

Safety Data Sheet

Ammonium chloride AF animal feed grade

Revision date : 2013/09/27

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Version: 1.0

(30160087/SDS_GEN_CA/EN)

1. Product and Company Identification

Company

BASF Canada Inc.
100 Milverton Drive
Mississauga, ON L5R 4H1, CANADA

24 Hour Emergency Response Information

CANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE: (800) 454-COPE (2673)

Molecular formula: NH_4Cl
Synonyms: Ammonium chloride

2. Hazards Identification

Emergency overview

Irritating to eyes.
Use NIOSH approved respirator as needed to mitigate exposure.
Eye wash fountains and safety showers must be easily accessible.
Wear suitable protective clothing, gloves and eye/face protection.

State of matter: solid
Colour: white
Odour: almost odourless

Potential health effects**Acute toxicity:**

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

Irritation / corrosion:

Not irritating to the skin. Eye contact causes irritation.

Assessment other acute effects:

Apart from effects causing lethality, no specific target organ toxicity was observed in experimental studies.

Sensitization:

Skin sensitizing effects were not observed in animal studies.

Chronic toxicity:

Carcinogenicity: In long-term studies in rats in which the substance was given by feed, a carcinogenic effect was not observed.

Repeated dose toxicity: Repeated oral uptake of the substance did not cause substance-related effects.

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Repeated ingestion of large amounts may lead to metabolic acidosis.

Teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Genotoxicity: In the majority of studies performed with microorganisms and in mammalian cell culture, a mutagenic effect was not found. A mutagenic effect was also not observed in in vivo tests.

Signs and symptoms of overexposure:

Overexposure may cause: vomiting, lethargy, confusion, hyperventilation, nausea, headache

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.

3. Composition / Information on Ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Hazardous ingredients</u>
12125-02-9	60.0 - 100.0 %	ammonium chloride

4. First-Aid Measures

General advice:

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air. If symptoms persist, seek medical advice.

If on skin:

Wash thoroughly with soap and water. If symptoms persist, seek medical advice.

If in eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:

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

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Flash point:		not applicable
Autoignition:		The substance / product decomposes therefore not determined.
Flammability:	not flammable	(other)
Self-ignition temperature:		not applicable not self-igniting

Suitable extinguishing media:

foam, water spray, dry powder

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Hazards during fire-fighting:

ammonia, Hydrogen chloride,

The substances/groups of substances mentioned can be released if the product is involved in a fire.

Protective equipment for fire-fighting:

Wear a self-contained breathing apparatus.

Further information:

Product itself is non-combustible; fire extinguishing method of surrounding areas must be considered. In case of fire and/or explosion do not breathe fumes. Large quantities of extinguishing water containing dissolved product should be contained. Contaminated extinguishing water must be disposed of in accordance with official regulations.

Impact Sensitivity:

Remarks:

Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Personal precautions:

Use personal protective clothing.

Environmental precautions:

Do not empty into drains.

Cleanup:

Avoid raising dust.

For small amounts: Sweep/shovel up.

For large amounts: Sweep/shovel up.

7. Handling and Storage

Handling

General advice:

Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:

No special precautions necessary.

Storage

General advice:

Protect against moisture.

Storage incompatibility:

General advice: Segregate from alkalis and alkalizing substances. Segregate from nitrites. Segregate from oxidants.

Specific chemicals to avoid: sodium nitrate,

8. Exposure Controls and Personal Protection

Personal protective equipment

Respiratory protection:

Breathing protection if breathable aerosols/dust are formed. Wear a NIOSH-certified (or equivalent) particulate respirator.

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Hand protection:

Chemical resistant protective gloves, Suitable materials, rubber, plastic

Eye protection:

Tightly fitting safety goggles (chemical goggles).

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form:	crystalline, powder	
Odour:	almost odourless	
Odour threshold:	No data available.	
Colour:	white	
pH value:	4.7	(200 g/l, 25 °C) (DIN ISO 976)
Melting point:	338 °C	The substance / product decomposes. Literature data.
Sublimation point:	338 °C	The substance / product decomposes.
Vapour pressure:	66 mbar	(250 °C)
Density:	1.53 g/cm3	(25 °C) Literature data.
Bulk density:	600 - 900 kg/m3	(DIN ISO 697)
Partitioning coefficient n-octanol/water (log Pow):		The value has not been determined because the substance is inorganic.
Viscosity, dynamic:		not applicable
Solubility in water:	372 g/l	(20 °C) Literature data.

10. Stability and Reactivity

Conditions to avoid:

Avoid heat. Avoid moisture. See MSDS section 7 - Handling and storage.

Substances to avoid:

nitrites, nitrates, oxidizing agents

Hazardous reactions:

Violent reaction under influence of oxidizing agents. Incompatible with bases. Reacts with nitrites.

Decomposition products:

Hazardous decomposition products: Hydrogen chloride, ammonia

Thermal decomposition:

To avoid thermal decomposition, do not overheat.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

11. Toxicological information

Acute toxicity

Oral:

Type of value: LD50

Species: rat (male/female)

Value: 1,410 mg/kg (BASF-Test)

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Inhalation:

Study scientifically not justified.

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.

Irritation / corrosion

Skin:

Species: rabbit

Result: non-irritant

Method: Draize test

Eye:

Species: rabbit

Result: Irritant.

Method: BASF-Test

Sensitization:

Guinea pig maximization test

Species: guinea pig

Result: Non-sensitizing.

Aspiration Hazard:

not applicable

12. Ecological Information

Fish

Acute:

Oncorhynchus mykiss/LC50 (96 h): = 42,91 mg/l Ammonium chloride

Prosopium williamsoni/LC50 (96 h): = 46,27 mg/l Ammonium chloride

Chronic:

Flow through.

Lepomis macrochirus (30 d): = 4,28 mg/l ammonium chloride

Aquatic invertebrates

Acute:

static

Ceriodaphnia dubia/EC50 (48 h): 98,5 mg/l Ammonium chloride

static

Daphnia magna/EC50 (48 h): 136,6 mg/l Ammonium chloride

Chronic:

semistatic 70 d

Aquatic plants

Toxicity to aquatic plants:

static

green algae/EC50 (5 d): 1,300 mg/l

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

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static

green algae/EC50 (18 d): 2,700 mg/l

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Microorganisms

Toxicity to microorganisms:

OECD Guideline 209 aquatic

activated sludge, domestic/EC20 (0.5 h): approx. 850 mg/l

Non-Mammals

Other terrestrial non-mammals:

Study scientifically not justified.

Plant

Toxicity to terrestrial plants:

No observed effect concentration (84 d): 626 mg/l

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Soil living organisms

Toxicity to soil dwelling organisms:

artificial soil

Eisenia foetida/LC50 (14 d): 163 mg/kg

Degradability / Persistence

Biological / Abiological Degradation

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

Accumulation in organisms is not to be expected.

The product has not been tested. The statements on environmental fate and pathway have been derived from the properties of the individual components.

13. Disposal considerations

Waste disposal of substance:

Dispose of in a licensed facility. Observe all local regulations.

Container disposal:

Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport

TDG

Not classified as a dangerous good under transport regulations

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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 DSL, CA released / listed

Feed DSL, CA released / exempt

WHMIS classification: D2B: Materials Causing Other Toxic Effects - Toxic material



This product is WHMIS controlled.

THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

16. Other Information

Recommended use: Raw material auxiliary inorganic salts flavours

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.

SDS Prepared by:

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SDS Prepared on: 2013/09/27

END OF DATA SHEET