

# Aluminum Sulfate, Solid



SDS No. 010  
1/16/2019

## Safety Data Sheet

### 1. IDENTIFICATION

#### Product Identifier

**Product Name** Aluminum Sulfate

#### Manufacturer

USALCO, LLC  
2601 Cannery Ave  
Baltimore, MD 21226

#### Other means of identification

**SDS #** 010

#### Recommended use of the chemical and restrictions on use

**Recommended Use** Water treatment chemical

#### Emergency Telephone Number

**Company Phone Number** 410-918-2230

**Emergency Telephone (24 hr)** 800-282-5322

### 2. HAZARDS IDENTIFICATION

**Appearance** White granules or powder

**Physical State** Solid

**Odor** Negligible

#### Classification

Acute toxicity - Oral  
Eye Damage/Irritation

Category 4  
Category 2B

#### Signal Word

**Warning**



#### Hazard Statements

-Causes serious eye irritation  
-Harmful if swallowed

#### Precautionary Statements – Prevention

-Wear eye/face protection. Wash hands and any exposed skin thoroughly after handling.  
-Wear protective gloves.  
-Avoid breathing dust.

#### Precautionary Statements - Response

-IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical attention.  
-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.  
-IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

#### Precautionary Statements – Disposal

Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, State, and local regulations.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS No	Weight-%
Aluminum Sulfate	10043-01-3	100

**4. FIRST-AID MEASURES****First Aid Measures**

<b>General Advice</b>	After first aid, get appropriate in-plant, paramedic, or community medical support.
<b>Eye Contact</b>	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water. Take off contaminated clothing. Wash contaminated clothing before reuse.
<b>Inhalation</b>	Remove to fresh air.
<b>Ingestion</b>	Rinse mouth. Do not induce vomiting. Get medical attention if there are symptoms.

**Most important symptoms and effects**

<b>Symptoms</b>	May cause eye burns and permanent eye damage. Contact may cause irritation and redness. Irritating to mouth, throat, and stomach if ingested. Vomiting. May cause shortness of breath, nausea, dizziness, and headache. May cause irritation to the mucous membranes and upper respiratory tract.
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**Indication of any immediate medical attention and special treatment needed**

<b>Notes to Physician</b>	Treat symptomatically.
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**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Aluminum Sulfate will not burn.

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

If exposed to temperatures greater than 1400°F, Aluminum Sulfate will decompose generating toxic and corrosive gas.

**Hazardous Combustion Products** Oxides of sulfur.

**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. Do not release runoff from fire control methods to sewers or waterways.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

<b>Personal Precautions</b>	Use personal protective equipment as required. Ventilate affected area.
<b>Other Information</b>	Aluminum Sulfate may absorb moisture, and powders or crystals can solidify into a single mass.
<b>Environmental Precautions</b>	Do not discharge wastewaters to the environment or a wastewater treatment plant without authorization from the appropriate officials.

**Methods and material for containment and clean up**

<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for Clean-Up</b>	Sweep up and shovel into suitable containers for disposal. Flush residue with water. Neutralize with soda ash or lime if necessary. Aluminum Sulfate solutions can have a pH less than two. The neutralization of aluminum sulfate can generate carbon dioxide.

**7. HANDLING AND STORAGE****Precautions for safe handling**

<b>Advice on Safe Handling</b>	Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use personal protection recommended in Section 8. Minimize dust generation and accumulation. Avoid moisture contamination.
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**Conditions for safe storage, including any incompatibilities**

<b>Storage Conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Wet aluminum sulfate will corrode steel.
<b>Incompatible Materials</b>	Alkalis. Water-reactive materials.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Exposure Guidelines**

No exposure limits noted for product.  
Exposure Limits for aluminum metal  
NIOSH REL - TWA 10 mg/m<sup>3</sup> (total) TWA 5 mg/m<sup>3</sup> (resp)  
OSHA PEL - TWA 15 mg/m<sup>3</sup> (total) TWA 5 mg/m<sup>3</sup> (resp)

**Appropriate engineering controls**

<b>Engineering Controls</b>	Showers. Eyewash stations. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of the chemical release. Dust emission control may be required depending on the dust generation rate. Isolation operations can also reduce exposure.
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**Individual protection measures, such as personal protective equipment**

<b>Eye/Face Protection</b>	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye & face protection regulations in 29 CFR 1910.133 or European Standard EN166. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with, contact lenses.
<b>Skin and Body Protection</b>	Wear appropriate clothing to prevent repeated or prolonged skin contact.
<b>Respiratory Protection</b>	Seek professional advice prior to respirator selection and use. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. WARNING!: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
<b>General Hygiene Considerations</b>	Do not eat, drink or smoke when using this product. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid, white granules or powder
Odor	None
Odor threshold	Not relevant
pH	3.3 ± 0.5 (1% solution)
Density	<98 lb/cu ft
Melting point/freezing point	105° C / 221° F
Initial boiling point and boiling range	Not relevant
Decomposition temperature	±1,400° F
Viscosity	Not relevant
Auto-ignition temperature	Not flammable
Evaporation rate;	Will not evaporate
Flammability (solid, gas)	Not flammable
Flash point	Will not burn
Upper/lower flammability or explosive limits	Will not burn
Partition coefficient: n-octanol/water	Not relevant
Solubility	Soluble in water
Vapor density	None
Vapor pressure	None

### 10. STABILITY AND REACTIVITY

#### Reactivity

Not reactive under normal conditions.

#### Chemical Stability

Stable under recommended storage conditions.

#### Possibility of Hazardous Reactions

Contact with incompatible materials causes exothermic reactions.

**Hazardous Polymerization**      Hazardous polymerization does not occur.

#### Conditions to Avoid

Contact with incompatible materials.

#### Incompatible Materials

Alkalis. Water-reactive materials.

#### Hazardous Decomposition Products

Thermal oxidative decomposition of Aluminum Sulfate occurs at temperatures greater than 1400°F and can produce sulfur oxides.

### 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

##### Product Information

**Eye Contact**      Causes serious eye damage.

**Skin Contact**      Avoid contact with skin.

**Inhalation**      Avoid inhalation of dust.

**Ingestion**      Harmful if swallowed.

##### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Aluminum Sulfate 10043-01-3	= 1930 mg/kg ( Rat )	-	-

**Information on physical, chemical and toxicological effects**

**Symptoms** Please see section 4 of this SDS for symptoms.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Carcinogenicity** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Numerical measures of toxicity**

Not determined

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Harmful to aquatic life with long lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Aluminum Sulfate 10043-01-3		100: 96 h Carassius auratus mg/L LC50 37: 96 h Gambusia affinis mg/L LC50 static		136: 15 min Daphnia magna mg/L EC50

**Persistence/Degradability**

Not determined

**Bioaccumulation**

Not determined

**Mobility**

Not determined

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS****Waste Treatment Methods**

**Disposal of Waste** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**14. TRANSPORT INFORMATION****Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT**

**UN/ID No** UN3077 if shipped in a single container with a weight greater than the RQ, 5,000 lbs.  
**Proper Shipping Name** Environmentally hazardous substance, solid, n.o.s. (Aluminum Sulfate)  
**Hazard Class** 9  
**Packing Group** III  
**Reportable Quantity (RQ)** 5000 lbs

**IATA**

Not regulated

**IMDG**

**Marine Pollutant** This material may meet the definition of a marine pollutant

## 15. REGULATORY INFORMATION

**Canadian Regulations**

WHMIS Classification

Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Class E - Corrosive Material

Listed on the Canadian DSL (Domestic Substances List)

**US Federal Regulations****CERCLA**

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Aluminum Sulfate 10043-01-3	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

**SARA 311/312 Hazard Categories**

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

**SARA 313**

Not listed.

**CWA (Clean Water Act)**

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Aluminum Sulfate 10043-01-3	5000 lb			X

## 16. OTHER INFORMATION

<b>NFPA</b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>	<b>Special Hazards</b>
	1	0	0	Not determined
<b>HMIS</b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical Hazards</b>	<b>Personal Protection</b>
	1	0	0	Not determined

**Issue Date** 30-Apr-2013  
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**Revision Note** 1/16/2019 Review

**Disclaimer**

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet