First-aid Comments

All first aid procedures should be periodically reviewed by a doctor familiar with the material and its condition of use in the workplace.

Most Important Symptoms and Effects, Acute and Delayed

May cause serious eye damage. May irritate or burn the eyes. Permanent damage including blindness may result.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Does not burn. Closed containers may rupture violently when heated releasing contents. Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: corrosive sulfur oxides; corrosive sulfuric acid.

Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

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Personal Precautions, Protective Equipment, and Emergency Procedures

Emergency responders: use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources if safe to do so. Remove or isolate incompatible materials as well as other hazardous materials.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Small spills or leaks: stop or reduce leak if safe to do so. Avoid generating dust. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Flush spill area.

Large spills or leaks: contact emergency services and manufacturer/supplier for advice.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Avoid generating dusts. Only use where there is adequate ventilation. Prevent accidental contact with incompatible chemicals. Do not dry sweep. Wet the product or use explosion-proof HEPA vacuum. Keep dry. Prevent accidental contact with water and humidity. Keep containers tightly closed when not in use or empty.

Conditions for Safe Storage

Store in an area that is: cool, dry, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity). Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Store in the original, labelled, shipping container. Comply with all applicable health and safety regulations, fire and building codes.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Aluminum sulfate octadecahydrate	Not established		2 mg/m3			

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use a corrosion-resistant exhaust ventilation system separate from other ventilation systems. Exhaust directly to the outside, taking any necessary precautions for environmental protection.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: butyl rubber, natural rubber, neoprene rubber, nitrile rubber, polyvinyl chloride, Viton®, Viton®/butyl rubber, Barrier® (PE/PA/PE), Silver Shield/4H® (PE/EVAL/PE).

The following materials should NOT be used: polyvinyl alcohol.

Respiratory Protection

No specific guidelines are available. The NIOSH recommendations for sulfuric acid may be applicable.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Colourless crystals.
Odour	Odourless
Odour Threshold	Not available
pH	3.0 - 4.0 (5% solution)

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Melting Point/Freezing Point	86.5 °C (187.7 °F) (melting); Not available (freezing)
Initial Boiling Point/Range	Not applicable
Flash Point	Not applicable
Evaporation Rate	Not available
Flammability (solid, gas)	Will not burn.
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not applicable
Relative Density (water = 1)	1.69
Solubility	Soluble in water; Insoluble in alcohols (e.g. ethanol).
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)
Other Information	
Physical State	Solid
Other Physical Property 1	Relative Density: 1.69 @ 17 deg C

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Reacts in the presence of water. Releases a large amount of heat.

Conditions to Avoid

Generation of dust. Water, moisture or humidity. High temperatures.

Incompatible Materials

Water, strong oxidizing agents (e.g. perchloric acid), strong bases (e.g. sodium hydroxide).

Hazardous Decomposition Products

Corrosive sulfuric acid; very toxic carbon monoxide, carbon dioxide; corrosive sulfur oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Aluminum sulfate octadecahydrate	Not available	6207 mg/kg (mouse)	> 5000 mg/kg (rabbit)

Skin Corrosion/Irritation

Not a skin irritant.

Serious Eye Damage/Irritation

There is limited evidence of serious eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

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Inhalation

May cause nose and throat irritation.

Ingestion

Not harmful.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

Not known to be a respiratory sensitizer. Not known to be a skin sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Aluminum sulfate octadecahydrate	Not evaluated	Not Listed	Not Listed	

Reproductive Toxicity**Development of Offspring**

Not known to harm the unborn child.

Sexual Function and Fertility

Not known to cause effects on sexual function or fertility.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Not known to be a mutagen.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal Methods**

Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION**Safety, Health and Environmental Regulations****Canada**

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Not listed on the DSL or NDSL.

USA

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SECTION 16. OTHER INFORMATION

SDS Prepared By	Alphachem Limited
Phone No.	(905)-821-2995
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References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).
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