

Material Safety Data Sheet

AMMONIUM BICARBONATE

Section 1 - Chemical Product and Company Identification

MSDS Name: **AMMONIUM BICARBONATE**

Synonyms: Ammonium hydrogen carbonate.

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	EC no	EINECS/ELINCS
1066-33-7	AMMONIUM BICARBONATE	213-911-5	NA

Section 3 - Hazards Identification

3.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

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

3.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Warning

Hazard statement(s)

H302

Harmful if swallowed.

Precautionary statement(s)

P301 + P312 + P330

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Rinse mouth.

Supplemental Hazard
Statements

None.

3.3 Other hazards

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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 4 - First Aid Measures

4.1 Description of first aid measures

General advice

Consult a physician. 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.

In 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

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 data available.

Section 5 - Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NOx)

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

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For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials 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 section 13.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

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

Heat
sensitive.

Storage class (TRGS 510): Non Combustible Solids

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

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

Eye/face protection

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

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,4 mm

Break through time: 230 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

Section 9 - Physical and Chemical Properties

- a) Appearance Form: Crystalline, Color: White
- b) Odor: no data available.
- c) Odor Threshold: no data available.
- d) pH: 7.0 - 8.5 at 79.1 g/l at 25 °C.
- e) Melting point/freezing point: Melting point/range: 60 °C.
- f) Initial boiling point and boiling range: no data available.
- g) Flash point: - not applicable.
- h) Evaporation rate: no data available.
- i) Flammability (solid, gas): Does not sustain combustion.
- j) Upper/lower flammability or explosive limits: no data available.
- k) Vapour pressure: 50.3 mmHg at 20 °C.
385 mmHg at 50 °C
- l) Vapour density: 2.73 - (Air = 1.0).
- m) Relative density: 1.580 g/cm³.
- n) Water solubility: 79.1 g/l at 20 °C - completely soluble.
- o) Partition coefficient: log Pow: -2.4.

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- p) Auto ignition temperature: no data available.
- q) Decomposition temperature: no data available.
- r) Viscosity: no data available.
- s) Explosive properties: no data available
- t) Oxidizing properties: no data available.

9.2 Other safety information:

Bulk density	850 kg/m ³
Relative vapour density	2.73 - (Air = 1.0)

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

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Iron oxides

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 toxicity

LD50 Oral - Rat - 1,576 mg/kg (Ammonium hydrogencarbonate)
(OECD Test Guideline 401)

Skin corrosion/irritation

Skin - EPISKIN Human Skin Model Test (Ammonium hydrogencarbonate)
Result: No skin irritation
(OECD Test Guideline 431)

Serious eye damage/eye irritation

Eyes - Rabbit (Ammonium hydrogencarbonate)
Result: Mild eye irritation
(Read-across (Analogy))

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Respiratory or skin sensitisation

Maximisation Test - Guinea pig(Ammonium hydrogencarbonate)

Did not cause sensitisation on laboratory animals.

(Read-across (Analogy))

Germ cell mutagenicity

No data available(Ammonium hydrogencarbonate)

Result: Not mutagenic in Ames Test

OECD Test Guideline 474(Ammonium hydrogencarbonate)

Mouse

Result: negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available(Ammonium hydrogencarbonate)

Specific target organ toxicity - single exposure

No data available(Ammonium hydrogencarbonate)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available(Ammonium hydrogencarbonate)

Additional Information

RTECS: BO8600000

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

Section 12 - Ecological Information

12.1 Toxicity

Toxicity to fish

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

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available(Ammonium hydrogencarbonate)

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic

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(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.

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 chem scrubber.

Contaminated packaging

Dispose of as unused product.

Section 14 - Transport Information

14.1 UN number

ADR/RID: - -

IMDG: - -

IATA: - -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - -

IMDG: - -

IATA: - -

14.4 Packaging group

ADR/RID: - -

IMDG: - -

IATA: - -

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

No data available.

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.

15.2 Chemical safety assessment

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

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Section 16 - Other Information

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

H302 Harmful if swallowed.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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