



MATERIAL SAFETY DATA SHEET

VITUSA PRODUCTS, INC.

Product: Ammonium Bicarbonate N Food Grade

Version: 3.1

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Revision date 2007/07/02
(30157276/MDS_GEN_US/EN)

1. Substance/preparation and company identification

Company

BASF CORPORATION
100 Campus Drive
Florham Park, NJ 07932

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP

Molecular formula:
Synonyms:

NH₄HCO₃
AMMONIUM BICARBONATE

2. Composition/information on ingredients

CAS Number
1066-33-7

Content (W/W)
> 99.0 %

Chemical name
ammonium hydrogencarbonate

3. Hazard identification

Emergency overview

WARNING: HARMFUL IF SWALLOWED.
INGESTION MAY CAUSE GASTRIC DISTURBANCES.
Prolonged or repeated exposure may cause pulmonary problems.
Avoid contact with the skin, eyes and clothing.
Avoid inhalation of dusts.
Use with local exhaust ventilation.
Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.
Wear NIOSH-certified chemical goggles.
Wear chemical resistant protective gloves.
Wear protective clothing.
Eye wash fountains and safety showers must be easily accessible.

Potential health effects

Primary routes of exposure

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

Acute toxicity:

Harmful if swallowed.

Irritation:

Not irritating to the eyes. Not irritating to the skin. The product has not been tested. The statement has been derived from products of a similar structure and composition.

Potential environmental effects

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.

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4. 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.

Note to physician

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

5. Fire-fighting measures

Suitable extinguishing media: water, carbon dioxide, foam

Hazards during fire-fighting: ammonia, carbon dioxide,

The substances/groups of substances mentioned can be released in case of fire.

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.

NFPA Hazard codes:

Health : 2 Fire: 0 Reactivity: 0 Special:

6. Accidental release measures

Personal precautions:

Breathing protection required.

Environmental precautions:

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

Cleanup:

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

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7. Handling and storage

Handling

General advice:

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.

Storage

General advice:

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 incompatibility:

General: Segregate from nitrites and alkaline substances. Segregate from strong acids. Segregate from strong bases.

Specific: Sodium nitrate,

Storage stability:

Keep container dry. Protect against moisture.

Temperature tolerance

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 and personal protection

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.

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9. Physical and chemical properties

Form:	crystalline, powder	
Odour:	ammonia-like	
Colour:	white	
pH value:	7.7	(10 %(m), 20 °C)
Vapour pressure:	79 mbar	(25.4 °C)
	526 mbar	(50 °C)
Density:	1.58 g/cm ³	(20 °C)
Bulk density:	approx. 850 kg/m ³	
Partitioning coefficient n-octanol/water (log Pow):	-2.4	(25 °C)
Solubility in other solvents:	178 g/kg	(20 °C)

10. Stability and reactivity

Substances to avoid:

nitrites, nitrates, strong bases, strong acids

Hazardous reactions:

Exothermic reaction. Reacts with nitrates. Reacts with nitrites. Reacts with strong alkalis.

Decomposition products:

Hazardous decomposition products: ammonia, carbon dioxide

Thermal decomposition:

> 30 °C

To avoid thermal decomposition, do not overheat.

11. Toxicological information

Acute toxicity

Oral:

LD50/rat/male/female: approx. 1,576 mg/kg

Chronic toxicity

Genetic toxicity:

No mutagenic effect was found in various tests with bacteria and mammalian cell culture. Literature data.

Other information:

development of pulmonary odema



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12. Ecological information

Environmental fate and transport

Biodegradation:

Evaluation:

Inorganic product which cannot be eliminated from water by biological purification processes.

Can be oxidized to nitrate, or be reduced to nitrogen, by microorganisms.

Bioaccumulation:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Environmental toxicity

Acute and prolonged toxicity to fish:

Flow through.

Rainbow trout/LC50 (96 h): 98 mg/l

Toxicity to aquatic plants: static

green algae/EC50 (120 h): approx. 1,900 mg/l

Toxicity to microorganisms:

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

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.

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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:

TSCA, US

released / listed

OSHA hazard category:

Chronic target organ effects reported, Acute target organ effects reported

CERCLA RQ

5000 LBS

CAS Number

1066-33-7

Chemical name

ammonium hydrogencarbonate

SARA hazard categories (EPCRA 311/312): Acute, Chronic

State regulations

State RTK

CAS Number

1066-33-7

Chemical name

ammonium hydrogencarbonate

State RTK

MA, NJ, PA

16. Other information

HMIS III rating

Health: 2

Flammability: 0

Physical hazard: 0

HMIS uses a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates high hazard.

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Local contact information prod_reg@basf.com

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