

SECTION 1: Identification

1.1. Product identifier

Trade name	: AMMONIUM SULFATE
Type of product	: Hygroscopic substance. Preventive measures apply to the substance in dry state only
EC-No.	: 231-984-1
CAS-No.	: 7783-20-2
Product code	: 101145xxx
Formula	: (NH ₄) ₂ SO ₄

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

Recommended uses and restrictions	: For laboratory use only
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1.3. Supplier's details

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 Founders Hill
 1609 Johannesburg - South Africa
 T +27 11 452 1116 - F +27 86 588 0293
techlab@labchem.co.za - www.labchem.co.za

1.4. Emergency telephone number

Emergency number	: +27 11 452 1116
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Acute toxicity (oral), Category 5	H303
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2A	H319
Hazardous to the aquatic environment — Acute Hazard, Category 3	H402
Full text of H statements : see section 16	

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS-ZA) :



GHS07

Signal word (GHS-ZA)	: Warning
Hazard statements (GHS-ZA)	: H303 - May be harmful if swallowed H315 - Causes skin irritation. H319 - Causes serious eye irritation. H402 - Harmful to aquatic life
Precautionary statements (GHS-ZA)	: P264 - Wash hands, forearms and face thoroughly after handling. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P302+P352 - IF ON SKIN: Wash with plenty of water. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 - Call a POISON CENTER or doctor if you feel unwell. P321 - Specific treatment (see supplemental first aid instruction on this label). P332+P313 - If skin irritation occurs: Get medical advice/attention. P337+P313 - If eye irritation persists: Get medical advice/attention. P362+P364 - Take off contaminated clothing and wash it before reuse. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects	: Harmful if swallowed,Causes skin irritation,Causes serious eye irritation,Harmful to aquatic life
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AMMONIUM SULFATE

Safety Data Sheet

According to SANS 10234:2019 and SANS 11014:2010

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance identification codes: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
ammonium sulphate (Main constituent)	(CAS-No.) 7783-20-2	≥ 98.5	Acute Tox. 5 (Oral), H303 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Aquatic Acute 3, H402

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice. Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Soap may be used. Do not apply (chemical) neutralizing agents without medical advice. Take victim to a doctor if irritation persists. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice. Take victim to an ophthalmologist if irritation persists. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth with water. Do not apply (chemical) neutralizing agents without medical advice. Call Poison Information Centre (www.big.be/antigif.html). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Rinse mouth. 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	: AFTER INHALATION OF DUST: Dry/sore throat. Coughing. ON CONTINUOUS EXPOSURE/CONTACT: Irritation of the respiratory tract.
Symptoms/effects after skin contact	: Red skin. Irritation.
Symptoms/effects after eye contact	: Slight irritation. Eye irritation.
Symptoms/effects after ingestion	: Vomiting. Nausea. Diarrhoea.
Chronic symptoms	: No effects known.
Potential adverse human health effects and symptoms	: Practically non-toxic if swallowed (LD50 oral 2000/5000 mg/kg). Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). Not irritant to skin. Slightly harmful by inhalation. Slightly irritant to eyes.

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	: Adapt extinguishing media to the environment for surrounding fires. Water spray. Dry powder. Foam.
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5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".
Hazardous decomposition products in case of fire	: On burning: release of toxic and corrosive gases/vapours (nitrous vapours, sulphur oxides).

5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

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According to SANS 10234:2019 and SANS 11014:2010

6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Reactivity hazard: compressed air/oxygen apparatus. Reactivity hazard: gas-tight suit.
- Emergency procedures : Ventilate spillage area. Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation. Avoid contact with skin and eyes.

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.

6.3. Methods and material for containment and cleaning up

- For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. If reacting: dilute toxic gas/vapour with water spray. Take account of toxic/corrosive precipitation water. Collect spillage.
- Methods for cleaning up : Mechanically recover the product. Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
- Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Keep container tightly closed. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Observe normal hygiene standards. Wash contaminated clothing before reuse. 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 : Store in a well-ventilated place. Keep cool.
- Storage area : Store in a dry area. Meet the legal requirements.
- Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. (strong) bases. metals. water/moisture.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: paper. wood. textile. MATERIAL TO AVOID: copper. zinc. bronze.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

- Materials for protective clothing : GIVE GOOD RESISTANCE: butyl rubber. neoprene. PVC. GIVE LESS RESISTANCE: polyethylene. styrene-butadiene rubber. nitrile rubber/PVC
- Hand protection : Gloves
- Eye protection : Safety glasses. In case of dust production: protective goggles. Safety glasses
- Skin and body protection : Protective clothing
- Respiratory protection : Dust production: dust mask with filter type P1

Personal protective equipment symbol(s):



8.4. Exposure limit values for the other components

No additional information available

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According to SANS 10234:2019 and SANS 11014:2010

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline solid. Powder.
Molecular mass	: 132.16 g/mol
Colour	: Colourless-white. Unpurified: grey-brown.
Odour	: Odourless.
Odour threshold	: No data available
pH	: 5.5 (1.3 %)
pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: Not applicable (decomposes)
Freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: > 280 °C
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: < 0.01 hPa (25 °C)
Vapour pressure at 50 °C	: No data available
Relative vapour density at 20 °C	: Not applicable
Relative density	: 1.77 (25 °C)
Relative density of saturated gas/air mixture	: No data available
Density	: 1770 kg/m ³
Relative gas density	: No data available
Solubility	: Soluble in water. Water: 76.7 g/100ml (25 °C)
Partition coefficient n-octanol/water (Log Pow)	: -5.1 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
Partition coefficient n-octanol/water (Log Kow)	: 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
Lower explosive limit (LEL)	: No data available
Upper explosive limit (UEL)	: No data available

9.2. Other information

Minimum ignition energy	: Not applicable
SADT	: Not applicable
VOC content	: Not applicable (inorganic)
Other properties	: Hygroscopic. Acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with (strong) oxidizers: (increased) risk of fire/explosion.

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

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

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Violent exothermic reaction with (some) bases: release of toxic and corrosive gases/vapours (ammonia, sulphur oxides). On heating: release of toxic/corrosive/combustible gases/vapours (ammonia).

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According to SANS 10234:2019 and SANS 11014:2010

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: May be harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

AMMONIUM SULFATE (7783-20-2)	
LD50 oral rat	4250 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 7 day(s))
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 434: Acute Dermal Toxicity - Fixed Dose Procedure, Rat, Male / female, Experimental value, Dermal, 14 day(s))

Skin corrosion/irritation	: Causes skin irritation. pH: 5.5 (1.3 %)
Serious eye damage/irritation	: Causes serious eye irritation. pH: 5.5 (1.3 %)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Practically non-toxic if swallowed (LD50 oral 2000/5000 mg/kg). Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). Not irritant to skin. Slightly harmful by inhalation. Slightly irritant to eyes.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008. Harmful to aquatic life.
Ecology - air	: Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Slightly harmful to crustacea. Harmful to fishes. May cause eutrophication. Not harmful to algae. No significant hydrolysis.
Hazardous to the aquatic environment, short-term (acute)	: Harmful to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

AMMONIUM SULFATE (7783-20-2)	
LC50 fish 1	53 mg/l (96 h, Oncorhynchus mykiss, Fresh water)
EC50 Daphnia 1	169 mg/l (48 h, Daphnia magna, Static system, Fresh water)
Partition coefficient n-octanol/water (Log Pow)	-5.1 (Experimental value, Equivalent or similar to OECD 107, 25 °C)

12.2. Persistence and degradability

AMMONIUM SULFATE (7783-20-2)	
Persistence and degradability	Biodegradability in water: no data available.

12.3. Bioaccumulative potential

AMMONIUM SULFATE (7783-20-2)	
Partition coefficient n-octanol/water (Log Pow)	-5.1 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

AMMONIUM SULFATE (7783-20-2)	
Mobility in soil	No additional information available
Partition coefficient n-octanol/water (Log Pow)	-5.1 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Other adverse effects

Ozone	: Not classified
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According to SANS 10234:2019 and SANS 11014:2010

Other adverse effects : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Do not discharge into surface water. Remove waste in accordance with local and/or national regulations. Remove to an authorized dump. Precipitate/make insoluble.
Additional information : Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
Not regulated for transport		
14.2. Proper Shipping Name		
Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable
14.4. Packing group		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available		

14.6. Special precautions for user

- SANS

Transport regulations (UN) : Not subject

- IMDG

Transport regulations (IMDG) : Not subject

- IATA

Transport regulations (IATA) : Not subject

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 national regulations specific for the product

Regulatory reference : SANS 10234:2008; SANS 11014:2010; SANS 10228:2012; SANS 10229:2010; SANS 10232(1,2,4), SANS 10231:2018; Occupational Health and Safety Act 85 of 1993; National Road Traffic Act 93 of 1996.

SECTION 16: Other information

Issue date : 02/07/2020

Revision date : 02/07/2025

Full text of H-statements:

H303	May be harmful if swallowed
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H402	Harmful to aquatic life

SDS South Africa

The data provided in this Safety Data Sheet (SDS) is correct to the best of our knowledge. The data relates to the specific product as named and is intended as a guide to the safe handling of the product in all its facets. The data may no longer be valid if the product is used in any process or in combination with other products. This SDS is not a quality specification nor any form of guarantee.