We create chemistry

Safety Data Sheet
Ammonium bicarbonate N food grade

1. Identification

Product identifier used on the label

Ammonium bicarbonate N food grade

Recommended use of the chemical and restriction on use
Recommended use*: food additive(s)

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Molecular formula: NH(4)HCO(3)
Synonyms: AMMONIUM HYDROGEN CARBONATE Use: Food additive(s)

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Acute Tox.	4 (oral)	Acute toxicity
Aquatic Acute	3	Hazardous to the aquatic environment - acute

Label elements

Pictogram:

Signal Word:
Warning

Hazard Statement:

H302	Harmful if swallowed.
H402	Harmful to aquatic life.

Precautionary Statements (Prevention):

P273	Avoid release to the environment.
P270	Do not eat, drink or smoke when using this product.
P264	Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P301 + P330	IF SWALLOWED: rinse mouth.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.
No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Weight %	Chemical name
1066-33-7	>= 75.0 - <= 100.0%	ammonium hydrogencarbonate

4. First-Aid Measures

Description of first aid measures

If inhaled:
After inhalation of decomposition products: Keep patient calm, remove to fresh air, seek medical attention.

If on skin:
Wash thoroughly with soap and water.

If irritation develops, seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open.

Seek medical attention.

If swallowed:
Rinse mouth immediately and then drink plenty of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Overexposure may cause:, vomiting, shortness of breath, nausea, coughing

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: After inhalation of decomposition products: Pulmonary odema prophylaxis. Treat according to symptoms (decontamination, vital functions), no known specific antidote, administer corticosteroid dose aerosol to prevent pulmonary odema.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, carbon dioxide, foam

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
ammonia, carbon dioxide,
The substances/groups of substances mentioned can be released in case of fire.

Advice 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.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Breathing protection required.

Environmental precautions

This product is regulated by CERCLA ('Superfund').

Methods and material for containment and cleaning up

For residues: Dampen, pick up mechanically and dispose of.

7. Handling and Storage

Precautions for safe handling

No special measures necessary provided product is used correctly. Avoid dust formation. Ensure suitable air extract/ventilation on process machinery and transportation equipment. Ensure thorough ventilation of stores and work areas. The temperatures which must be avoided are to be considered. Sealed containers should be protected against heat as this results in pressure build-up. Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:
See MSDS section 5 - Fire fighting measures.

Conditions for safe storage, including any incompatibilities

Segregate from nitrites and alkaline substances. Storage and transport only combined with food materials or food additives. Separate from flavoring agents. Segregate from strong acids. Segregate from strong bases.
Do not store with: Sodium nitrate

Further information on storage conditions: Keep container tightly closed and dry. Keep only in the original container in a cool, well-ventilated place. Keep at temperature not exceeding 30 °C.

Storage stability:
Keep container dry.
Protect against moisture.
Protect from temperatures above: 30 °C
Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. Exposure Controls/Personal Protection

No occupational exposure limits known.

Advice on system design:
Provide local exhaust ventilation to control dust.

Personal protective equipment

Respiratory protection:
Breathing protection if gases/vapours are formed. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:
Wear chemical resistant protective gloves., Consult with glove manufacturer for testing data.

Eye protection:
Tightly fitting safety goggles (chemical goggles).

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:
Do not breathe dust. At the end of the shift the skin should be cleaned and skin-care agents applied.

9. Physical and Chemical Properties

Form:	crystalline, powder
Odour:	ammonia-like

Odour threshold:	No applicable information available.	
Colour:	white	
pH value:	7.7 (10 %(m), 20 °C)	
Melting point:	The substance / product decomposes.	
Flash point:	not applicable	
Flammability:	not flammable	(other)
Lower explosion limit:	For solids not relevant for classification and labelling.	
Upper explosion limit:	For solids not relevant for classification and labelling.	
Vapour pressure:	79 mbar (25.4 °C) 526 mbar (50 °C)	
Density:	1.58 g/cm3 (20 °C)	
Bulk density:	approx. 850 kg/m3	
Partitioning coefficient n-octanol/water (log Pow):	-2.4 (25 °C)	
Thermal decomposition:	> 30 °C To avoid thermal decomposition, do not overheat.	
Viscosity, dynamic:	not applicable	
Solubility in water:	220 g/l (20 °C) Literature data.	
Evaporation rate:	The product is a non-volatile solid., negligible	

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Chemical stability
The product is stable if stored and handled as prescribed/indicated. Slow decomposition possible.

Possibility of hazardous reactions
Exothermic reaction. Reacts with nitrates. Reacts with nitrites. Reacts with strong alkalies.

Conditions to avoid
See MSDS section 7 - Handling and storage.
Avoid heat.

Incompatible materials
nitrites, nitrates, strong bases, strong acids

Hazardous decomposition products

Decomposition products:
Hazardous decomposition products: ammonia, carbon dioxide

Thermal decomposition:
> 30 °C
To avoid thermal decomposition, do not overheat.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Of moderate toxicity after single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Oral
Type of value: LD50
Species: rat (male/female)
Value: approx. 1,576 mg/kg

Inhalation
Type of value: LC50
Species: rat (male/female)
Value: > 4.74 mg/l
Exposure time: 4.5 h
An aerosol was tested.
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Dermal
Type of value: LD50
Species: rat (male/female)
Value: > 2,000 mg/kg
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Assessment other acute effects
Assessment of STOT single:
Apart from effects causing lethality, no specific target organ toxicity was observed in experimental studies.

Irritation / corrosion
Assessment of irritating effects: Not irritating to the eyes. Not irritating to the skin. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Skin
Result: non-irritant
Method: OECD Guideline 431

Species: rabbit
Result: non-irritant
Method: other
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Eye

Result: Non corrosive.
Method: HET-CAM test in vitro

Species: rabbit
Result: non-irritant
Method: other
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Sensitization
Assessment of sensitization: Skin sensitizing effects were not observed in animal studies. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition. The chemical structure does not suggest a sensitizing effect.

Guinea pig maximization test
Species: guinea pig
Result: Non-sensitizing.
Method: other
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aspiration Hazard
not applicable

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: Repeated oral uptake of the substance did not cause substance-related effects. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Genetic toxicity
Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.

Carcinogenicity
Assessment of carcinogenicity: The whole of the information assessable provides no indication of a carcinogenic effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Teratogenicity
Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Other Information
development of pulmonary edema

Symptoms of Exposure

Overexposure may cause:, vomiting, shortness of breath, nausea, coughing

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
Acutely harmful for aquatic organisms. 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. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish
LC50 (96 h) 63.4 mg/l, Oncorhynchus mykiss (Fish test acute)

Aquatic invertebrates
EC50 (48 h) 145.6 mg/l, Daphnia magna (Daphnia test acute, static)

Aquatic plants
EC50 (120 h) approx. 1,900 mg/l (growth rate), Chlorella vulgaris (static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

EC50 (18 d) 3,231 mg/l, Chlorella vulgaris (static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Chronic toxicity to fish
EC10 (30 d) 6.3 mg/l, Lepomis macrochirus (Flow through.)

Chronic toxicity to aquatic invertebrates
EC10 (70 d) 3.7 mg/l, Daphnia magna (semistatic)

Toxicity to terrestrial plants

No observed effect concentration (84 d) 749 mg/l
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
DIN 38412 Part 8 aquatic
bacterium/EC10 (16 h): 1,347 mg/l

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.

Assessment of stability in water
According to structural properties, hydrolysis is not expected/probable.

Bioaccumulative potential

Assessment bioaccumulation potential
Accumulation in organisms is not to be expected.

Bioaccumulation potential
Accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments
Study scientifically not justified.
Adsorption to solid soil phase is not expected.

Additional information

Other ecotoxicological advice:
Do not release untreated into natural waters. At the present state of knowledge, no negative ecological effects are expected.

13. Disposal considerations

Waste disposal of substance:
Test for use in agriculture.
Dispose of in accordance with national, state and local regulations.

Container disposal:
Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

Further information
Specific national features of transport regulations must be observed. They are to be found in the shipping documents.

15. Regulatory Information

Federal Regulations

Registration status:

Chemical	TSCA, US	released / listed
Food	TSCA, US	released / exempt

EPCRA 311/312 (Hazard categories): Acute; Chronic

CERCLA RQ	CAS Number	Chemical name
5000 LBS	1066-33-7	ammonium hydrogencarbonate

Reportable Quantity for release: 5,000 lb

State regulations

State RTK	CAS Number	Chemical name
NJ	1066-33-7	ammonium hydrogencarbonate
PA	1066-33-7	ammonium hydrogencarbonate

NFPA Hazard codes:
Health : 1 Fire: 0 Reactivity: 1 Special:

HMIS III rating
Health: 1 Flammability: 0 Physical hazard: 1

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Acute Tox.	4 (oral)	Acute toxicity
Aquatic Acute	3	Hazardous to the aquatic environment - acute

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2016/04/05

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.