Product Name	Ammonium bicarbonate

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

1.1 Product identification:

Product Description: Ammonium bicarbonate

Synonyms: Ammonium hydrogen carbonate

CAS-No: 1066-33-7

EC-No.: 213-911-5

Molecular Formula: NH_4HCO_3

REACH Registration No: A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, 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, Manufacturing 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-382110, Gujarat, India.
  Web: www.finarchemicals.com
- **E-Mail Address** — safety.finar@actylis.com; info.finar@actylis.com

1.4 Emergency Telephone Number:

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

Product Name	Ammonium bicarbonate

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 4), H302

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label Elements:

Labeling according Regulation (EC) No 1272/2008

Pictogram

Signal word: Warning

Hazard statement(s)

H302 Harmful if swallowed

Precautionary statement(s)

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

P501 Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard information (EU)

None

Reduced labelling (≤125 ml)

Pictogram

Signal word: Warning

Hazard statement(s): None

Precautionary statement(s): None

Supplemental Hazard information (EU): None

2.3 Other Hazards:

None Known

Product Name	Ammonium bicarbonate

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances: Ammonium bicarbonate

3.2 Mixtures:

Component	CAS-No	EC-No.	Weight %
Ammonium bicarbonate	1066-33-7	213-911-5	<= 100 %

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

- **General advice**
  Consult a physician. Show this material 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 case of skin contact**
  Wash off with soap and plenty of water. Consult a physician.
- **In case of eye contact**
  Flush eyes with water as a precaution.
- **If swallowed**
  Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed:

No information available

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-

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media-

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

5.2 Special hazards arising from the substance or mixture:

Carbon oxides

Nitrogen oxides (NOx)

Not combustible

Fire may cause evolution of:

Nitrogen oxides

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters:

In the event of fire, wear self-contained breathing apparatus.

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: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

6.2 Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up:

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections:

For disposal see Sections 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

Advice on safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid dust formation. Avoid ingestion and inhalation. Do not get in eyes, on skin, or on clothing.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities:

Storage conditions

Keep container tightly closed in a dry and well-ventilated place.

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:

Ingredients 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.

Personal Protective Equipment:

Protective clothing needs to be selected specifically for the workplace, depending on concentration and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

- **Eye & Face Protection-**

  Safety Glasses

- **Hand Protection -**

  Full Contact: -

  Glove Material : Nitrile Rubber
  Glove thickness : 0.11 mm
  Break through time: 480 min

  Splash Contact: -

  Glove material : Nitrile Rubber
  Glove thickness : 0.11 mm
  Break through time: 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 898 Butoject® (full contact), KCL 706 Lapren® (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

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.

- **Body Protection-**

  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 dusts are generated.

  Recommended Filter type: Filter ABEK - P2

  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-**

  Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

- **Physical State:** Solid
- **Appearance:** White
- **Odor:** Ammonia - like
- **Odor Threshold:** No data available
- **pH:** 7.0 - 8.5
- **Melting Point:** 60 °C
- **Initial Boiling Point/Range:** No data available
- **Flash Point:** No data available
- **Evaporation Rate:** No data available
- **Lower Explosion Limit:** No data available
- **Upper Explosion Limit:** No data available
- **Vapor Pressure:** 67.1 hPa at 20 °C
- **Vapor Density:** 2.73 (Air = 1.0)
- **Specific Gravity / Relative Density:** 1.580 g/cm3 at 20°C
- **Water Solubility:** 79.1 g/l at 20 °C - completely soluble
- **Partition Co-efficient: n-octanol/Water:** No data available
- **Auto-Ignition Temperature:** No data available
- **Decomposition Temperature:** No data available

- **Viscosity, Dynamic:** No data available
- **Viscosity, Kinematic:** No data available
- **Water/Oil Dist. Co eff.:** No data available
- **Molecular Weight:** 79.06 g/mol

9.2 Other information:

Bulk Density: 850 kg/m^3

Molecular Formula: NH_4HCO_3

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No data available

10.2 Chemical stability:

Stable under recommended storage conditions

10.3 Possibility of hazardous reactions:

Violent reactions possible with:

Nitrates

Nitrites

Acids

Alkaline

10.4 Conditions to avoid:

Avoid dust formation. Incompatible products. Temperatures above 35°C.

10.5 Incompatible materials:

Oxidizing agents, Strong acids, Nitrites, Nitrates, Strong oxidizing agents

10.6 Hazardous decomposition products:

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)

Other decomposition products - No data available

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 – 1.576 mg/kg

(OECD Test Guideline 401)

Acute inhalation toxicity

LC50 Inhalation - Rat - Male and Female – 4.5 h - > 4.74 mg/l

Remarks: The value is given in analogy to the following substances: Sodium Hydrogen carbonate

Acute dermal toxicity

LD50 Dermal - Rat - Male and Female - > 2.000 mg/kg

(OECD Test Guideline 434)

Remarks: The value is given in analogy to the following substances: Ammonium Sulphate

Skin corrosion / irritation

Skin - Reconstructed human Epidermis (RhE)

Result: No skin Irritation

(OECD Test Guideline 431)

Serious eye damage / Eye irritation

Eyes: Rabbit

Result: No eye irritation

(US-EPA)

Remarks: The value is given in analogy to the following substances: Sodium Hydrogen carbonate

Respiratory or skin Sensitisation

Sensitisation test: - Guinea pig

Result: Negative

Remarks: The value is given in analogy to the following substances: Ammonium Chloride

Germ cell mutagenicity

Test Type: Ames Test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: Negative

Remarks: (ECHA)

Test Type: In vivo micronucleus test

Species: Mouse

Application Route: Intraperitoneal

Method: OECD Test Guideline 474

Mouse - Male

Result: Negative

Remarks: The value is given in analogy to the following substances: Ammonium Chloride

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

Specific target organ toxicity - single exposure

This information is not available.

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further Information:

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Toxicity to fish

LC50 - Oncorhynchus mykiss (rainbow trout) - 173 mg/l - 96 h

Remarks: (ECOTOX Database)

LC50 - Oncorhynchus mykiss (rainbow trout) - 98.3 mg/l - 96 h

Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates

No data available

Toxicity to algae

No data available

12.2 Persistence and degradability:

The methods for determining the biological degradability 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:

Harmful to aquatic life.

Avoid release to the environment.

Product Name	Ammonium bicarbonate

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Product:

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging:

Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
14.1 UN number	N/A		
14.2 Proper shipping name	N/A		
14.3 Class	N/A		
14.4 Packing group	N/A		
14.5 Environmentally Hazardous	No		
14.6 Special precautions for user	N/A		
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not classified as dangerous in the meaning of transport regulations.			

SECTION 15: REGULATORY INFORMATION

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

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

National Legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : Not Applicable

15.2 Chemical safety assessment:

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

Product Name	Ammonium bicarbonate

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.

Training advice

Provide adequate information, instruction and training for operators.

References: Not available

Created: 12/10/2021

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Disclaimer:

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