




## Aluminum Sulfate 48-49%

### 1. Product and Company Identification

Product Name	Aluminum Sulfate 48-49%	NFPA diamond and HMIS ratings for this product may be found in section 16 of this Safety Data Sheet.
Synonyms	Liquid Alum	
SDS Number	D26781	
Company Identification	Aquachem of America Inc. PO Box 129 Little Chute, WI 54140	
Telephone	Aquachem of America Inc. – 920-687-5238 CHEMTREC – 800.424.9300	

### 2. Hazards Identification

Form	Liquid
Color	Clear, water white to amber
Odor	Odorless
OSHA/HCS Status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200): target organ effect (lungs, bone), irritant.
GHS Classification	Skin irritation (Category 2) Serious eye Damage (Category 1) Specific target organ toxicity – single exposure (Category 3) Acute aquatic toxicity (Category 3) Chronic aquatic toxicity (Category 2)
Pictogram	
Signal Word	Danger
Hazard Statement(s)	
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.



#### Precautionary Statement(s)

P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338	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 CENTER or doctor/physician.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

#### Potential Acute Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

See section 11 for more detailed information on health effects and symptoms

### 3. Composition/Information on Ingredients

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>WT %</u>
Aluminum Sulfate	10043-01-3	48.0 – 49.0
Water	7732-18-5	Balance

### 4. First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes. Consult a physician.
Skin Contact	Wash off with soap and plenty of water. Consult a physician.
Inhalation	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.



Protection of First Aid  
Personnel

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If it is suspected that dust, vapor, mist, or gas are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

## 5. Fire-fighting Measures

Flammability of the Product	Not flammable or combustible
Flash Point	Not applicable
Auto Ignition Temperature	Not applicable

### Extinguishing Media

Suitable	Non-flammable. Use extinguishing agents suitable for surrounding fire.
Not Suitable	Not applicable

Special Fire-fighting Procedures & Hazards	Wear chemical protective clothing and positive pressure self-contained breathing apparatus. Use water spray to keep containers cool.
Unusual Fire & Explosion Hazards	None known

## 6. Accidental Release Measures

Personal Precautions	Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
	Discharge into the environment must be avoided.

## 7. Handling and Storage

Handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Provide appropriate exhaust ventilation at places where vapors are formed.
Storage	Keep container tightly closed in a dry and well-ventilated place.

## 8. Exposure Controls/Personal Protection

<u>Ingredient Name</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Aluminum Sulfate	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>
Engineering Measures	Use mechanical ventilation such as dilution and local exhaust. Supply ample air replacement.	
Hygiene Measures	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.	



Respiratory	If airborne concentrations are above the applicable exposure limits, use NIOSH-approved respiratory protection. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134).
Eyes and Face	Wear safety glasses with side shields (or goggles) and a face shield.
Skin	Wear chemically impervious gloves, made of any waterproof material. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## 9. Physical and Chemical Properties

Appearance	Clear, water white to amber liquid
Odor	Odorless
pH	3.5 (approximate)
Water Solubility	Complete
Vapor Density (air = 1)	Not applicable
Evaporation rate (butyl acetate = 1)	Not applicable
Boiling Point	214 °F (101 °C)
Freezing Point	5 °F (-15 °C)
Specific Gravity (@ 70 °F)	1.315 – 1.345
Vapor Pressure	Not applicable
Volatile Organic (VOC) Content	Not applicable

## 10. Stability and Reactivity

Stable: X	Unstable:	Hazardous Polymerization:	Occurs:	Does Not Occur:	X
Conditions to Avoid	When evaporated to dryness, product residue should not be exposed to temperatures above 1400 °F (760 °C), toxic and corrosive gases may occur.				
Materials to Avoid	Alkalis and water-reactive materials such as oleum (causes exothermic reactions).				
Decomposition Products	Not known.				

## 11. Toxicological Information

Eye	Causes eye irritation.
Aluminum Sulfate	Serious eye damage/eye irritation: Severe eye irritation – rabbit - 24 hr.
Dermal	May be harmful if absorbed through skin. Causes skin irritation.
Aluminum Sulfate	No data available



Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Aluminum Sulfate	No data available Specific target organ toxicity – single exposure: Inhalation – may cause respiratory irritation.
Oral	May be harmful if swallowed.
Aluminum Sulfate	LD50 (mouse) – 6,207 mg/kg
Chronic Effects	
Carcinogenicity	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC, NTP, or ACGIH.
Mutagenicity	Genotoxicity in vitro – human – lymphocyte (micronucleus test) Genotoxicity in vitro – human – lymphocyte (sister chromatid exchange) Genotoxicity in vivo – rat – oral (cytogenetic analysis)
Reproductive toxicity	Rat – intratesticular Paternal effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Testes, epididymis, and sperm duct. Mouse – intraperitoneal Effects on newborn: Growth statistics (e.g. reduced weight gain) and behavioral.

## 12. Ecological Information

Biodegradability	No data available
Ecotoxicity	Toxicity to fish: LC50 – pimephales promelas (fathead minnow) – 33.9 mg/l – 96 hr. Toxicity to aquatic invertebrates: LC50 – daphnia magna (water flea) – 38.2 mg/l – 48 hr. Toxic to aquatic life with long lasting effects.

## 13. Disposal Considerations

Waste Disposal	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
RCRA	This material is not listed as a hazardous waste. <b>Note:</b> If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal.



## 14. Transportation

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

<u>US DOT 49 CFR 172.101</u>	<u>Non-bulk Shipments (Drums/Totes)</u>	<u>Bulk Shipments (Tank Trucks/Rail Cars)</u>
Proper Shipping Name	Corrosive Liquid, Acidic, Inorganic, N.O.S. (Aluminum Sulfate)	Same
Hazara Class	8	Same
Identification Number	UN3264	Same
Packing Group	III	Same
Reportable Quantities	RQ=10,300 lbs.	Same
Placards/Labels	Corrosive	Same

## 15. Regulatory Information

**CERCLA / SARA  
Emergency Reporting**

A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40 CFR Part 300) and/or SARA Title III (40 CFR Part 355). State or local reporting requirements may differ from federal requirements. Consult counsel for further guidance on your responsibilities under these laws.  
**Aluminum Sulfate CERCLA reporting amount – 5000 lbs.**

**SARA Title III Section 313**

This material is not listed for required reporting.

**Clean Water Act (CWA)  
Section 311**

The following chemicals are listed under Section 311 as hazardous substances requiring the submission of a National Pollutant Discharge Elimination System (NPDES) permit application to EPA.  
**Product not listed**

**TSCA – Toxic Substances  
Control Act**  
**RCRA – Resource  
Conservation and Recovery  
Act**

All components of this product are listed as “Active” on the Toxic Substances Control Act (TSCA) 8(b) Inventory.  
The requirements of the federal hazardous waste regulations do not apply unless the waste fails to pass any of EPA’s four tests for determining hazardous wastes. Note: If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal.  
**Not listed as hazardous waste.**

### State Regulations

**Massachusetts**

**RTK Substances:** The following components are listed: Aluminum Sulfate (CAS# 10043- 01-3)

**New Jersey**

**RTK Substances:** The following components are listed: Aluminum Sulfate (CAS# 10043-01-3)

**Pennsylvania**

**RTK Substances:** The following components are listed: Aluminum Sulfate (CAS# 10043-01-3)



California

Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## 16. Other Information

Date of Issue 8/29/2013 | 2/12/2015-updated UN shipping number & DOT shipping name in Section 14 | 4/10/2015-updated RQ value in Section 14 | 6/24/2015-updated GHS statements, section 2 | 2/12/2016-updated UN shipping number & DOT shipping name in Section 14 (ST) | 8/19/2019-updated TSCA statement, section 15 (ST) | 12/17/2020-updated address, section 1 – added water as component, section 3 (ST)

NFPA



HMIS

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	1
PPE	

Caution: NFPA and HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them.  
The customer is responsible for determining the PPE code for this material.

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