

Product Name	<u>Ammonium sulfate</u>
--------------	-------------------------

## **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:**  $(\text{NH}_4)_2\text{SO}_4$

**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, Used as Bio Pharma Ingredient

### **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](mailto:info@finarchemicals.com)  
Web: [www.finarchemicals.com](http://www.finarchemicals.com)
- **E-Mail Address** [safety.finar@actylis.com](mailto:safety.finar@actylis.com); [info.finar@actylis.com](mailto:info.finar@actylis.com)

### **1.4 Emergency Telephone Number:**

- For Emergency contact on: +91 - 2717 - 616 717

Product Name	<u>Ammonium sulfate</u>
--------------	-------------------------

## **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:**

Component	CAS-No	EC-No.	Weight %
Ammonium sulphate	7783-20-2	231-984-1	>95

## **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:**

<b>Product Name</b>	<b><u>Ammonium sulfate</u></b>
---------------------	--------------------------------

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 (NO<sub>x</sub>)

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.

Product Name	<u>Ammonium sulfate</u>
--------------	-------------------------

## **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](http://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

<b>Product Name</b>	<b><u>Ammonium sulfate</u></b>
---------------------	--------------------------------

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](http://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

<b>Product Name</b>	<b><u>Ammonium sulfate</u></b>
---------------------	--------------------------------

- **Autoignition Temperature:** No data available
- **Volatility:** No data available
- **Bulk Density:** ca.850 kg/m<sup>3</sup>
- **Viscosity, dynamic:** No data available
- **Water/Oil Dist. Co eff.:** 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:** (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>
- **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:

Incompatible products. Excess heat. Avoid dust formation.

#### 10.5. Incompatible materials:

Strong oxidizing agents

#### 10.6. Hazardous decomposition products:

In the event of fire: see section 5

<b>Product Name</b>	<b><u>Ammonium sulfate</u></b>
---------------------	--------------------------------

## **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

<b>Product Name</b>	<b><u>Ammonium sulfate</u></b>
---------------------	--------------------------------

Test Type: Micronucleus test  
Species: Mouse  
Cell type: Bone marrow  
Application Route: Intraperitoneal  
Remarks: (ECHA)

**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:**

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 53 mg/l - 96 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic Invertebrates	Static test EC50 - Ceriodaphnia (water flea) - 121,7 mg/l - 48 h (US-EPA)



## Safety Data Sheet

<b>Product Name</b>	<b>Ammonium sulfate</b>
---------------------	-------------------------

Toxicity to bacteria                      Static test EC50 - activated sludge - 1.618 mg/l - 30 min  
(OECD Test Guideline 209)

### 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

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
<b>14.1 UN number</b>	Not dangerous goods		
<b>14.2 Proper shipping name</b>	Not dangerous goods		
<b>14.3 Class</b>	Not dangerous goods		
<b>14.4 Packing group</b>	Not dangerous goods		
<b>14.5 Environmentally hazardous</b>	No		

## Safety Data Sheet

<b>Product Name</b>	<b><u>Ammonium sulfate</u></b>
---------------------	--------------------------------

<b>14.6 Special precautions for user</b>	No data available
<b>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not Relevant

### **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

Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

#### **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

**Created:** 03/03/2022

**Updated On:** 26/09/2023

#### **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.