



# SAFETY DATA SHEET

Revision date 2020-Dec-18

Revision number 2

## 1. IDENTIFICATION

### Product identifier

**Product name** Aluminum Sulfate Hydrate

### Other means of identification

**Product code** 3204L  
**Synonyms** None

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

**Recommended use [RU]** No information available  
**Uses advised against** None known

### Details of the supplier of the safety data sheet

**Supplier** G2O Technologies LLC  
9213 Arch Street Pike  
Little Rock, AR 72206  
+1-800-453-2586  
Hours: Monday-Friday 9:00-5:00 CST (Central Standard Time)

**Contact Point** sdsinfo@g2otech.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC: (800) 424-9300  
Outside USA - +1 (703) 527-3887 collect calls accepted

## 2. HAZARDS IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

<b>Skin corrosion/irritation</b>	Category 2
<b>Serious eye damage/eye irritation</b>	Category 2
<b>Specific target organ toxicity (single exposure)</b>	Category 3

### EMERGENCY OVERVIEW

<b>Physical state</b> solid	<b>Color</b> White to light tan	<b>Appearance</b> crystalline	<b>Odor</b> odorless
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**GHS Label elements, including precautionary statements****WARNING****Hazard statements**

Causes skin irritation

Causes serious eye irritation

May cause respiratory irritation

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

**Precautionary Statements - Response**

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 advice/attention.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant.

**Other information**

- May be harmful if swallowed
- Harmful to aquatic life with long lasting effects

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No	weight-%	TRADE SECRET
Aluminum sulfate	10043-01-3	> 55%	--
Water	7732-18-5	< 45%	--

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

\*The exact percentage (concentration) of composition has been withheld as a trade secret While some substances are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.1200(i), all known hazards are clearly communicated within this document.

**4. FIRST AID MEASURES****First Aid Measures****Eye contact**

Remove contact lenses, if worn. Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. Get medical attention

if irritation develops and persists.

**Skin contact**

Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

**Ingestion**

Do NOT induce vomiting. If vomiting should occur spontaneously, keep airway clear. Never give anything by mouth to an unconscious person. Get medical attention.

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

**Most important symptoms and effects, both acute and delayed****Acute effects**

None known.

**Chronic effects**

None known.

**Indication of any immediate medical attention and special treatment needed****Note to physicians**

Aluminum soluble salts may cause gastroenteritis if ingested. Treatment includes the use of demulcents. Note: Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Extinguishing media****Suitable extinguishing media**

Water fog, carbon dioxide, foam, dry chemical.

**Extinguishing media which must not be used for safety reasons**

No information available.

**Special hazards arising from the substance or mixture****Special Hazard**

Under fire conditions (or at temperatures greater than 650 °C or 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.

**Advice for firefighters****Firefighting measures**

Cool exposed containers with water spray after extinguishing fire.

**Special protective equipment for firefighters**

Full protective clothing and approved self-contained breathing apparatus required for firefighting personnel.

**Explosion data****Sensitivity to Mechanical Impact**

None.

**Sensitivity to Static Discharge**

None.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

#### **Personal precautions**

Wear suitable protective clothing and gloves.

### Environmental precautions

#### **Environmental precautions**

Do not permit solutions of product into sewers or waterways.

### Methods and material for containment and cleaning up

#### **Methods for containment**

Prevent further leakage or spillage if safe to do so.

#### **Methods for cleaning up**

Large spills should be handled according to a predetermined plan. For assistance in developing a plan, call 1-800-453-2586. Use with adequate ventilation where dust may be generated. Ensure adequate decontamination of tools and equipment following cleanup. Sweep up or vacuum into labeled waste containers for disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Advice on safe handling**

Keep container closed when not in use

Avoid creating dust

Do not take internally

Avoid contact with eyes, skin and clothing

### Conditions for safe storage, including any incompatibilities

#### **Technical measures and storage conditions**

Store in a cool, dry place away from ignition sources and open flame.

#### **Incompatible products**

Reacts with strong alkali to form aluminum hydroxide. Weakly corrosive to carbon steel. On contact with moisture, an acidic solution forms.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **Exposure Guidelines**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

### Appropriate engineering controls

#### **Engineering controls**

Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details. If there are no applicable or established exposure limit requirements or guidelines, general ventilation should be sufficient.

### Individual protection measures, such as personal protective equipment

#### **Eye/face Protection**

Wear chemical splash goggles and face shield (when eye and face contact is possible due to splashing or spraying of material).

#### Hand Protection

Appropriate chemical resistant gloves should be worn

#### Skin and body protection

Standard work clothing and work shoes.

#### Respiratory protection

When exposed to elevated dust levels, use NIOSH/MSHA approved respirator in accordance with OSHA Respiratory Protection Requirements under 29 CFR 1910.134.

#### Other personal protection data

Eyewash fountains and safety showers must be easily accessible.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical state	solid
Color	White to light tan
Appearance	crystalline
Odor	odorless
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks / Method</u>
pH	3.5	aqueous solution (1%)
Melting / freezing point	Loses water of hydration at 88 °C ( 190 °F)	No information available
Boiling point / boiling range	No information available	No information available
Flash point	No information available	No information available
Evaporation rate	No information available	No information available
Flammability (solid, gas)	Not applicable	No information available
Flammability Limit in Air		
Upper flammability limit	No information available	No information available
Lower flammability limit	No information available	No information available
Vapor pressure	No information available	No information available
Vapor density	No information available	No information available
Specific gravity	No information available	No information available
Solubility (water)	87.3 g/100 g water	No information available
Solubility in other solvents	No information available	No information available
Partition coefficient: n-octanol/water	No information available	No information available
Autoignition temperature	No information available	No information available

<b>Decomposition temperature</b>	No information available	No information available
<b>Kinematic viscosity</b>	No information available	No information available
<b>Dynamic viscosity</b>	No information available	No information available

**Other information**

<b>Density</b>	No information available
<b>Bulk Density</b>	65 lb/ft <sup>3</sup>
<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available
<b>Softening point</b>	No information available
<b>Molecular weight</b>	Not applicable
<b>Volatile Organic Compound (VOC) content, wt. %</b>	No information available
<b>Percent Volatile, wt. %</b>	No information available

**10. STABILITY AND REACTIVITY****Reactivity****Reactivity**

No data available.

**Chemical stability****Chemical stability**

Stable at ambient temperatures and atmospheric pressure.

**Possibility of hazardous reactions****Possibility of hazardous reactions**

None under normal processing.

**Hazardous polymerization**

Not anticipated under normal or recommended handling and storage conditions.

**Conditions to avoid****Conditions to avoid**

Avoid high temperatures greater than 650° C (1200° F) as material may decompose to form aluminum oxide and sulfur trioxide (an oxidizing agent that supports combustion).

**Incompatible materials****Materials to avoid**

Reacts with strong alkali to form aluminum hydroxide. Weakly corrosive to carbon steel. On contact with moisture, an acidic solution forms.

**Hazardous decomposition products****Hazardous decomposition products**

Thermal decomposition products include oxides of aluminum and sulfur.

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure****Eye contact**

Concentrated solutions (over 20%) may cause severe eye damage or burns. May cause irritation and inflammation of the eye.

**Skin contact**

May cause skin irritation or burns if the product is wet or in the presence of perspiration.

**Ingestion**

May be harmful if swallowed. May cause abdominal pain, nausea, or vomiting. Concentrated solutions can cause burns of the mouth, bleeding stomach, muscle spasms and kidney injury.

**Inhalation**

Dust extremely irritating to respiratory tract.

**Acute toxicity - Product Information**

<b>Oral LD50</b>	> 2,000 mg/kg (rat)
<b>Dermal LD50</b>	> 5,000 mg/kg (rabbit)
<b>Inhalation LC50</b>	No information available

**Acute toxicity - Component Information**

Component	weight-%	Oral LD50	Dermal LD50	Inhalation LC50
Aluminum sulfate 10043-01-3	> 55%	= 1930 mg/kg ( Rat )	--	--

**Information on toxicological effects****Symptoms**

No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Skin corrosion/irritation**

Irritating to skin

**Serious eye damage/eye irritation**

Causes serious eye irritation

**Sensitization**

No information available

**Germ cell mutagenicity**

No information available

**Carcinogenicity**

This product does not contain any components in concentrations greater than or equal to 0.1% that are listed as known or suspected carcinogens by NTP, IARC, ACGIH, or OSHA.

**Reproductive toxicity**

No information available

**Specific target organ toxicity - Single exposure**

Irritating to respiratory system.

**Specific target organ toxicity - Repeated exposure**

No information available

**Aspiration hazard**

No information available.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 3386 mg/kg

#### **Other information**

Conclusions are drawn from sources other than direct testing.

## **12. ECOLOGICAL INFORMATION**

### **Ecotoxicity**

- Harmful to aquatic life with long lasting effects

### **Acute aquatic toxicity - Product Information**

**Fish** No information available

**Crustacea** No information available

**Algae/aquatic plants** No information available

### **Acute aquatic toxicity - Component Information**

Component	weight-%	Algae/aquatic plants	Fish	Toxicity to daphnia and other aquatic invertebrates
Aluminum sulfate 10043-01-3	> 55%	--	LC50 (96 h ) = 100 mg/L (Carassius auratus) LC50 (96 h static) = 37 mg/L (Gambusia affinis)	EC50 (15 min ) = 136 mg/L (Daphnia magna)

### **Persistence and degradability**

#### **Persistence and degradability**

No information available

### **Bioaccumulative potential**

#### **Bioaccumulative potential**

No information available

### **Mobility**

#### **Mobility**

No information available

### **Results of PBT and vPvB assessment**

#### **PBT and vPvB assessment**

No information available

### **Other adverse effects**

#### **Other information**

No other ecological studies have been carried out on this product.

## **13. DISPOSAL CONSIDERATIONS**

### **Waste treatment methods**

#### **Disposal of wastes**

Dispose of product in an approved chemical waste landfill or incinerate in accordance with applicable Federal, state and local



regulations.

**Contaminated packaging**

Since empty containers retain product residue, follow label warnings even after container is emptied.

**14. TRANSPORT INFORMATION**

<b>DOT</b>	Regulated in quantities above RQ.
<b>Reportable Quantity (RQ)</b>	8500 pounds as hydrate
<b>DOT Shipping Name &gt; RQ</b>	UN3077, Environmentally Hazardous Substance, Solid, N.O.S. (Aluminum Sulfate, Hydrate), 9, PG III, RQ, ERG# 171
<b>ICAO/IATA</b>	Not regulated
<b>IMDG</b>	Not regulated

**15. REGULATORY INFORMATION****International Inventories****United States (TSCA)**

Not determined

**Australia (AICS)**

Not determined

**Canada (DSL)**

Not determined

**Canada (NDSL)**

Not determined

**China (IECSC)**

Not determined

**European Union (EINECS)**

Not determined

**European Union (ELINCS)**

Not determined

**Japan (ENCS)**

Not determined

**South Korea (KECL)**

Not determined

**Philippines (PICCS)**

Not determined

**Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**AICS** - Australian Inventory of Chemical Substances

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**IECSC** - China Inventory of Existing Chemical Substances

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**U.S. Federal Regulations****CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Component	CERCLA/SARA Hazardous Substance RQ	CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs	Calculated Product RQ
Aluminum sulfate 10043-01-3	5000 lb final RQ; 2270 kg final RQ	--	8,500 lb as hydrate

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Priority Pollutants	CWA - Toxic Pollutants
Aluminum sulfate 10043-01-3	Present	5000 lb RQ	--	--

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**U.S. State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Aluminum sulfate 10043-01-3	
Massachusetts Right to Know Law	Present
Minnesota Hazardous Substance List	Present
New Jersey Right to Know List	sn 0068
Pennsylvania Right to Know List	Environmental hazard

**16. OTHER INFORMATION**

<b>NFPA Rating</b>	Health - 1	Flammability - 0	Instability - 1	Special Hazard -
<b>HMIS Rating</b>	Health - 1	Flammability - 0	Physical hazards - 1	Personal protection - B
<b>Product code</b>	3204L			
<b>Revision date</b>	2020-Dec-18			
<b>Revision number</b>	2			

**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