

SAFETY DATA SHEET

Ammonium Sulphate

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Issued: 08/07/2026
Revision No: 3

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product Identifier: Ammonium Sulphate Special Grade
Synonyms: Ammonium sulphate
CAS number: 7783-20-2
EINECS number: 231-984-1
REACH registration number: 01-2119455044-46-XXXX

Relevant identified uses of the substance or mixture and uses advised against:

Identified use(s): Chemical
Recommended use(s): Fertilisers, chemical, intermediate, process chemical, fire extinguishing compounds, laboratory chemicals.

Details of the supplier of the safety data sheet:

Company name: Nexchem Ltd
Unit 3 Barshaw Park
Leycroft Road
Leicester
LE4 1ET
Tel: 0116 2311130
24/7 Emergency Tel: 0800 246 1274
Email: sales@nexchem.co.uk

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567:

No need for classification according to GHS criteria for this product.

Label elements:

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567:

The product does not require a hazard warning label in accordance with GHS criteria.

Other hazards:

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567:

No specific dangers known if the regulations/notes for storage and handling are considered.
The product does not contain a substance above legal limits fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

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3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

Ammonium sulphate:

CAS number: 7783-20-2

EC number: 231-984-1

ε-caprolactam (Content (W/W) < 0.5%):

CAS number: 105-60-2

EC number: 203-313-2

INDEX number: 613-069-00-2

Mixtures: Not applicable

4. FIRST AID MEASURES

Description of first aid measures: Remove contaminated clothing.

Inhalation: After inhalation of dust: fresh air. If difficulties occur, seek medical attention. After inhalation of decomposition products: keep patient calm, remove to fresh air, and seek medical attention.

Skin contact: Wash thoroughly with soap and water.

Eye contact: Wash affected eyes for at least 15 minutes under running water with eyelids held open. Seek medical attention.

Ingestion: Rinse mouth immediately and then drink plenty of water (200 – 300 ml). Seek medical attention.

Most important symptoms and effects, both acute and delayed:

Symptoms: (Further) symptoms and / or effects are not known so far.

Hazards: After inhalation of decomposition products: Risk of pulmonary edema. Symptoms can appear later.

Indication of any immediate medical attention and special treatment needed:

Treatment: After inhalation of decomposition products: Pulmonary oedema prophylaxis.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Water spray, foam, dry powder.

Special hazards arising from the substance or mixture:

Advice: See SDS section 7 - handling and storage.

Temperature limit: 235 °C

Endangering substances: Ammonia, anhydrous

Endangering substances: Nitrogen oxides, sulphur oxides

Advice: The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters:

Further information: Product itself is non-combustible; fire extinguishing method of surrounding areas must be considered. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Handle in accordance with good industrial hygiene and safety practice. Information regarding personal protective measures - see section 8.

Environmental precautions:

Do not discharge into drains/surface water/ground water. Retain and dispose of contaminated wash water.

Methods and material for containment and cleaning up:

For large amounts: Sweep/shovel up.

For residues: Sweep/shovel up. Rinse away with water.

Reference to other sections:

Information regarding exposure controls/personal protection and disposal consideration can be found in section 8 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling:

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities:

Segregate from alkalis and alkalising substances. Segregate from nitrites and alkaline substances.

Suitable materials for containers: Stainless steel 1.4401, stainless steel 1.4301 (V2), aluminium, polyester resin, glass reinforced (Palatal A410), high density polyethylene (HDPE), glass, low density polyethylene (LDPE).

Further information on storage conditions: Protect against moisture.

The substance/product may cake under the influence of moisture.

Storage stability:

Storage temperature: 20°C, storage duration: 24 months

Specific end use(s):

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

No substance specific occupational exposure limits known.

Predicted No Effect Concentrations (PNEC): Freshwater: 0.312 mg/l

Marine water: 0.0312 mg/l

Intermittent release: 0.53 mg/l

STP: 16.18 mg/l

Sediment (freshwater): 0.063 mg/kg

Soil: 62.6 mg/kg

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Derived No Effect Level (DNEL): Worker, long-term exposure-systemic effect, dermal: 42.67 mg/kg bw/day
Worker, long-term exposure-systemic effect, inhalation: 11.17 mg/m³.
Consumer, long-term exposure-systemic effect, oral: 6.4 mg/kg bw/day
Consumer, long-term exposure-systemic effect, inhalation: 1.67 mg/m³.
Consumer, long-term exposure-systemic effect, dermal: 12.8 mg/kg bw/day

Exposure controls:

Respiratory protection: Breathing protection if breathable aerosols/dust are formed. Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1 or FFP1).

Hand protection: Chemical resistant protective gloves (EN ISO 374-1).

Gloves material: e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinyl chloride (0.7 mm) and other.

Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection: Safety glasses with side-shields (frame goggles) (e.g. EN 166).

General safety and hygiene measures: Handle in accordance with good industrial hygiene and safety practice. At the end of the shift the skin should be cleaned and skin-care agents applied.

Body protection: Body protection must be chosen based on level of activity and exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Form: Crystalline

Colour: White

Odour: Odourless

Odour threshold: No data available.

pH value: Approx. 5 (100 g/l, 20 °C, pH meter)

Melting point (decomposition): Approx. 350 °C. The substance/product decomposes.

Onset of boiling: The substance/product decomposes therefore not determined.

Flash point: The substance/product is non-combustible.

Evaporation rate: Not applicable, the product is a non-volatile solid.

Flammability: Not flammable

Lower explosion limit: Not applicable

Upper explosion limit: Not applicable

Ignition temperature: Not applicable

Vapour pressure: 0.0000001 hPa (25 °C), literature data.

Density: 1.766 g/cm³ (20 °C, OECD Guideline 109)

Relative density: 1.77 (25 °C, 1,013 hPa), literature data.

Relative vapour density (air): Not applicable, the product is a non-volatile solid.

Solubility in water: 764 g/l (20 °C), 843 g/l (50 °C)

Partitioning coefficient n-octanol/water (log K_{ow}): Not applicable

Self-ignition: Not self-igniting. Test type: Spontaneous self- ignition at room-temperature. The value has not been determined because of the low risk of self-ignition in consequence of the high flash-point.
Test type: Self-ignition at high temperatures.

Thermal decomposition: >235 °C. To avoid thermal decomposition, do not overheat.

Viscosity, dynamic: Not applicable

Viscosity, kinematic: Not applicable, the product is a solid.

Explosion hazard: Based on the chemical structure there is no indicating of explosive properties.

Fire promoting properties: Based on its structural properties the product is not classified as oxidising.

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Other information:

Self-heating ability:	It is not a substance capable of spontaneous heating.
Bulk density:	1,000 kg/m ³ (20°C)
Adsorption:	Study scientifically not justified.
Surface Tension:	Based on chemical structure, surface activity is not to be expected.
Grain size distribution:	560 µm (D50, calculated)

10. STABILITY AND REACTIVITY

Reactivity: No hazardous reactions if stored and handled as prescribed/indicated.

Formation of flammable gases: Forms no flammable gases in the presence of water.

Chemical stability: This chemical is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions: Evolution of ammonia under influence of alkalis. Reacts with alkalis and nitrates.

Conditions to avoid: See MSDS section 7 – Handling and Storage.

Incompatible materials:

Materials to avoid: Alkaline reactive substances, nitrites.

Hazardous decomposition products: Ammonia, anhydrous.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity: Of low toxicity after single ingestion. Of low toxicity after short-term skin contact.

Experimental/calculated data: LD50 rat (oral): 4,250 mg/kg

By inhalation: Study does not need to be conducted.

LD50 rat (dermal): > 2,000 mg/kg, literature data.

Information on: Ammonium sulphate

Assessment of acute toxicity: Of low toxicity after single ingestion. Of low toxicity after short-term skin contact.

Irritation:

Assessment of irritating effects: Not irritating to the skin. Not irritating to the eyes.

Experimental/calculated data:

Skin corrosion/irritation rabbit: Non-irritant

Serious eye damage/irritation rabbit: Non-irritant

Respiratory/skin sensitisation:

Assessment of sensitisation: Skin sensitising effects were not observed in animal studies.

Experimental/calculated data: Guinea pig maximisation test guinea pig: Non-sensitising. (other) The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

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Germ cell mutagenicity:

Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture. The substance was not mutagenic in studies with mammals.

Experimental/calculated data: Ames-test, negative (OECD Guideline 471). Cytogenetic assay, negative (OECD Guideline 473, literature data). HGPRT assay, CHO cells: Negative (OECD Guideline 476).

Carcinogenicity:

Assessment of carcinogenicity: In long-term animal studies in which the substance was given in high concentrations by feed, a carcinogenic effect was not observed.

Reproductive toxicity:

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Development toxicity:

Assessment of teratogenicity: No indications of a developmental toxic/teratogenic effect were seen in animal studies. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Specific target organ toxicity (single exposure):

Assessment of STOT single: The available information is not sufficient for the evaluation of specific target organ toxicity.

Specific target organ toxicity (repeated exposure):

Assessment of repeated dose toxicity: No substance-specific organ toxicity was observed after repeated administration to animals.

Aspiration hazard: Not applicable.

Other relevant toxicity information: The product has not been tested. The statement has been derived from the properties of the individual components.

12. ECOLOGICAL INFORMATION

Toxicity:

Assessment of aquatic toxicity: The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Acutely harmful for aquatic organisms. Toxicity to fish: LC50 (96h) 53 mg/l, *Oncorhynchus mykiss* (Fish test acute)

Aquatic invertebrates: EC50 (48h) 121.7 mg/l, *Ceriodaphnia* sp. (Daphnia test acute, static)

Aquatic plants: EC50 (18d) 2,700 mg/l (growth rate), *Chlorella vulgaris* (other). The details of the toxic effect relate to the nominal concentration.

Microorganisms/effect on active sludge: EC50 (0.5h) approx. 1,050 mg/l, activated sludge (OECD Guideline 209, aquatic). The product has not been tested. The statement has been derived from products of a similar structure or composition.

Chronic toxicity to aquatic invertebrates: EC10 (70d), 3.12mg/kg (semi-static)

Soil living organisms: LC50 (14 d) 201 mg/kg, *Eisenia foetida* (artificial soil). The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Other terrestrial non-mammals: Study scientifically not justified.

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Persistence and degradability:

Assessment biodegradation and elimination (H₂O): Inorganic product which cannot be eliminated from water by biological purification process. Can be oxidised to nitrate, or be reduced to nitrogen, by micro-organisms.
Elimination information: Study scientifically not justified.

Bio accumulative potential:

Assessment bioaccumulation potential: Accumulation in organisms is not to be expected.

Bioaccumulation potential: Study scientifically not justified.

Mobility in soil:

Assessment transport between environmental compartments: Adsorption to solid soil phase is not expected.

Results of PBT and vPvB assessment: According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfil the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

Other adverse effects: The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods: Test for use in agriculture. Contact manufacturer.
The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

Contaminated packaging: Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. TRANSPORT INFORMATION

Land transport:

ADR: Not classified as a dangerous good under transport regulations.

RID: Not classified as a dangerous good under transport regulations.

Inland waterway transport:

ADNR: Not classified as a dangerous good under transport regulations.

Sea transport:

IMDG: Not classified as a dangerous good under transport regulations.

Air transport:

IATA/ICAO: Not classified as a dangerous good under transport regulations.

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15. REGULATORY INFORMATION

Chemical safety assessment: Chemical safety assessment has been performed.

Note: The regulatory information given above only indicates the principal regulations specifically Applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Aquatic Acute 3
Acute Tox. 5 (oral)

Source of key data used to compile the data sheet: Supplier information.

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Aquatic Acute 3
Acute Tox. 5 (oral)

Legal disclaimer: The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.

