


# Safety Data Sheet

Section 1. Identification		
<b>Product Identifier</b>	Aluminium Sulfate	<b>Version: 5</b> <b>Effective Date: 10 July, 2017</b>
<b>Other Means Of Identification</b>	Alum	
<b>Initial Supplier Identifier</b>	Chemfax Products Ltd. 11444 – 42 Street SE Calgary, AB T2C 5C4 Tel: 403-287-2055	
<b>Recommended Use and Restrictions On Use</b>	Pulp & paper industry, textile processing, water treatment, food additive, soaps, greases, drugs and cosmetics. No restrictions.	
<b>Restrictions on use</b>	None	
<b>Product Family</b>	Inorganic Salt	
<b>24 Hour Emergency</b>	Canutec (613) 996-6666	

Section 2. Hazard Identification	
<b>Hazard Classification</b>	
<b>Health Hazards</b>	Skin Corrosion/Irritation – Category 2 Eye Damage/Irritation – Category 1
<b>Signal Word</b>	Danger
<b>Hazard Statement</b>	Causes skin irritation. Causes serious eye damage.
<b>Precautionary Prevention Statement</b>	Wash hands thoroughly after handling. Wear protective gloves, and eye & face protection.
<b>Precautionary Response Statement</b>	IF ON SKIN: Wash with plenty water. Specific treatment: Do not induce vomiting unless directed by medical personnel. If skin irritation occurs, seek medical attention. Remove contaminated clothing and launder before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately seek medical attention
<b>Precautionary Storage Statement</b>	No statements.

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<b>Precautionary Disposal Statement</b>	Dispose of contents/containers in accordance with local regulations.
<b>Other Hazards</b>	None

### Section 3. Composition / Information on Ingredients

Chemical Name	Common Name or Synonyms	CAS NO. and Other Unique Identifiers	% by weight
Aluminium sulphate	Alum	16828-12-9	100

### Section 4. First-Aid Measures

<b>Eye Contact</b>	Flush eyes with water for 15 minutes. Seek medical attention.
<b>Skin Contact</b>	Flush area with water. If irritation persists, seek medical attention. Launder clothing before reuse.
<b>Inhalation</b>	Remove victim to fresh air. If there is difficulty breathing, seek immediate medical attention.
<b>Ingestion</b>	Remove victim to fresh air. If there is difficulty breathing, seek immediate medical attention.
<b>Most Important Symptoms and Effects Both Acute and Delayed</b>	May cause abdominal pain, nausea, and or vomiting. Concentrated solutions (over 20%) can cause burns of the mouth, bleeding stomach, incoordination, muscle spasms, and/or kidney injury. May cause irritation and inflammation of the eye. Concentrated solutions (over 20%) may cause severe eye damage or burns.
<b>Immediate Medical Attention and Special Treatment</b>	Aluminum soluble salts may cause gastroenteritis if ingested. Treatment includes the use of demulcents.

### Section 5. Fire-Fighting Measures

<b>Suitable and Unsuitable Extinguishing Media</b>	Use extinguishing media suitable for surrounding fire.
<b>Hazardous Combustion Products</b>	Oxides of sulphur, aluminium oxides, and corrosive fumes.
<b>Specific Hazards Arising From The Product</b>	Under fire conditions greater than 650°C (1202°F), product decomposes to give off sulfur trioxide, an oxidizing agent which will support combustion. Sulfur trioxide will react with water to form sulfuric acid.

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<b>Special Protective Equipment and Precautions For Fire-Fighters</b>	Fire-fighters should wear self-contained breathing apparatus and full protective clothing. Use water spray to cool containers and structures exposed to fire.
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### Section 6. Accidental Release Measures

<b>Personal Precautions, Protective Equipment and Emergency Procedures</b>	Gloves, coveralls, safety glasses. Secure area. Evacuate unnecessary personnel. Minimize the generation of dust.
<b>Environmental Precautions</b>	Do not allow spilled material to enter sewers and surface watercourses.
<b>Methods and Materials for Containment and Clean-Up</b>	Sweep up spilled material, being careful not create dust. Place material in a suitable container for disposal. Neutralize residues with lime slurry, limestone or soda ash. This will generate carbon dioxide requiring additional ventilation.

### Section 7. Handling and Storage

<b>Precautions For Safe Handling</b>	Handle with care. Avoid inhaling dust. Avoid contact with skin and eyes.
<b>Conditions For Safe Storage</b>	Store in a cool, DRY well ventilated area. Keep containers closed when not in use. Keep away from incompatible materials.

### Section 8. Exposure Controls / Personal Protection

Control Parameters	TWA: 8 Hr	STEL: 15 min	Ceiling	IDLH *
Aluminium sulphate	2 mg/m <sup>3</sup>			
	* Immediately Dangerous to Life and Health			
<b>Exposure Controls</b>	Local exhaust ventilation			
<b>Appropriate Engineering Controls</b>	Safety shower and eye wash station.			
<b>Individual Protective Measures</b>	If exposure limits are exceeded:			
<b>Eye / Face Protection</b>	Safety glasses			
<b>Skin Protection</b>	Chemical resistant coveralls, gloves			
<b>Respiratory Protection</b>	Air purifying respirator fitted with HEPA filters			

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Section 9. Physical and Chemical Properties	
<b>Appearance</b>	White to off white, powder or granules
<b>Odour</b>	No odour
<b>Odour Threshold</b>	Not applicable.
<b>pH</b>	>2.9 @ 5% solution.
<b>Flash Point</b>	No data
<b>Boiling Point and Boiling Range</b>	No data
<b>Melting Point and Freezing Point</b>	86 °C
<b>Evaporation Rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not flammable
<b>Upper and Lower Flammability or Explosive Limits</b>	No data
<b>Vapour Pressure</b>	Not applicable.
<b>Vapour Density</b>	Not applicable.
<b>Relative Density</b>	1.61
<b>Solubility</b>	Soluble
<b>Partition co-efficient, n-Octanol/Water</b>	No data
<b>Auto-ignition Temperature</b>	No data
<b>Decomposition Temperature</b>	No data
<b>Viscosity</b>	Not applicable

Section 10. Stability and Reactivity	
<b>Reactivity</b>	Alkalis and water reactive materials, such as oleum, cause exothermic reactions.
<b>Chemical Stability</b>	Stable
<b>Possibility of Hazardous Reactions</b>	Will not occur
<b>Conditions to Avoid</b>	Temperatures above 760 °C.
<b>Incompatible Materials</b>	Contact with water forms sulphuric acid. Water reactive materials such as oleum cause exothermic reactions. Strong bases, strong oxidizing agents, and alkalis.
<b>Hazardous Decomposition Products</b>	Not expected to decompose under normal conditions of use. At temperatures above 760 °C, sulphur oxide gases are released which are toxic, corrosive and are oxidizers. The remaining residues are caustic. The trioxide is also a fire hazard, Oxides of aluminium. May corrode ferrous metals and mild steel in the presence of moisture.

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<b>Section 11. Toxicological Information</b>	
<b>Component Toxicity</b>	<b>LD50 Oral      LD50 Dermal      LC50 Inhalation</b>
Aluminium sulphate	>9g/kg (Rat)
<b>Likely Routes of Exposure</b>	
<b>Skin:</b>	May cause irritation with prolonged and repeated contact as either powder or in liquid form.
<b>Eyes:</b>	May cause mild to severe irritation or burns as the dust becomes acidic if in contact with water.
<b>Inhalation:</b>	Dust or mists will cause irritation of the respiratory tract.
<b>Ingestion:</b>	May cause irritation of the digestive tract leading to vomiting, nausea and purging. Acute exposure can lead to incoordination, muscle spasms, and kidney effects.
<b>Acute Toxicity Estimates (ATE)</b>	Alkalis and water reactive materials, such as oleum, cause exothermic reactions
<b>STOT (Specific Target Organ Toxicity) – Single Exposure</b>	Not classified
<b>Aspiration Toxicity</b>	Not classified
<b>STOT (Specific Target Organ Toxicity) – Repeated Exposure</b>	Not classified
<b>Skin Corrosion / Irritation</b>	Irritant
<b>Serious Eye Damage / Irritation</b>	Serious eye damage
<b>Respiratory or Skin Sensitization</b>	Not classified
<b>Carcinogenicity</b>	Not listed.
<b>Reproductive Toxicity</b>	
- <b>Sexual Function and Fertility</b>	Not classified
- <b>Development of Offspring</b>	Not classified
- <b>Effects on or via Lactation</b>	Not classified
<b>Germ Cell Mutagenicity</b>	Not classified
<b>Interactive Effects</b>	None known
<b>Other Information</b>	None known



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Section 12. Ecological Information	
<b>Ecotoxicity</b>	No data
<b>Persistence and Degradability</b>	No data
<b>Bioacumulative Potential</b>	No data
<b>Biodegradability</b>	No data
<b>Mobility in Soil</b>	Not available
<b>Other Adverse Effects</b>	The products of degradation are more toxic than the original products. Degradation products are: carbon monoxide, dioxide, and oxides of sulphur. This can lead to acidic conditions and the potential release of trace metals.

Section 13. Disposal Considerations	
<b>Disposal Considerations</b>	Dispose of contents/container in accordance with local regulations.

Section 14. Transport Information	
<b>UN Number</b>	3077
<b>UN Proper Shipping Name</b>	Environmentally hazardous substance, Solid, N.O.S. (Aluminium sulfate)
<b>Transport Hazard Class(es)</b>	9
<b>Packaging Group</b>	III
<b>Environmental Hazards</b>	Not applicable
<b>Bulk Transport</b>	Not applicable
<b>Special Precaution</b>	Not applicable
<b>DOT Erg#</b>	171

Section 15. Regulatory Information	
<b>Canada – DSL Inventory</b>	All components of this product are either on the Domestic Substances List (DSL), Non-Domestic Substances List (NDSL), or exempt
<b>TSCA</b>	All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt
<b>Additional Information</b>	None

Section 16. Other Information	
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Manufacturer of Specialty Chemicals

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<b>NFPA Rating</b>	Health-2/ Flammability-0/Reactivity-1/Special Hazard-Not applicable
<b>HMIS Rating</b>	Health-2/Flammability-0/Reactivity-1/Personal Protection-See Section 8.
<b>Prepared by:</b>	Chemfax Products Ltd., Technical Department
<b>Date Prepared:</b>	17 August, 2012
<b>Date of Latest Revision:</b>	10 July, 2017
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