



Chronic Aquatic Toxicity	Chronic 3 - H412
Substances/mixtures corrosive to metal.	Category 1 - H290

## 2.2. Label Elements

### Hazard Pictograms



Signal Word

Danger

### Hazard Statements

H290 - May be corrosive to metals  
 H318 - Causes serious eye damage  
 H351 - Suspected of causing cancer  
 H412 - Harmful to aquatic life with long lasting effects

### Precautionary Statements - EU (§28, 1272/2008)

P234 - Keep only in original container  
 P280 - Wear protective gloves/eye protection/face protection  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P308 + P313 - IF exposed or concerned: Get medical advice/attention  
 P390 - Absorb spillage to prevent material damage  
 P501 - Dispose of contents/container to an approved waste disposal plant

### Contains

#### Substances

Aluminum sulfate octadecahydrate

#### CAS Number

7784-31-8

## 2.3. Other Hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).  
 This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

## SECTION 3: Composition/information on Ingredients

### 3.2. Mixtures

Mixture

Substances	EINECS	CAS Number	PERCENT (w/w)	EU - CLP Substance Classification	REACH No.
Aluminum sulfate octadecahydrate	616-524-3	7784-31-8	30 - 60%	Eye Corr. 1 (H318) Aquatic Chronic 3 (H412) Met. Corr. 1 (H290)	No data available

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Inhalation

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

#### Eyes

Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

#### Skin

Wash with soap and water. Get medical attention if irritation persists.

#### Ingestion

Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

**4.2. Most Important symptoms and effects, both acute and delayed**

Causes serious eye damage. May cause skin irritation. Potential carcinogen.

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

**Notes to Physician** Treat symptomatically

<b>SECTION 5: Firefighting Measures</b>
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**5.1. Extinguishing media****Suitable Extinguishing Media**

All standard fire fighting media

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

None known.

**5.2. Special hazards arising from the substance or mixture****Special Exposure Hazards**

Not applicable.

**5.3. Advice for firefighters****Special Protective Equipment for Fire-Fighters**

Not applicable.

<b>SECTION 6: Accidental release measures</b>
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**6.1. Personal precautions, protective equipment and emergency procedures**

Use appropriate protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation.

See Section 8 for additional information

**6.2. Environmental precautions**

Prevent from entering sewers, waterways, or low areas.

**6.3. Methods and material for containment and cleaning up**

Isolate spill and stop leak where safe. Neutralize with lime slurry, limestone, or soda ash. Contain spill with sand or other inert materials. Scoop up and remove.

**6.4. Reference to other sections**

See Section 8 and 13 for additional information.

<b>SECTION 7: Handling and Storage</b>
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**7.1. Precautions for Safe Handling**

Avoid contact with eyes, skin, or clothing. Avoid breathing mist. Avoid breathing vapors. Ensure adequate ventilation. Use appropriate protective equipment.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for safe storage, including any incompatibilities**

Store in a cool, dry location. Product has a shelf life of 24 months.

**7.3. Specific End Use(s)**

**Exposure Scenario** No information available

**Other Guidelines** No information available

<b>SECTION 8: Exposure Controls/Personal Protection</b>
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**8.1. Control parameters****Exposure Limits**

Substances	CAS Number	EU	UK	Netherlands	France
Aluminum sulfate octadecahydrate	7784-31-8	Not applicable	TWA: 2 mg/m <sup>3</sup> STEL: 6 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	Not applicable

Substances	CAS Number	Germany	Spain	Portugal	Finland
Aluminum sulfate octadecahydrate	7784-31-8	Not applicable	TWA: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	Not applicable

Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Aluminum sulfate octadecahydrate	7784-31-8	Not applicable	2 mg/m <sup>3</sup> TWA	Not applicable	TWA: 2 mg/m <sup>3</sup> STEL: 4 mg/m <sup>3</sup>
Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Aluminum sulfate octadecahydrate	7784-31-8	Not applicable	Not applicable	Not applicable	Not applicable
Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Aluminum sulfate octadecahydrate	7784-31-8	TWA: 1 mg/m <sup>3</sup>	Not applicable	Not applicable	Not applicable

**Derived No Effect Level (DNEL)** No information available.  
**Worker**

#### General Population

**Predicted No Effect Concentration (PNEC)** No information available.

#### 8.2. Exposure controls

**Engineering Controls** Use in a well ventilated area.

#### **Personal protective equipment**

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

**Respiratory Protection** If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional. Dust/mist respirator. (N95, P2/P3)

**Hand Protection** Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Nitrile gloves. (>= 0.7 mm thickness)  
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. Manufacturer's directions for use should be observed because of great diversity of types.

**Skin Protection** Normal work coveralls.  
**Eye Protection** Wear safety glasses or goggles to protect against exposure.  
**Other Precautions** None known.

**Environmental Exposure Controls** Do not allow material to contaminate ground water system

## SECTION 9: Physical and Chemical Properties

### 9.1. Information on basic physical and chemical properties

**Physical State:** Liquid **Color:** White  
**Odor:** Odorless **Odor Threshold:** No information available

<u>Property</u>	<u>Values</u>
Remarks/ - Method	
<b>pH:</b>	1.55
<b>Freezing Point/Range</b>	No data available
<b>Melting Point/Range</b>	No data available
<b>Boiling Point/Range</b>	No data available
<b>Flash Point</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>upper flammability limit</b>	No data available
<b>lower flammability limit</b>	No data available
<b>Evaporation rate</b>	No data available

Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	1.3
Water Solubility	Soluble in water
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

**9.2. Other information**

VOC Content (%) No data available

## SECTION 10: Stability and Reactivity

**10.1. Reactivity**

Not expected to be reactive.

**10.2. Chemical Stability**

Stable

**10.3. Possibility of Hazardous Reactions**

Will Not Occur

**10.4. Conditions to Avoid**

None anticipated

**10.5. Incompatible Materials**

Strong alkalis.

**10.6. Hazardous Decomposition Products**

Oxides of sulfur.

## SECTION 11: Toxicological Information

**11.1. Information on Toxicological Effects****Acute Toxicity****Inhalation**

May cause respiratory irritation.

**Eye Contact**

Causes serious eye damage.

**Skin Contact**

May cause skin irritation.

**Ingestion**

In large amounts: May cause abdominal pain, vomiting, nausea, and diarrhea.

**Chronic Effects/Carcinogenicity**

This product is a suspected carcinogen.

**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Aluminum sulfate octadecahydrate	7784-31-8	> 2000 <5000 mg/kg (Rat) (similar substance)	> 5000 mg/kg (Rabbit) (similar substance)	> 6.1 mg/L (Rat, aerosol, 4h) (similar substance)

Substances	CAS Number	Skin corrosion/irritation
Aluminum sulfate octadecahydrate	7784-31-8	Non-irritating to the skin (Rabbit) (similar substances)

Substances	CAS Number	Eye damage/irritation
Aluminum sulfate octadecahydrate	7784-31-8	Causes severe eye irritation which may damage tissue. (Rabbit) (similar substances)

Substances	CAS Number	Skin Sensitization
Aluminum sulfate octadecahydrate	7784-31-8	Did not cause sensitization on laboratory animals (guinea pig) (similar substances)

Substances	CAS Number	Respiratory Sensitization
Aluminum sulfate octadecahydrate	7784-31-8	No information available

Substances	CAS Number	Mutagenic Effects
Aluminum sulfate octadecahydrate	7784-31-8	Some in vitro tests have shown mutagenic effects. Positive in the chromosomal aberration assay Some in vivo tests have shown mutagenic effects. (similar substances)

Substances	CAS Number	Carcinogenic Effects
Aluminum sulfate octadecahydrate	7784-31-8	No information available.

Substances	CAS Number	Reproductive toxicity
Aluminum sulfate octadecahydrate	7784-31-8	No data of sufficient quality are available.

Substances	CAS Number	STOT - single exposure
Aluminum sulfate octadecahydrate	7784-31-8	No information available

Substances	CAS Number	STOT - repeated exposure
Aluminum sulfate octadecahydrate	7784-31-8	No data of sufficient quality are available.

Substances	CAS Number	Aspiration hazard
Aluminum sulfate octadecahydrate	7784-31-8	Not applicable

## SECTION 12: Ecological Information

### 12.1. Toxicity Ecotoxicity Effects

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Aluminum sulfate octadecahydrate	7784-31-8	EC50(72h): 14 mg/L (Pseudokirchnerella subcapitata)	LC50(96h): 186 mg/L (Danio rerio) (similar substance) NOEC(96h): 1000 mg/L (Danio rerio) (similar substance) NOEC(28d): 0.24 mg/L (Salmo trutta) NOEC(60d): 0.013 mg/L (Salvelinus fontinalis)	EC50(180m): > 1000 mg/L (activated sludge, domestic)	EC50(48h): 38 mg/L (Daphnia magna) (similar substance)

### 12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Aluminum sulfate octadecahydrate	7784-31-8	The methods for determining biodegradability are not applicable to inorganic substances.

### 12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Aluminum sulfate octadecahydrate	7784-31-8	No information available

### 12.4. Mobility in soil

Substances	CAS Number	Mobility
Aluminum sulfate octadecahydrate	7784-31-8	No information available

### 12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

**12.6. Other adverse effects****Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

**SECTION 13: Disposal Considerations**
**13.1. Waste treatment methods****Disposal Method**

Disposal should be made in accordance with federal, state, and local regulations.

**Contaminated Packaging**

Follow all applicable national or local regulations.

**SECTION 14: Transport Information**
**IMDG/IMO**

**UN Number:** UN3264  
**UN Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Aluminum Sulfate)  
**Transport Hazard Class(es):** 8  
**Packing Group:** III  
**Environmental Hazards:** Not applicable

**RID**

**UN Number:** UN3264  
**UN Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Aluminum Sulfate)  
**Transport Hazard Class(es):** 8  
**Packing Group:** III  
**Environmental Hazards:** Not applicable

**ADR**

**UN Number:** UN3264  
**UN Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Aluminum Sulfate)  
**Transport Hazard Class(es):** 8  
**Packing Group:** III  
**Environmental Hazards:** Not applicable

**IATA/ICAO**

**UN Number:** UN3264  
**UN Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Aluminum Sulfate)  
**Transport Hazard Class(es):** 8  
**Packing Group:** III  
**Environmental Hazards:** Not applicable

**14.1. UN Number:** UN3264

**14.2. UN Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Aluminum Sulfate)

**14.3. Transport Hazard Class(es):** 8

**14.4. Packing Group:** III

**14.5. Environmental Hazards:** Not applicable

**14.6. Special Precautions for User:** None

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable

**SECTION 15: Regulatory Information**
**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories****EINECS Inventory**

This product, and all its components, complies with EINECS

**US TSCA Inventory**

All components listed on inventory or are exempt.

**Canadian DSL Inventory**

All components listed on inventory or are exempt.

**Legend**

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

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances  
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

Germany, Water Endangering Classes (WGK) WGK 1: Low hazard to waters.

### 15.2. Chemical Safety Assessment

No information available

## SECTION 16: Other Information

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

H290 - May be corrosive to metals  
H318 - Causes serious eye damage  
H351 - Suspected of causing cancer  
H412 - Harmful to aquatic life with long lasting effects

### Key or legend to abbreviations and acronyms

bw – body weight  
CAS – Chemical Abstracts Service  
CLP – REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Classification, Labelling and Packaging of substances and mixtures  
EC – European Commission  
EC10 – Effective Concentration 10%  
EC50 – Effective Concentration 50%  
EEC – European Economic Community  
ErC50 – Effective Concentration growth rate 50%  
IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
LC50 – Lethal Concentration 50%  
LD50 – Lethal Dose 50%  
LL0 – Lethal Loading 0%  
LL50 – Lethal Loading 50%  
MARPOL – International Convention for the Prevention of Pollution from Ships  
mg/kg – milligram/kilogram  
mg/L – milligram/liter  
NIOSH – National Institute for Occupational Safety and Health  
NOEC – No Observed Effect Concentration  
NTP – National Toxicology Program  
OEL – Occupational Exposure Limit  
PBT – Persistent Bioaccumulative and Toxic  
PC – Chemical Product category  
PEL – Permissible Exposure Limit  
ppm – parts per million  
PROC – Process category  
REACH – REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals  
STEL – Short Term Exposure Limit  
SU – Sector of Use category

### Key literature references and sources for data

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

Revision Date: 07-Sep-2015

### Revision Note

SDS sections updated: 1

**This safety data sheet complies with the requirements of Regulation (EC) No. 453/2010**

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**End of Safety Data Sheet**