



Safety Data Sheet
According to 29 CFR 1910.1200 (OSHA HCS)

SDS No. 63

Review date: July 16, 2019

1 Identification of substance and company

Product details

Product name: **Aluminum sulfate, hydrate**
Product code: 17629, 90701
Relevant identified uses of the substance: Research and product development
Manufacturer/Supplier: Noah Technologies Corporation
1 Noah Park
San Antonio, Texas 78249-3419
Phone: (210) 691-2000
Web site: www.noahtech.com
Emergency information: CHEMTREC
800-424-9300

2 Hazards identification

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Corrosive to metals - 1
Serious eye damage - 1

Pictogram:



Signal Word:

Danger

Hazard statements:

H290 May be corrosive to metals
H318 Causes serious eye damage

Precautionary statements:

P234 Keep only in original container

P280 Wear eye protection/ face protection
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician
P390 Absorb spillage to prevent material damage
P406 Store in corrosive resistant container with a resistant inner liner

Hazards not otherwise classified (HNOC) or not covered by GHS:

None

HMIS ratings (scale 0-4):

Health	2
Flammability	0
Physical hazard	0

3 Composition/Information on ingredients

Chemical name: Aluminum sulfate, hydrate
Designation: (CAS#): 17927-65-0, 7784-31-8
Formula: $Al_2(SO_4)_3 \cdot xH_2O$
Synonyms: Cake alum, patent alum
Identification number(s):
EC Number: 233-135-0

4 First aid measures

After inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
After skin contact: Seek immediate medical advice
Instantly wash with water and soap and rinse thoroughly
After eye contact: Seek immediate medical advice
Rinse opened eye for at least 15 minutes under running water. Assure adequate flushing by separating the eyelids with fingers.
Seek immediate medical advice
After swallowing: Seek immediate medical advice
Most important symptoms and effects, both acute and delayed: May be harmful by inhalation, ingestion, or skin absorption. Moderately toxic by ingestion and intraperitoneal routes.

Indication of immediate medical attention: No further relevant information available

5 Fire-fighting measures

Suitable extinguishing agents: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

Special hazards caused by the material, its products of combustion or resulting gases: In case of fire, the following can be released:
Oxides of aluminum
Oxides of sulfur (SO_x)

Protective equipment: Wear self-contained breathing apparatus
Wear fully protective fire fighting equipment/clothing in fire situations

6 Accidental release measures

Person-related safety precautions: Wear personal protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

Measures for environmental protection: Do not allow material to be released to the environment without proper governmental permits

Measures for cleaning/collecting: Dispose of contaminated material as waste according to item 13
Ventilate and wash spill site after material removal is complete

Additional information: See Section 7 for information on safe handling
See Section 8 for information on personal protective equipment
See Section 13 for information on disposal

7 Handling and storage

Information for safe handling: Keep containers tightly sealed
Store in cool, dry place in tightly closed containers
Ensure good ventilation/exhaust at the workplace

Information about protection against explosions and fires: This material is not flammable

Information about storage in one common storage facility: Store away from air / water / moisture
Do not store together with strong oxidizers

Further information about storage conditions: Keep container tightly sealed
Store in cool, dry conditions in well sealed containers

8 Exposure controls/personal protection

Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute

Components with critical values that require monitoring at the workplace: ACGIH TLV: TWA 2 mg(Al)/m³ (soluble salt)
OSHA PEL: TWA 5 mg/m³ (respirable); 15 mg/m³ (total dust)

Additional information: No data

Personal protective equipment

General protective and hygienic measures: The usual precautionary measures should be adhered to in handling the chemicals
Keep away from foodstuffs, beverages and food
Instantly remove any soiled and impregnated garments
Wash hands during breaks and at the end of the work
Avoid contact with the eyes and skin

Respiratory protection: Use suitable respirator when high concentrations are present
Use only NIOSH/MESA or CEN approved full-face particle respirator type N100 or TYPE P3 (EN 143)

Hand protection: Impervious gloves

Eye protection: Safety glasses
Chemical safety goggles
Full face protection

Skin protection: Protective work clothing

Additional protective equipment: Sufficient to prevent contact
Emergency eyewash and safety shower

9 Physical and chemical properties

General Information:

Physical state: Crystalline

Color: White

Smell: Odorless

Molecular Weight (Calculated): 342.15 (anhydrous)

pH (5% solution) Not determined

Melting point/range: 86.5 C (decomposes)

Boiling point/range: Not determined

Sublimation temperature/start: Not determined

Flash point: Non-flammable

Autoignition temperature: Not determined

Decomposition temperature: Not determined

Danger of explosion: Product does not present an explosion hazard

Flammable limits: Non-flammable

Lower: Not determined

Upper: Not determined

Vapor pressure (mm Hg): Not determined

Specific gravity: 1.69

Solubility in/Miscibility with water: 360 g/L @ 20 C

10 Stability and reactivity

Reactivity: No data available
Chemical stability: Stable under recommended storage conditions
Conditions to be avoided: No decomposition if used and stored according to specifications
See section 7 for information on proper handling and storage
Materials to be avoided: Strong oxidizers
Water / moisture / air
Dangerous reactions: None known
Hazardous decomposition products: Aluminum oxide, oxides of sulfur (SOx)

11 Toxicological information

Acute toxicity:
LD/LC50 values that are relevant for classification: oral-rat LD₅₀: > 5000 mg/kg
Primary irritant effect:
on the skin: No data available
on the eye: No data available
Sensitization: No sensitizing effect known
Additional information: May be harmful by inhalation, ingestion, or skin absorption. Moderately toxic by ingestion and intraperitoneal routes
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known
Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH

12 Ecological information

Toxicity
Aquatic toxicity:
Toxicity to fish: No data available
Toxicity to daphnia and other invertebrates: No data available
Toxicity to algae: No data available
Persistence and degradability: No further relevant information available
Behavior in environmental systems:
Bioaccumulative potential: No further relevant information available
Mobility in soil: No further relevant information available
Additional ecological information:
General notes: Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system
Do not allow material to be released to the environment without proper governmental permits

13 Disposal considerations

Recommendation: Consult state, local or national regulation for proper disposal
Allow professional disposal company to handle waste
Must be specially treated under adherence to official regulations
Unclean packaging recommendation: Disposal must be made according to official regulations

14 Transport information

Land transport DOT

Proper shipping name: Chemicals Non-Hazardous
Technical name: Aluminum sulfate, hydrate

Air transport ICAO-TI and IATA-DGR:

Proper shipping name: Chemicals Non-Hazardous
Technical name: Aluminum sulfate, hydrate

UPS Ground / FedEx Ground

Proper shipping name: Chemicals Non-Hazardous
Technical name: Aluminum sulfate, hydrate

UPS Air

Proper shipping name: Chemicals Non-Hazardous
Technical name: Aluminum sulfate, hydrate

15 Regulatory information

SARA 302 Components: Not applicable
SARA 311/312 Components: Acute Health Hazard, Chronic Health Hazard
SARA 313 Components: Not applicable
California Prop. 65 Components: Not applicable
National regulations: All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory
Information about limitation of use: For use only by technically qualified individuals

16 Other information

The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulation are subject to change and the conditions of handling and use, or misuse are beyond our control. NOAH MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. User should satisfy himself that he has all current data relevant to his particular use.