


# Material Safety Data Sheet

Section 1. Chemical Product and Company Identification		
<b>Product Name:</b>	<b>Aluminum Sulphate</b>	<b>Version: 4</b> <b>Effective Date: 20 June, 2014</b>
<b>Supplier/ Manufacturer:</b>	Chemfax Products Ltd. 11444 – 42 Street SE Calgary, AB T2C 5C4 Tel: 403-287-2055	
<b>Material Uses</b>	Pulp & paper industry, textile processing, water treatment, food additive, soaps, greases, drugs and cosmetics	
<b>24 Hour Emergency</b>	Canutec (613) 996-6666	
<b>WHMIS</b>		
		
This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR		
<b>HMIS Ratings</b> for this product are: <b>Health 2, Flammability 0, Reactivity 0</b>		

Section 2. Composition and Information on Ingredients		
Name	CAS#	% by weight
Aluminum sulphate	16828-12-9	100
See Section 8 for information on permissible exposure limits and threshold limit values		

Section 3. Hazards Identification	
<b>Physical State and Appearance</b>	White to off white, powder or granules with no odour
<b>Hazard Summary</b>	Irritant
<b>Routes of Exposure</b>	Skin – contact, eyes, inhalation, ingestion
<b>Potential Acute Health Effects</b>	<p><b>Skin:</b> Irritant. May cause irritation with prolonged and repeated contact as either powder or in liquid form.</p> <p><b>Eyes:</b> Irritant. May cause mild to severe irritation or burns as the dust becomes acidic in contact with water.</p>

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	<p><b>Inhalation:</b> Dust or mists will cause irritation of the respiratory tract.</p> <p><b>Ingestion:</b> Irritant. May cause irritation of the digestive tract leading to vomiting, nausea and purging. Acute exposure can lead to inco-ordination, muscle spasms and kidney effects.</p>
<b>Medical Conditions Aggravated by Exposure</b>	Breathing of dust may aggravate acute or chronic asthma and chronic pulmonary disease such as emphysema and bronchitis.
See Toxicological Information – Section 11	
<b>Additional Hazard Identification Remarks</b>	None

<b>Section 4. First Aid Measures</b>	
<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>	Rinse mouth with water if conscious. Do not induce vomiting. Lay victim on left side to prevent aspiration of any vomit. Seek immediate medical attention.
<b>Notes to Physician</b>	None
<b>Additional First Aid Remarks</b>	None

<b>Section 5. Fire Fighting Measures</b>	
<b>Flammability of the Product</b>	Non flammable
<b>Flash Point</b>	Not applicable
<b>Explosive Limits</b>	Not applicable
<b>Auto Ignition Temperature</b>	Not applicable
<b>Static Discharge</b>	No
<b>Suitable Extinguishing Media</b>	Use extinguishing media suitable for surrounding fire
<b>Hazardous Combustion Products</b>	Oxides of sulphur, aluminium oxides and corrosive fumes
<b>Precautions for Fire Fighting</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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<b>Section 6. Accidental Release Measures</b>	
<b>Personal Precautions</b>	Gloves, coveralls, safety glasses
<b>Environmental Precautions</b>	Do not allow to enter sewers and surface watercourses
<b>Methods for Clean Up</b>	Sweep up spilt material, being careful not create dust. Place material in a suitable container for disposal. Neutralise residues with lime slurry, limestone or soda ash. This will generate carbon dioxide requiring additional ventilation.

<b>Section 7. Handling and Storage</b>	
<b>Handling</b>	Handle with care. Avoid breathing dust. Avoid contact with skin and eyes. Contact with water forms Sulphuric acid
<b>Storage</b>	Store in a cool, DRY well ventilated area. Keep containers closed when not in use. Keep away from incompatible materials.

<b>Section 8. Exposure Controls and Personal Protection</b>			
<b>Exposure Guidelines</b>	<b>TWA: 8 Hr</b>	<b>STEL: 15 min</b>	<b>Ceiling</b>
Aluminum sulphate	2 mg/m <sup>3</sup> Form as aluminium (soluble salts)		
<b>Exposure Controls</b>	Local exhaust ventilation		
<b>Personal Protection</b>			
<b>Respiratory</b>	Air purifying respirator fitted with HEPA filters if exposure limits are exceeded.		
<b>Skin</b>	Gloves (nitrile), coveralls, chemical resistant footwear		
<b>Eyes</b>	Safety glasses		
<b>Other</b>	None		

<b>Section 9. Physical and Chemical Properties</b>	
<b>Physical State and Appearance</b>	White to off white, powder or granules with no odour
<b>Odour Threshold</b>	Not applicable
<b>pH</b>	>2.9 @ 5% solution
<b>Boiling Point</b>	No data
<b>Melting Point / Freezing point</b>	86 °C
<b>Evaporation Rate</b>	Not applicable
<b>Vapour Density</b>	Not applicable
<b>Vapour Pressure</b>	Not applicable
<b>Relative Density</b>	1.61
<b>Solubility in Water</b>	Soluble
<b>% Volatile</b>	Not applicable
<b>Other Data</b>	None

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<b>Section 10. Stability and Reactivity</b>	
<b>Chemical Stability</b>	Stable
<b>Hazardous Polymerisation</b>	Will not occur
<b>Conditions to Avoid</b>	Temperatures above 760 °C.
<b>Materials to Avoid</b>	Contact with water forms Sulphuric acid. Water reactive materials such as oleum cause exothermic reactions. Strong bases, strong oxidising agents, alkalis.
<b>Hazardous Decomposition Products</b>	At temperatures above 760 °C, sulphur oxide gases are released which are toxic, corrosive and are oxidisers. 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

<b>Section 11. Toxicological Information</b>	
<b>Principle Routes of Exposure</b>	
<b>Skin:</b>	Irritant. May cause irritation with prolonged and repeated contact as either powder or in liquid form.
<b>Eyes:</b>	Irritant. May cause mild to severe irritation or burns as the dust becomes acidic in contact with water.
<b>Inhalation:</b>	Dust or mists will cause irritation of the respiratory tract.
<b>Ingestion:</b>	Irritant. May cause irritation of the digestive tract leading to vomiting, nausea and purging. Acute exposure can lead to inco-ordination, muscle spasms and kidney effects.
<b>Additional Information</b>	
<b>Acute Toxicity</b>	
Aluminum sulphate	LD50: >9000 mg/kg acute (Rat, oral)
<b>Chronic Toxic Effects</b> – Aluminum sulphate has been to show liver, kidney and nervous system toxicity when tested in laboratory animals. Repeated ingestion can cause phosphate deficiency which can weaken bones.	
<b>Carcinogenicity</b> – Not listed	
<b>Reproductive Toxicity / Teratogenicity / Embryotoxicity / Mutagenicity</b> – Aluminum sulphate has been shown to cause chromosomal breaks when tested in rat somatic cells IN VIVO, and to induce sister chromatid exchanges. Chromosomal aberrations and micronuclei in human leukocytes under IN VITRO conditions.	

<b>Section 12. Ecological Information</b>	
<b>Ecotoxicity</b>	No data
<b>BOD and COD</b>	No data
<b>Biodegradability / OECD</b>	No data
<b>Toxicity of the Products of Biodegradation</b>	The products of degradation are more toxic than the original products. Degradation products are – carbon monoxide and dioxide, and oxides

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	of sulphur. This can lead to acidic conditions and the potential release of trace metals
<b>Special Remarks</b>	None

<b>Section 13. Disposal Considerations</b>	
Dispose of in accordance with local, provincial and federal regulations	

<b>Section 14. Transport Information</b>	
<b>TDG Classification</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOILD, N.O.S. (Aluminum sulphate), Class 9, UN 3077, Packing Group III
<b>Emergency Response Guide #</b>	ERG # 171
<b>Marine Pollutant</b>	No
<b>Special Precautions</b>	None

<b>Section 15. Regulatory Information</b>	
<b>Canada – DSL Inventory</b>	All components of this product are either on the Domestic Substances List (DSL) or 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>WHMIS Hazard Class</b>	D2B
<b>Additional Information</b>	None

<b>Section 16. Other Information</b>	
<b>Prepared by:</b> Chemfax Products Ltd., Technical Department	
<b>Date Prepared:</b>	17 August, 2012
<b>Revision Date:</b>	20 June, 2014
<b>Disclaimer</b> Notice to reader	
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