



NAPCO CHEMICAL COMPANY

Safety Data Sheet Aluminum Sulfate (Alum)

SECTION 1: Identification

1.1 Product identifier

Product name	Aluminum Sulfate (Alum)
Substance name	Aluminum sulfate
CAS no.	10043-01-3

1.3 Recommended use of the chemical and restrictions on use

All proper and legal purposes.

1.4 Supplier's details

Name	NAPCO Chemical Company
Address	2830 Spring Cypress Rd Spring, Tx 77383 United States
Telephone	281-651-6800
Fax	281-651-6868

1.5 Emergency phone number(s)

ChemTel 1(800)255-3924

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with OSHA (29 CFR 1910.1200)

- Acute toxicity, oral (chapter 3.1), Cat. 4
- Skin corrosion/irritation (chapter 3.2), Cat. 2
- Eye damage/irritation (chapter 3.3), Cat. 1
- Specific target organ toxicity, single exposure (chapter 3.8), Cat. 3

2.2 GHS label elements, including precautionary statements

Pictogram



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Signal word

Danger

Hazard statement(s)

H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H335	May cause respiratory irritation

Precautionary statement(s)

P261	Avoid breathing mist or vapors.
P264	Wash ... thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell,
P302+P352	IF ON SKIN: Wash with plenty of water/...
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor/... if you feel unwell.
P321	Specific treatment (see ... on this label).
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container to ...

Statement regarding ingredients of unknown toxicity (OSHA)

51% of the mixture consists of component(s) of unknown acute oral toxicity.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name	Aluminum sulfate
CAS no.	10043-01-3
Other names / synonyms	Sulfuric acid, aluminum salt (3:2)
Impurities and stabilizing additives	Other components below reportable levels.

Hazardous components

1. Aluminum sulfate

Concentration	49 %
CAS no.	10043-01-3

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

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General advice	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this SDS to doctor in attendance.
If inhaled	If breathed in, move person into fresh air and keep at rest in a position comfortable for breathing. Call a Poison Center or doctor/physician if you feel unwell.
In case of skin contact	Take off contaminated clothing and shoes immediately. Wash off with plenty of water. Consult a physician. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
If swallowed	Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into lungs. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician or poison control center immediately.
Personal protective equipment for first-aid responders	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.2 Most important symptoms/effects, acute and delayed

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Water fog. Dry chemical powder. Foam. Carbon dioxide (CO₂).

Do not use water jet as extinguisher, as this will spread the fire.

5.2 Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

5.3 Special protective actions for fire-fighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Further information

Move containers from fire area if you can do so without risk.

Use standard firefighting procedures and consider the hazards of other involved materials.

No unusual fire or explosion hazards noted.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist. Ensure adequate ventilation. Evacuate personnel to safe areas upwind of spill/leak. For personal protection see section 8.

6.2 Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and materials for containment and cleaning up

Prevent entry into waterways, sewer, basements or confined areas. **SMALL SPILLS:** Contain and absorb with absorbent material and place into containers for later disposal. Wash site of spillage thoroughly with water. **LARGE SPILLS:** Dike far ahead of spill to prevent further movement. Recover by pumping or by using a suitable absorbent material and place into containers for later disposal. Dispose in suitable waste container.

Reference to other sections

Never return spills to original containers for re-use. For waste disposal see section 13 of the SDS.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. When using, do not eat, drink or smoke. Provide adequate ventilation. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store away from incompatible materials including any incompatibilities. (See section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

8.2 Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Wearing appropriate chemical resistant gloves and impervious apron is recommended.

Body protection

Wearing appropriate chemical resistant gloves and impervious apron is recommended.

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Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Use NIOSH approved respirator with organic vapor cartridge and full facepiece.

Thermal hazards

Wear appropriate thermal protective clothing when necessary.

Environmental exposure controls

Should not be released into the environment. See Section 12 for additional ecological information.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form	Liquid/Clear to yellow to Green blue
Odor	Faint to Sharp
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	1418 F (770 C) estimated
Initial boiling point and boiling range	212 F (100 C) estimated
Flash point	200 F (93.3 C) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not Applicable.
Upper/lower flammability limits	Not available.
Upper/lower explosive limits	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

SECTION 10: Stability and reactivity

10.1 Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2 Chemical stability

Chemical is stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4 Conditions to avoid

Avoid temperatures exceeding the flash point. Contact with incompatible materials.

10.5 Incompatible materials

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Strong oxidizing agents.

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Harmful if swallowed. May cause respiratory irritation.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes severe eye damage.

Respiratory or skin sensitization

Not a respiratory sensitizer.

This product is not expected to cause skin sensitization.

Germ cell mutagenicity

No data available.

Carcinogenicity

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Summary of evaluation of the CMR properties

This product is not expected to contribute to any of these properties.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

Not classified.

Aspiration hazard

Not an aspiration hazard.

Additional information

Prolonged inhalation may be harmful.

SECTION 12: Ecological information

Toxicity

This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

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Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

No data is available.

Mobility in soil

No data is available.

Results of PBT and vPvB assessment

No data is available.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

Disposal of the product

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Disposal of contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Waste treatment

Dispose of in accordance with local regulations.

Sewage disposal

Do not allow.

Other disposal recommendations

Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

DOT (US)

UN Number: UN3264

Class: 8

Packing Group: III

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS ALUMINUM SULFATE)

Reportable quantity (RQ): 5,000 lbs.

Marine pollutant: IMDG Regulated Marine Pollutant

Poison inhalation hazard:

IMDG

UN Number:

Class:

Packing Group:

EMS Number:

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Proper Shipping Name:

IATA

UN Number:

Class:

Packing Group:

Proper Shipping Name:

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Massachusetts Right To Know Components

Chemical name: Aluminum sulfate

CAS number: 10043-01-3

New Jersey Right To Know Components

Common name: ALUMINUM SULFATE

CAS number: 10043-01-3

Pennsylvania Right To Know Components

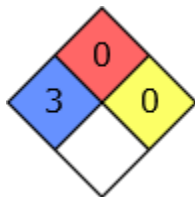
Chemical name: Sulfuric acid, aluminum salt (3:2)

CAS number: 10043-01-3

HMIS Rating

Aluminum sulfate	
HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

NFPA Rating



SECTION 16: Other information

16.1 Further information/disclaimer

The information contained herein is accurate to the best of our knowledge. However, data, safety standards and government regulations are subject to change and, therefore, holders and users should satisfy themselves that they are aware of all current data and regulations relevant to their particular use of product. NAPCO CHEMICAL COMPANY, INC. DISCLAIMS ALL LIABILITY FOR RELIANCE ON THE COMPLETENESS OR ACCURACY OR THE INFORMATION INCLUDED HEREIN. NAPCO CHEMICAL COMPANY, INC. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR USE OR PURPOSE OF THE PRODUCT DESCRIBED HEREIN. All conditions relating to storage, handling, and use of the product are beyond the control of NAPCO Chemical Company, Inc., and shall be the sole responsibility of the holder or user of the product.

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