

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Reference number: A0502

Issue date: 17/08/2023 Revision date: 09/08/2023 Supersedes version of: 18/06/2018 Version: 3.0

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

1.1. Product identifier

| | |
|-------------------------------|---|
| Product form | : Substance |
| Trade name | : Ammonium sulphate |
| EC-No. | : 231-984-1 |
| CAS-No. | : 7783-20-2 |
| REACH registration No. | : 01-2119455044-46-xxxx |
| Product code | : A0502 |
| Formula | : (NH ₄) ₂ SO ₄ |
| Product group | : Raw material |
| Other means of identification | : Ammonium sulphate |

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

1.2.1. Relevant identified uses

| | |
|----------------------------------|---|
| Main use category | : Professional use |
| Industrial/Professional use spec | : For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes. |

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Duchefa Biochemie B.V.
A. Hofmanweg 71
2031 BH Haarlem
The Netherlands
T +31(0)23-5319093 - F +31(0)23-5318027
info@duchefa.nl

1.4. Emergency telephone number

| | |
|------------------|--|
| Emergency number | : Supplier contact information: +31(0)23-5319093 (M-F 09:00-17:00) +31(0)6-30008100 (outside office hours) |
|------------------|--|

| Country | Organisation/Company | Address | Emergency number | Comment |
|---------|---|---|------------------|---|
| | World Health Organization world directory of poison centres | http://apps.who.int/poisoncentres/ | | Consult website for a local poison centre |

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

No additional information available

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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 | % |
|-------------------|--|------|
| Ammonium sulphate | CAS-No.: 7783-20-2 EC-No.: 231-984-1 REACH-no: 01-2119455044-46-xxxx | ≥ 99 |

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Seek medical attention if ill effect or irritation develops.
First-aid measures after inhalation : Allow affected person to breathe fresh air. Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Flush with plenty of water.
First-aid measures after eye contact : Rinse with water.
First-aid measures after ingestion : Rinse mouth.

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

No additional information available

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).

5.2. Special hazards arising from the substance or mixture

Reactivity in case of fire : When exposed to heat, may decompose liberating hazardous gases.

5.3. Advice for firefighters

Precautionary measures fire : Do not enter fire area without proper protective equipment, including respiratory protection.
Firefighting instructions : Use water spray or fog for cooling exposed containers.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid breathing dust, mist or spray.

6.1.1. For non-emergency personnel

Measures in case of dust release : Avoid dust formation.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Sweep up dry powder and dispose properly.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, well-ventilated area. Store at room temperature. Keep container closed when not in use.

7.3. Specific end use(s)

For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

| Ammonium sulphate (7783-20-2) | |
|--|---|
| Bulgaria - Occupational Exposure Limits | |
| Local name | Амониев сулфат |
| OEL TWA | 10 mg/m ³ |
| Regulatory reference | Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 47 от 2021 г., в сила от 04.06.2021 г.) |
| Latvia - Occupational Exposure Limits | |
| Local name | Hroma-amonija sulfāts, pēc Cr (hroma-amonija alauns) |
| OEL TWA | 0,02 mg/m ³ |
| Regulatory reference | Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2011. gada 1. februārī noteikumiem Nr. 92) |

8.1.2. Recommended monitoring procedures

No additional information available

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8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

| Ammonium sulphate (7783-20-2) | |
|--|-----------------------------|
| DNEL/DMEL (Workers) | |
| Long-term - systemic effects, dermal | 42,667 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 11,167 mg/m ³ |
| DNEL/DMEL (General population) | |
| Long-term - systemic effects, oral | 6,4 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 1,667 mg/m ³ |
| Long-term - systemic effects, dermal | 12,8 mg/kg bodyweight/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 |

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

8.2.2.1. Eye and face protection

Eye protection:

Safety glasses (to European standard EN 166 or equivalent)

8.2.2.2. Skin protection

Hand protection:

Wear gloves

8.2.2.3. Respiratory protection

Respiratory protection:

Dust production: dust mask with filter type P1 (EN 143)

8.2.2.4. Thermal hazards

No additional information available

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8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|--|
| Physical state | : Solid |
| Colour | : White. |
| Appearance | : Powder. |
| Molecular mass | : 132,1 g/mol |
| Odour | : Not available |
| Odour threshold | : Not available |
| Melting point | : > 280 °C |
| Freezing point | : Not available |
| Boiling point | : Not available |
| Flammability | : Not available |
| Explosive limits | : Not applicable |
| Lower explosion limit | : Not applicable |
| Upper explosion limit | : Not applicable |
| Flash point | : Not applicable |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : Not available |
| pH | : Not available |
| pH solution | : Not available |
| Viscosity, kinematic | : Not applicable |
| Solubility | : Water: 760 g/l |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Vapour pressure | : 0,000000004 hPa Temp.: 25 °C |
| Vapour pressure at 50°C | : Not available |
| Density | : 1,77 g/cm ³ (20 °C) |
| Relative density | : 1,77 Type: 'relative density' Temp.: 25 °C |
| Relative vapour density at 20°C | : Not applicable |
| Particle size | : Not available |

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Bulk density : $\approx 850 \text{ kg/m}^3$

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of storage, handling and use.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

An exothermic reaction may occur.

10.4. Conditions to avoid

Heat.

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10.5. Incompatible materials

Strong bases. Strong oxidizers. Nitrates. Chlorates.

10.6. Hazardous decomposition products

When heated to decomposition, emits dangerous fumes. - SOx. - NOx. Ammonia (NH3).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
 Acute toxicity (dermal) : Not classified
 Acute toxicity (inhalation) : Not classified

| Ammonium sulphate (7783-20-2) | |
|-------------------------------|---|
| LD50 oral rat | 2840 mg/kg |
| LD50 oral | 640 mg/kg (mouse) |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 434 (Acute Dermal Toxicity - Fixed Dose Procedure) |

Skin corrosion/irritation : Not classified
 Serious eye damage/irritation : Not classified
 Respiratory or skin sensitisation : Not classified
 Germ cell mutagenicity : Not classified
 Carcinogenicity : Not classified

| Ammonium sulphate (7783-20-2) | |
|---|---|
| NOAEL (chronic, oral, animal/male, 2 years) | 256 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |
| NOAEL (chronic, oral, animal/female, 2 years) | 284 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |

Reproductive toxicity : Not classified
 STOT-single exposure : Not classified
 STOT-repeated exposure : Not classified
 Aspiration hazard : Not classified

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Other information : See actual entry in RTECS for complete information: BS4500000

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified
 Hazardous to the aquatic environment, long-term (chronic) : Not classified

| Ammonium sulphate (7783-20-2) | |
|-------------------------------|---|
| LC50 - Fish [1] | 420 mg/l Danio rerio (zebrafish) |
| LC50 - Fish [2] | 57,2 mg/l Test organisms (species): Prosopium williamsoni |

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| | |
|------------------------------------|--|
| EC50 - Crustacea [1] | 169 mg/l Test organisms (species): Daphnia magna |
| EC50 - Other aquatic organisms [1] | 121,7 mg/l Test organisms (species): other: |

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Prevent entry to sewers and public waters. Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

| ADR | IMDG | IATA |
|---|---------------|---------------|
| 14.1. UN number or ID number | | |
| Not regulated | Not regulated | Not regulated |
| 14.2. UN proper shipping name | | |
| Not regulated | Not regulated | Not regulated |
| 14.3. Transport hazard class(es) | | |
| Not regulated | Not regulated | Not regulated |
| 14.4. Packing group | | |
| Not regulated | Not regulated | Not regulated |
| 14.5. Environmental hazards | | |
| Not regulated | Not regulated | Not regulated |
| No supplementary information available | | |

14.6. Special precautions for user

Overland transport

Not regulated

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Transport by sea

Not regulated

Air transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

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

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Ensure all national/local regulations are observed.

Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 296).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

SZW-lijst van reprotoxische stoffen –

Borstvoeding

SZW-lijst van reprotoxische stoffen –

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen –

Ontwikkeling

15.2. Chemical safety assessment

No additional information available

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SECTION 16: Other information

| Indication of changes | | | |
|-----------------------|---|----------|----------|
| Section | Changed item | Change | Comments |
| | Revision date | Modified | |
| | Supersedes | Modified | |
| | Substance type | Added | |
| 1.1 | Other means of identification | Added | |
| 1.1 | Formula | Modified | |
| 8 | Regulatory reference | Added | |
| 8 | Regulatory reference | Added | |
| 8.1 | OEL TWA | Added | |
| 8.1 | Local name | Added | |
| 8.1 | OEL TWA | Added | |
| 8.1 | Local name | Added | |
| 8.1 | PNEC sewage treatment plant | Added | |
| 8.1 | PNEC sediment (freshwater) | Added | |
| 8.1 | PNEC soil | Added | |
| 8.1 | PNEC aqua (marine water) | Added | |
| 8.1 | PNEC aqua (freshwater) | Added | |
| 8.1 | PNEC aqua (intermittent, freshwater) | Added | |
| 8.1 | Long-term - systemic effects,oral | Added | |
| 8.1 | Long-term - systemic effects, inhalation | Added | |
| 8.1 | Long-term - systemic effects, inhalation | Added | |
| 8.1 | Long-term - systemic effects, dermal | Added | |
| 8.1 | Long-term - systemic effects, dermal | Added | |
| 9.1 | Relative density | Added | |
| 9.1 | Vapour pressure | Added | |
| 11.1 | NOAEL (chronic, oral, animal/female, 2 years) | Added | |
| 11.1 | NOAEL (chronic, oral, animal/male, 2 years) | Added | |
| 11.1 | LD50 dermal rat | Added | |
| 12.1 | LC50 - Fish [2] | Added | |
| 12.1 | EC50 - Crustacea [1] | Added | |
| 12.1 | EC50 - Other aquatic organisms [1] | Added | |

| Abbreviations and acronyms: | |
|-----------------------------|---|
| ATE | Acute Toxicity Estimate |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |

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| Abbreviations and acronyms: | |
|------------------------------------|---|
| BCF | Bioconcentration factor |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| DPD | Dangerous Preparations Directive 1999/45/EC |
| DSD | Dangerous Substances Directive 67/548/EEC |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| PBT | Persistent Bioaccumulative Toxic |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| SDS | Safety Data Sheet |

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. ECHA (European Chemicals Agency).

Safety Data Sheet (SDS), EU Duchefa 2023

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.