NeuAG
Growing Together

NEUAG LLC

Safety Data Sheet
Ammonium Sulfate

SECTION 1: Identification

1.1 GHS Product identifier

Product name	Ammonium Sulfate

1.2 Other means of identification

Ammonium Sulfate Coarse, Ammonium Sulfate Standard, Ammonium Sulfate Granular, NeuAG Spray Grade Ammonium Sulfate, NeuAG Industrial Ammonium Sulfate

1.3 Recommended use of the chemical and restrictions on use

Agricultural; chemical; intermediate; process chemical; fire extinguishing compounds; laboratory chemicals

1.4 Supplier's details

Name	NeuAG LLC
Address	695 Flag Lake Drive Clute TX 77531 USA
Telephone	(979)500-6130

1.5 Emergency phone number

CHEMTREC 1-800-424-9300/+1 703-527-3887

SECTION 2: Hazard identification

General hazard statement

This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Eye damage/irritation, Cat. 2B

2.2 GHS label elements, including precautionary statements

Pictogram

Signal word	**Warning**
Hazard statement(s)	
H320	Causes eye irritation
Precautionary statement(s)	
P264	Wash hand and forearms thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a doctor if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P501	Dispose of contents/container according to local regulations

SECTION 3: Composition/information on ingredients

3.1 Substances

Components

1. Ammonium Sulfate	
Concentration	99.2 - 99.5 % (weight)
CAS no.	7783-20-2

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Remove contaminated clothing
If inhaled	After inhalation of dust. Fresh air. If difficulties occur: Seek medical attention. After inhalation of decomposition products: Keep patient calm, remove to fresh air, seek medical attention.
In case of skin contact	Wash thoroughly with soap and water
In case of eye contact	Wash affected eyes for at least 15 minutes under running water with eyelids held open. Seek medical attention.
If swallowed	Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

4.2 Most important symptoms/effects, 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.

4.3 Indication of immediate medical attention and special treatment needed, if necessary
Note to physician
Treatment: After inhalation of decomposition products: Pulmonary odema

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Carbon dioxide, water spray

5.2 Specific hazards arising from the chemical
See SDS section 7 - Handling and storage.
Ammonia, can be emitted at 235 °C
Nitrogen oxides, Sulfur oxides
The substances/groups of substances mentioned can be released in case of fire.

5.3 Special protective actions for fire-fighters
Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

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.
Impact Sensitivity: Based on the chemical structure there is no shock-sensitivity

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Do not get in eyes, on skin, or on clothing. Take appropriate protective measures.

6.2 Environmental precautions
Do not discharge into drains/surface waters/groundwater. Retain and dispose of contaminated wash water

6.3 Methods and materials for containment and cleaning up
For large amounts: Sweep/shovel up, return to stock if not contaminated
For residues: Sweep/shovel up. Rinse away with water.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Use in accordance with good industrial hygiene and safety practices. Store in cool, dry, well-ventilated area away from incompatible substances.
Protection against fire and explosion:
The substance/product is non-combustible

7.2 Conditions for safe storage, including any incompatibilities

Segregate from alkalis and alkalizing 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

SECTION 8: Exposure controls/personal protection

8.2 Appropriate engineering controls

No substance specific occupational exposure limits known.
Advice on system design: Ensure adequate ventilation.

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

Pictograms

Eye/face protection
Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles).

Skin protection
Wear chemical resistant protective gloves., e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other, Consult with glove manufacturer for testing data.

At the end of the shift the skin should be cleaned and skin-care agents applied.

Body protection
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Breathing protection if breathable aerosols/dust are formed. Wear a NIOSH-certified (or equivalent) particulate respirator.

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Solid
Appearance	Crystalline
Color	White
Odor	Odorless
Odor threshold	N/A
pH	approximately 5
Melting point/freezing point	approx. 350 °C The substance / product decomposes.
Boiling point or initial boiling point and boiling range	N/A
Flash point	N/A
Evaporation rate	N/A
Flammability	Not flammable
Lower and upper explosion limit/flammability limit	N/A
Vapor pressure	0.0000001 hPa (25 °C) Literature data.
Relative vapor density	N/A
Density and/or relative density	1.77
Solubility	764 g/l (20C) in water
Partition coefficient n-octanol/water (log value)	N/A
Auto-ignition temperature	N/A
Decomposition temperature	> 235 C
Kinematic viscosity	N/A
Explosive properties	N/A

Particle characteristics
> 1000 um

Further safety characteristics (supplemental)
Bulk density: 1,000 kg/m3
(20 °C)

SECTION 10: Stability and reactivity

10.1 Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.
Oxidizing properties:
Based on its structural properties the product is not classified as oxidizing. (other)

10.2 Chemical stability
The product is stable if stored and handled as prescribed/indicated.

10.3 Possibility of hazardous reactions
Evolution of ammonia under influence of alkaline or acid compounds. Reacts with alkalis and nitrites.

10.4 Conditions to avoid
Protect from atmospheric humidity

10.5 Incompatible materials
Alkaline reactive substances, nitrites

10.6 Hazardous decomposition products
Ammonia
No applicable information available.
Thermal decomposition: > 235 °C
To avoid thermal decomposition, do not overheat.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Low toxicity after single ingestion.
Oral
Type of value: LD50
Species: rat (male/female)
Value: 4,250 mg/kg (BASF-Test)

Skin corrosion/irritation
Assessment of irritating effects: Not irritating to the skin.
Dermal
Type of value: LD50
Species: rat (male/female)
Value: > 2,000 mg/kg
Literature data.

Serious eye damage/irritation
Direct contact may cause local irritation

Respiratory or skin sensitization
Skin sensitizing effects were not observed in animal studies. Product has not been tested.

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. Genetic toxicity in vitro:
OECD Guideline 471 Ames-test with and without metabolic activation negative
OECD Guideline 473 Cytogenetic assay without metabolic activation negative Literature data.
OECD Guideline 476 HGPRT assay CHO cells:with and without metabolic activation negative

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.

Summary of evaluation of the CMR properties
The product has not been tested. The statement has been derived from the properties of the individual components.

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

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

Aspiration hazard
not applicable

SECTION 12: Ecological information

Toxicity
Aquatic 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 (96 h) 53 mg/l, Oncorhynchus mykiss (Fish test acute)

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

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

Chronic toxicity to aquatic invertebrates
EC10 (70 d) 3.12 mg/l (semistatic)

Soil living organisms

Toxicity to soil dwelling 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.

Persistence and degradability
Assessment biodegradation and elimination (H2O)
Inorganic product which cannot be eliminated from water by biological purification processes. Can be oxidized to nitrate, or be reduced to nitrogen, by microorganisms.

Elimination information

Study scientifically not justified

Bioaccumulative 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.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Dispose of in accordance with national, state and local regulations.

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

Sewage disposal
Not recommended to wash down drain

SECTION 14: Transport information

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Toxic Substances Control Act (TSCA) Inventory
Released/listed

SARA 311/312 Hazards
No SARA hazards.

Pennsylvania Right To Know Components
Chemical name: Sulfuric acid diammonium salt
CAS number: 7783-20-2

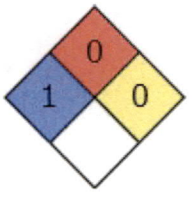
15.2 Chemical Safety Assessment

Aquatic Acute	3	Hazardous to the aquatic environment - acute
Acute Tox.	5 (oral)	Acute toxicity

HMIS Rating

Ammonium Sulfate	
HEALTH	* 1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

NFPA Rating



SECTION 16: Other information

16.1 Further information/disclaimer

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END OF DATA SHEET

16.2 Preparation information

EHS Manager of NeuAG, LLC