Aluminum Sulfate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 05/24/2016

SECTION 1: Identification of the substance/mixture

1.1. Product identifier

Product form	:	Substance
Substance name	:	Aluminum Sulfate
Formula	:	$Al_2(SO_4)_3$
Molecular weight	:	342.15 g/mol
CAS No.	:	10043-01-3
Product code	:	LW-Al2(SO4)3
Synonyms	:	Aluminium Sulphate

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	:	Laboratory chemicals, Synthesis of substances

1.3. Emergency telephone number

Emergency number	:	1.800.424.9300 (USA) +1.703.527.3887 (INT)

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

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

Corrosive to metals (Category 1), H290

Serious eye damage (Category 1), H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. GHS Label elements, including precautionary statements

Pictogram :

Signal word : Danger

Hazard statement(s)

H290 : May be corrosive to metals.

H318 : Causes serious eye damage.

Precautionary statement(s)

P234 : Keep only in original container.

P280 : Wear eye protection/ face protection.

P305 + P351 + P338 + P310	:	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/doctor.
P390	:	Absorb spillage to prevent material damage.
P406	:	Store in corrosive resistant container with a resistant inner liner.

2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

none

SECTION 3: Composition/information on ingredients

3.1. Substances

Hazardous components

Component	Classification	Concentration
Aluminium sulphate	Met. Corr. 1; Eye Dam. 1; H290, H318	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: Description of first aid measures

4.1. Description of first aid measures

General advice	:	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
First-aid measures after inhalation	:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	:	Wash off with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
First-aid measures after ingestion	:	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3. Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

No data available

5.3. Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4. More Information

no data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Hygroscopic Store under inert gas. Keep in a dry place.

7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Aluminium sulphate	10043-01-3	TWA	2.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	2 mg/m3	USA. NIOSH Recommended Exposure Limits
		PEL	2 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

8.2. Exposure controls

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3. Personal protective equipment

Eye protection : Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection : Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)
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		data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body protection	:	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	:	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Environmental exposure controls	:	Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	:	Form: powder Color: white
Odor	:	No data available
Odor Threshold	:	No data available
pH	:	no data available
Melting point/freezing point	:	Melting point/range: 770 °C (1,418 °F) - dec.
Initial boiling point and boiling range	:	No data available
Flash point	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	The product is not flammable. - Flammability (solids)
Upper/lower flammability or explosive limits	:	no data available

Vapor pressure	:	0.01 hPa (0.01 mmHg) at 20 °C (68 °F)
Vapor density	:	no data available
Relative density	:	2.71 g/mL at 25 °C (77 °F)
Water solubility	:	1,000 g/l at 20 °C (68 °F) - OECD Test Guideline 105 - completely miscible
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Decomposition temperature	:	no data available
Viscosity	:	no data available
Explosive properties	:	no data available
Oxidizing properties	:	The product has been shown not to be oxidizing in a test following Directive 67/548/EEC (Method A17, Oxidizing properties).

9.2. Other safety information

no data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Air Exposure to moisture

10.5. Incompatible materials

Incompatible with strong bases and oxidizing agents., Ammonia, Water, Amines

10.6. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Aluminum oxide

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	LD50 Oral - Rat - male and female - > 5,000 mg/kg (OECD Test Guideline 401) Inhalation: No data available Dermal: No data available No data available
Skin corrosion/irritation	:	Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)
Serious eye damage/irritation	:	Eyes - Rabbit Result: Irritating to eyes. (OECD Test Guideline 405)
Respiratory or skin sensitization	:	no data available
Germ cell mutagenicity	:	Ames test S. typhimurium Result: negative Rat Cytogenetic analysis

Carcinogenicity

IARC:	:	No component 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:	:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	:	No data available Reproductive toxicity - Rat - Intratesticular Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Testes, epididymis, sperm duct. Reproductive toxicity - Mouse - Intraperitoneal Effects on Newborn: Growth statistics (e.g., reduced weight gain). Effects on Newborn: Behavioral. No data available

Specific target organ toxicity (single exposure)	:	No data available
Specific target organ toxicity (repeated exposure)	:	No data available
Aspiration hazard	:	No data available
Additional Information	:	RTECS: BD1700000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Stomach - Irregularities - Based on Human Evidence Stomach - Irregularities - Based on Human Evidence

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to daphnia and other aquatic invertebrates	:	LC50 - Daphnia magna (Water flea) - 38.2 mg/l - 48 h
12.2. Persistence and degradability	:	No data available
12.3. Bioaccumulative potential	:	No data available
12.3. Mobility in soil	:	No data available
12.4. Results of PBT and vPvB assessment	:	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
12.6. Other adverse effects	:	no data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product	:	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated Packaging	:	Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number	:	3260
Class	:	8

Packing group	:	III
Proper shipping name	:	Corrosive solid, acidic, inorganic, n.o.s. (Aluminium sulphate)
Reportable Quantity (RQ)	:	5000 lbs
Poison Inhalation Hazard	:	No

IMDG

UN number	:	3260
Class	:	8
Packing group	:	III
EMS-No	:	F-A, S-B
Proper shipping name	:	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Aluminium sulphate)

IATA

UN number	:	3260
Class	:	8
Packing group	:	III
Proper shipping name	:	Corrosive solid, acidic, inorganic, n.o.s. (Aluminium sulphate)

SECTION 15: Regulatory information

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Aluminium sulphate	CAS-No.	Revision Date
	10043-01-3	1993-04-24

Pennsylvania Right To Know Components

Aluminium sulphate	CAS-No.	Revision Date
	10043-01-3	1993-04-24

New Jersey Right To Know Components

Aluminium sulphate	CAS-No.	Revision Date
	10043-01-3	1993-04-24

California Prop. 65 Components

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

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

Eye Dam.	:	Serious eye damage
H290	:	May be corrosive to metals.
H318	:	Causes serious eye damage.
Met. Corr.	:	Corrosive to metals

HMIS Rating

Health Hazard	:	2
Chronic Health Hazard	:	
Flammability	:	0
Physical Hazard	:	0

NFPA Rating

Health hazard	:	2
Fire Hazard	:	0
Reactivity Hazard	:	0

Further Information

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and Loudwolf Holdings Ltd. assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his/her application.