



Ammoniumsulfate

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Revision date: 30-05-2019 Version: 2.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Chemical name : Ammonium sulfate
EC-No. : 231-984-1
CAS-No. : 7783-20-2
REACH registration No : 01-2119455044-46-XXXX
Product code : 174501
Formula : (NH₄)₂SO₄

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Fertilizer
Flame retardant

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

AZELIS
Posthofbrug 12, box 6
B-2600 Antwerp
Belgium
sds@azelis.com

1.4. Emergency telephone number

Emergency number : CareChem 24x7 : EUROPE: +44 1235 239670 | USA: +1 202 464 2554 | CANADA - +1 800 579 7421 (Toll Free) | ASIA - +65 3158 1074 | MOROCCO - +44 1235 239671 | REST OF THE WORLD - +44 1865 407333 (English only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|------------------|---|------|---|
| Ammonium sulfate | (CAS-No.) 7783-20-2 (EC-No.) 231-984-1 (REACH-no) 01-2119455044-46-XXXX | > 98 | Not classified |

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.

Ammoniumsulfate

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

| | |
|---------------------------------------|--|
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. Respiratory problems: consult a doctor/medical service. |
| First-aid measures after skin contact | : Wash off with soap and plenty of water. Remove all contaminated clothing and footwear. If skin irritation occurs: Get medical advice/attention. |
| First-aid measures after eye contact | : Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion | : Rinse mouth out with water. Give water to drink if victim completely conscious/alert. Do not induce vomiting. Call a poison center or a doctor if you feel unwell. |

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

| | |
|------------------------------------|--|
| Symptoms/effects after inhalation | : At high concentrations: May cause irritation to the respiratory tract. |
| Symptoms/effects after eye contact | : Dust from this product may cause eye irritation. |
| Symptoms/effects after ingestion | : On ingestion in large quantities: Gastrointestinal complaints. |

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

| | |
|--------------------------------|--|
| Firefighting instructions | : Cool down the containers exposed to heat with a water spray. Dilute toxic gases with water spray. |
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. EN 469. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid dust formation. Ensure adequate ventilation.

6.1.1. For non-emergency personnel

| | |
|----------------------|--|
| Protective equipment | : Do not touch or walk on the spilled product. Complete protective clothing. |
| Emergency procedures | : Ventilate spillage area. |

6.1.2. For emergency responders

| | |
|----------------------|---|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
|----------------------|---|

6.2. Environmental precautions

Avoid release to the environment. Stop leak if safe to do so. Do not allow to enter drains or water courses. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

| | |
|-------------------------|---|
| For containment | : Collect spillage. |
| Methods for cleaning up | : Mechanically recover the product. Large spill: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Small spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. |
| Other information | : Dispose of materials or solid residues at an authorized site. |

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

| | |
|-------------------------------|---|
| Precautions for safe handling | : Ensure good ventilation of the work station. Wear personal protective equipment. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. |
| Hygiene measures | : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|------------------------------|--|
| Storage conditions | : Keep only in original container. Store in a well-ventilated place. |
| Maximum storage period | : 24 months |
| Storage temperature | : 20 °C |
| Information on mixed storage | : Keep away from : Strong bases. Strong oxidizing agents. Metals. |
| Storage area | : Store in a well-ventilated place. Store in a dry place. |

Ammoniumsulfate

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Special rules on packaging : Secure fragile packagings in solid containers.
Packaging materials : Stainless steel. Synthetic material. Aluminium. Glass.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ammonium sulfate (7783-20-2)

DNEL/DMEL (Workers)

Long-term - systemic effects, dermal 42.667 mg/kg bw/day

Long-term - systemic effects, inhalation 11.167 mg/m³

DNEL/DMEL (General population)

Long-term - systemic effects, oral 6.4 mg/kg bw/day

Long-term - systemic effects, inhalation 1.667 mg/m³

Long-term - systemic effects, dermal 12.8 mg/kg bw/day

PNEC (Water)

PNEC aqua (freshwater) 0.312 mg/l

PNEC aqua (marine water) 0.0312 mg/l

PNEC aqua (intermittent, freshwater) 0.53 mg/l

PNEC (Sediment)

PNEC sediment (freshwater) 0.063 mg/kg dwt

PNEC (Soil)

PNEC soil 62.6 mg/kg dwt

PNEC (STP)

PNEC sewage treatment plant 16.18 mg/l

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protective equipment:

Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection. Gloves.

Hand protection:

Protective gloves

| Type | Material | Permeation | Thickness (mm) | Penetration | Standard |
|-----------------|---------------------------------------|-------------------|----------------|-------------|------------|
| Reusable gloves | Polyvinylchloride (PVC), Butyl rubber | 6 (> 480 minutes) | 0.5 | | EN ISO 374 |

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

| Device | Filter type: | Condition | Standard |
|-----------|--------------|-----------|----------|
| Dust mask | P2 | | |

Personal protective equipment symbol(s):



Ammoniumsulfate

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|--|
| Physical state | : Solid |
| Appearance | : Crystalline powder. Grains. |
| Molecular mass | : 132.16 g/mol |
| Colour | : white. |
| Odour | : ammonia odour. |
| Odour threshold | : No data available |
| pH | : No data available |
| pH solution | : 5 - 8 (@ 10% w/w) |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : > 235 °C (Decomposes before melting) |
| Freezing point | : Not applicable |
| Boiling point | : > 280 °C (Decomposes on heating) |
| Flash point | : Not applicable |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : > 235 °C |
| Flammability (solid, gas) | : Non flammable. |
| Vapour pressure | : < 1 hPa (Negligible vapour pressure at ambient conditions) |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Density | : 1.77 g/cm ³ |
| Solubility | : Water: 77 g/100ml (@ 20°C) |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : Not applicable |

9.2. Other information

Other properties : Hygroscopic.

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Reacts with : Bases.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Avoid high temperatures.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. May be corrosive to metals.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Ammonia. Nitrous gasses. Sulphur oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|-----------------------------|---|
| Acute toxicity (oral) | : Not classified (Based on available data, the classification criteria are not met) |
| Acute toxicity (dermal) | : Not classified (Based on available data, the classification criteria are not met) |
| Acute toxicity (inhalation) | : Not classified (Based on available data, the classification criteria are not met) |

Ammonium sulfate (7783-20-2)

| | |
|-----------------|--------------|
| LD50 oral rat | 4250 mg/kg |
| LD50 dermal rat | > 2000 mg/kg |

Ammoniumsulfate

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

| | |
|-----------------------------------|---|
| LC50 inhalation rat (mg/l) | > 1000 mg/l (8h) |
| Skin corrosion/irritation | : Not classified (Based on available data, the classification criteria are not met) |
| Serious eye damage/irritation | : Not classified (Based on available data, the classification criteria are not met) |
| Respiratory or skin sensitisation | : Not classified (Based on available data, the classification criteria are not met) |
| Germ cell mutagenicity | : Not classified (Based on available data, the classification criteria are not met) |
| Carcinogenicity | : Not classified (Based on available data, the classification criteria are not met) |

Ammonium sulfate (7783-20-2)

| | |
|---|---|
| NOAEL (chronic, oral, animal/male, 2 years) | 256 mg/kg bodyweight |
| NOAEL (chronic, oral, animal/female, 2 years) | 284 mg/kg bodyweight |
| Reproductive toxicity | : Not classified (Based on available data, the classification criteria are not met) |
| STOT-single exposure | : Not classified (Based on available data, the classification criteria are not met) |
| STOT-repeated exposure | : Not classified (Based on available data, the classification criteria are not met) |
| Aspiration hazard | : Not classified (Based on available data, the classification criteria are not met) |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|--------------------------|---|
| Ecology - general | : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. |
| Acute aquatic toxicity | : Not classified (Based on available data, the classification criteria are not met) |
| Chronic aquatic toxicity | : Not classified (Based on available data, the classification criteria are not met) |

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Ammonium sulfate (7783-20-2)

| | |
|---------------------------|-------------------------|
| Bioaccumulative potential | Does not bioaccumulate. |
|---------------------------|-------------------------|

12.4. Mobility in soil

Ammonium sulfate (7783-20-2)

| | |
|----------------|-------------------|
| Ecology - soil | soluble in water. |
|----------------|-------------------|

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--|--|
| Regional legislation (waste) | : Disposal must be done according to official regulations. |
| Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| Product/Packaging disposal recommendations | : Do not discharge into drains. Dispose in a safe manner in accordance with local/national regulations. |
| European List of Waste (LoW) code | : 06 03 13* - solid salts and solutions containing heavy metals 06 03 11* - solid salts and solutions containing cyanides 06 03 14 - solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13 |

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IMDG | IATA | ADN | RID |
|---|---------------|---------------|---------------|---------------|
| 14.1. UN number | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.2. UN proper shipping name | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.3. Transport hazard class(es) | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.4. Packing group | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |

Ammoniumsulfate

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

14.5. Environmental hazards

Not regulated

Not regulated

Not regulated

Not regulated

Not regulated

No supplementary information available

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Ammonium sulfate is not on the REACH Candidate List

Ammonium sulfate is not on the REACH Annex XIV List

Ammoniumsulfate is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Ammoniumsulfate is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

No additional information available

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.