Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification:
Product Description: Ammonium sulfate
Synonyms: Diammonium sulfate; Sulfuric acid, diammonium salt
CAS-No: 7783-20-2
EC-No.: 231-984-1
Molecular Formula: (NH₄)₂SO₄
REACH Registration No: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the Registration is envisaged for a later registration deadline.

1.2. Relevant identified uses of the substance or mixture and uses advised against:
Recommended Use: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet:

- Company
  Finar Limited
  184-186/P, Chacharwadi Vasna,
  Sarkhej-Bavla Highway,
  Ta.: Sanand, Dist.: Ahmedabad,
  Email: info@finarchemicals.com
  Web: www.finarchemicals.com

- E-Mail Address
  safety.finar@aceto.com; info.finar@aceto.com

1.4 Emergency Telephone Number:
- For Emergency contact on: +91 - 2717 - 616 717
SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture:
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2. Label Elements:
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.3. Other Hazards:
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances: Ammonium sulphate

3.2. Mixtures:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>EC-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium sulphate</td>
<td>7783-20-2</td>
<td>231-984-1</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures:

- **General advice**
  Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

- **If inhaled**
  If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

- **If Contact with skin**
  Take off immediately all contaminated clothing. Rinse skin with water/shower.

- **In case of eye contact**
  Rinse thoroughly with plenty of water for at least 15 minutes, remove contact lenses and consult a physician.
If swallowed
Immediately make victim drink water (two glasses at most). Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed:
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3. Indication of any immediate medical attention and special treatment needed:
No information available

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media:
Suitable Extinguishing Media- Use extinguishing measures that are appropriate to local Circumstances and the surrounding environment.

Unsuitable extinguishing media- For this substance/mixture no limitations of extinguishing agents are given.

5.2. Special hazards arising from the substance or mixture:
Nitrogen oxides (NOx)
Hydrogen chloride gas
Not combustible.
Ambient fire may liberate hazardous vapours.

5.3. Advice for firefighters:
Wear self-contained breathing apparatus for fire fighting if necessary.

5.4 Further Information:
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:
Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.
6.2. Environmental precautions:
Do not let product enter drains.

6.3. Methods and material for containment and cleaning up:
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dust.

6.4. Reference to other sections:
For disposal see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:
Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation.

7.2. Conditions for safe storage, including any incompatibilities:
Keep containers tightly closed in a dry and well-ventilated place. Incompatible Materials. Strong oxidizing agents.

7.3. Specific end use(s):
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters
Components with workplace control parameters

8.2. Exposure Controls:
Appropriate Engineering Controls:
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.
Personal Protective Equipment:

Eye & Face Protection:
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as OSHA, NIOSH (US) or EN 166(EU).

Hand Protection -
This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under Conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g., KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under Conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g., KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatril® L

- Other Protective equipment -
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

- Respiratory Protection -
Required when dust is generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Recommended Filter type: Filter type P1

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

**Environmental Exposure Controls**

Do not let product enter drains.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties:

- **Appearance:** Colorless
- **Physical State:** Solid
- **Odor:** Odorless
- **Odor Threshold:** Not applicable
- **pH:** 5.0 – 6.0 at 132 g/l at 25 °C
- **Melting Point:** 280 °C
- **Critical Temperature:** No data available
- **Vapor Pressure:** < 0.1 hPa at 25 °C
- **Autoignition Temperature:** No data available
- **Vapor Pressure:** No data available
- **Bulk Density:** ca.850 kg/m3
- **Viscosity, dynamic:** No data available
- **Water/Oil Dist. Co ef.:** Not applicable for inorganic substances
- **Ionicity (in Water):** No data available
- **Lower Explosion Limit:** No data available
- **Upper Explosion Limit:** No data available
- **Boiling Point/Range:** Not applicable
- **Flash Point:** No data available
- **Specific Gravity:** No data available
- **Water Solubility:** Soluble
9.2. Other information:
- Molecular Formula: (NH₄)₂SO₄
- Molecular Weight: 132.13 g/mol

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:
No data available

10.2. Chemical stability:
The product is chemically stable under standard ambient conditions (room temperature).

10.3. Possibility of hazardous reactions:
- Exothermic reaction with: chlorates with heat nitrates with Heat.
- Risk of explosion with: chlorates with Acids nitrates with Potassium nitrates with Acids nitrites
  sodium hypochlorite
- Generates dangerous gases or fumes in contact with: alkalines
- Possible formation of: Ammonia

10.4. Conditions to avoid:

10.5. Incompatible materials:
- Strong oxidizing agents

10.6. Hazardous decomposition products:
- In the event of fire: see section 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:
- Acute Oral toxicity:
  - LD₅₀ Oral - Rat - male and female - 4.250 mg/kg
  (OECD Test Guideline 401)
  - LD₅₀ Dermal – Rat - male and female - > 2.000 mg/kg
  (OECD Test Guideline 434)

- Skin corrosion/irritation:
  - Skin - Rabbit
Result: No skin irritation - 20 h
(ECHA)

**Serious eye damage/eye irritation:**

Eyes - Rabbit
Result: No Eye irritation
Remarks: (ECHA)

**Respiratory or skin sensitization:**

Maximization Test - Guinea pig
Result: negative
(US-EPA)

**Germ cell mutagenicity:**

Test Type: Ames test
Test system: S. typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Human lymphocytes
Metabolic activation: without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster lung cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Test Type: Micronucleus test
Species: Mouse
Cell type: Bone marrow
Application Route: Intraperitoneal
Remarks: (ECHA)
<table>
<thead>
<tr>
<th>Product Name</th>
<th>Ammonium sulfate</th>
</tr>
</thead>
</table>

**Carcinogenicity:**
No data available

**Reproductive toxicity:**
No data available

**Teratogenicity:**
No data available

**Specific target organ toxicity - single exposure:**
No data available.

**Specific target organ toxicity - repeated exposure:**
No data available

**Aspiration hazard:**
No data available

11.2 **Further Information:**
Repeated dose toxicity - Rat - male - Oral - NOAEL (No observed adverse effect level) - 256 mg/kg
RTECS: BS4500000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
The following applies to ammonium salts in general: after swallowing: local irritation symptoms, nausea, vomiting, diarrhea. Systemic effect: after the uptake of very large quantities: drop in blood pressure, collapse, CNS disorders, spasms, narcotic conditions, respiratory paralysis, hemolysis.
Handle in accordance with good industrial hygiene and safety practice.

### SECTION 12: ECOLOGICAL INFORMATION

12.1 **Toxicity:**

<table>
<thead>
<tr>
<th>Toxicity to fish</th>
<th>LC50 - Oncorhynchus mykiss (rainbow trout) - 53 mg/l - 96 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remarks: (ECHA)</td>
<td></td>
</tr>
<tr>
<td>Toxicity to daphnia</td>
<td>Static test EC50 - Ceriodaphnia (water flea) - 121,7 mg/l - 48 h</td>
</tr>
<tr>
<td>and other aquatic</td>
<td>(US-EPA)</td>
</tr>
<tr>
<td>Invertebrates</td>
<td></td>
</tr>
<tr>
<td>Toxicity to bacteria</td>
<td>Static test EC50 - activated sludge - 1.618 mg/l - 30 min</td>
</tr>
<tr>
<td></td>
<td>(OECD Test Guideline 209)</td>
</tr>
</tbody>
</table>
12.2 Persistence and degradability:
The methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulate potential:
No data available

12.4 Mobility in soil:
No data available

12.5 Results of PBT and vPvB assessment:
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects:
Biological effects:
Fertilizing effect possible.
Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods:
Product
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Contaminated packaging
Dispose of as unused product.
SECTION 14: Transport information

<table>
<thead>
<tr>
<th></th>
<th>Land transport (ADR/RID)</th>
<th>Air transport (IATA)</th>
<th>Sea transport (IMDG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1 UN number</td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.2 Proper shipping name</td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.3 Class</td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.5 Environmentally hazardous</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.6 Special precautions for user</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</td>
<td>Not Relevant</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorizations and/or restrictions on use

National legislation

Seveso III: Directive 2012/18/EU of the European: Not applicable


15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

Training advice:

Provide adequate information, instruction and training for operators.

References: Not available
Safety Data Sheet

| Product Name | Ammonium sulfate |

Created: 03/03/2022

Disclaimer:

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Finar Limited be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Finar Limited has been advised of the possibility of such damages.