

## SAFETY DATA SHEET

### Section 1: Identification of the substance and of the company

Product Name: Aluminium Sulphate Liquor

Chemical Name: Aluminium Sulphate, Alum.

#### Company Identification

Acorn Water Ltd

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MSDS NO: 1510

CAS NO: 10043-01-3

EINECS No: 233-135-0

Revision No: 02

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Supersedes:01

Health & Safety Manager: A. Holland

REACH Reg No.150605

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### Section 2: Hazards Identification

Eye/Skin contact: Harmful if absorbed through skin. Causes burns. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract, eyes and skin.

Inhalation: may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonia and pulmonary edema.

Ingestion: May be fatal if swallowed. Symptoms of exposure may include burning sensation coughing, wheezing, laryngitis, and shortness of breath, headache, nausea and vomiting.

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### **Section 3: Chemical composition/Information on Ingredients**

Aluminium as Alumina (  $\text{Al}_2\text{O}_3$  ): 8 %  $\pm$  0.3 %

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### **Section 4: First Aid**

Eye/Skin contact: After contact, immediately flush eyes or skin with amounts of water for at least 15 minutes. Consult a physician if irritation persists.

Inhalation: If after spasm due to inhalation, remove to fresh air and check for breathing and pulse. Provide artificial respiration, if person is not breathing.

Ingestion: Wash out mouth with water provided person is conscious. Obtain medical attention immediately.

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### **Section 5: Fire fighting measures**

Use extinguishing media appropriate to surrounding fire conditions.

Wear fully protective suit and self-contained respiratory protective device.

Note: Toxic fumes are liberated above 600°C.

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### **Section 6: Accidental release measures**

Evacuate area. Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.

Cover with dry lime, sand or soda ash.

Ventilate area and wash spill after material pickup is complete.

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### **Section 7: Handling and Storage**

Treat as a weak acid. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Do not store with incompatible materials e.g. cyanides, sulphides, carbonates. Avoid contact with most common metals. Can be stored long term in stainless steel, plastic or rubber lined mild steel surfaces.

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## Section 8: Exposure controls/ Personal Protection

Wear appropriate NIOSH/MSHA-approved respirator, chemical-resistant gloves, safety goggles, other protective clothing. Safety shower and eyes bath must be readily accessible.  
The occupational exposure limit (O.E.L.) for aluminium salts is  $2\text{mgm}^{-3}$ (long term).

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## Section 9: Physical and Chemical Properties

Appearance:	Liquor
Odour:	None
Boiling Point:	101 °C
Freezing point:	-15°C
Flash point:	N/A
Specific Gravity ( g/cm <sup>3</sup> ) :	1.32 ( at 20°C )
pH at 20 °C:	0.8-1.5
Organic solvents content:	0.0 %
Flammability:	N/A
Explosive properties:	N/A
Oxidising properties:	N/A
Vapour pressure:	17mm @60°C
Solubility:	Miscible in all proportions with water.

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## Section 10: Stability and reactivity

No decomposition if used according to specification.  
Dangerous reactions with bases i.e. chlorites, hypochlorites, sulphites, cyanides and sulphides. Avoid contact with most common metals (aluminium, copper, zinc and their alloys).  
Can liberate toxic and corrosive fumes of SO<sub>2</sub> and SO<sub>3</sub> under extreme conditions when boiled to dryness or heated above 600°C.

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## Section 11: Toxicological Information

Eye/Skin contact: Liquid aluminium sulphate has been found to be a minimal irritant to a rabbit's eye and a non-irritant to rabbit skin.

Ingestion: Unlikely to be acutely harmful. Acute oral toxicity in rats (LD<sub>50</sub>) exceeded 5000mg/kg.

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## Section 12: Ecological Information

On contact with water, aluminium sulphate will hydrolyse to give sulphuric acid and gelatinous aluminium hydroxide. Discharge to the aquatic environment should be avoided as aluminium sulphate can clog the tentacles and gills of marine life.

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## Section 13: Disposal Considerations

Dispose in accordance with all applicable federal, state and local environmental regulations.

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## Section 14: Transport Information

UN Number/Description: Not classified, not a transport hazard in the EU

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## Section 15: Regulatory Information

Dangerous Substances Directive 67/548/EEC: This applies

Dangerous Preparations Directive 88/379/EEC: This applies

Label Information: Aluminium Sulphate, "Xi" irritant, R36 irritating to eyes, S26-37 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves.

Control of substances hazardous to health (COSHH) regulations: These regulations apply in the UK.

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## Section 16: Other Information

Other sources of data used to compile this information.

Draft BSEN 878:2004-Chemicals used for the treatment of water intended for human consumption, Aluminium sulphate, iron free grade.

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