



SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2021

Date Updated: August 17, 2021

SECTION 1. ----- PRODUCT AND COMPANY IDENTIFICATION -----

Product Name Ammonium chloride
Product Code(s) ADB0034
Recommended Use For Laboratory Research Use Only
Not for Human or Animal Drug Use

Supplier Bio Basic Inc.
Address 20 Konrad Crescent, Markham, Ontario,
Canada, L3R 8T4
Telephone (905) 474 4493
Fax (905) 474 5794
For Chemical Emergency Phone# (416) 995 9730

SECTION 2. ----- HAZARDS IDENTIFICATION -----

GHS Classification in accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)

Acute toxicity, Oral (Category 4), H302
Eye irritation (Category 2A), H319

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

GHS Label elements, including precautionary statements

Pictogram



Signal word Warning

Hazard statement(s)

H302

Harmful if swallowed.

H319

Causes serious eye irritation.

Precautionary statement(s)

P264

Wash skin thoroughly after handling.

P270

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

P280

Wear eye protection/ face protection.

P301 + P312 + P330

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

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313

If eye irritation persists: Get medical advice/ attention.

P501

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

Hazards not otherwise classified (HNOC) or not covered by GHS

- none

SECTION 3. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

Chemical Name	EC No.	CAS-No	Weight %
Ammonium chloride	235-186-4	12125-02-9	<100

SECTION 4. ----- FIRST-AID MEASURES-----

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5. ----- FIRE FIGHTING MEASURES-----

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

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

Special hazards arising from the substance or mixture

Nitrogen oxides (NOx)

Hydrogen chloride gas Not

combustible.

Ambient fire may liberate hazardous vapours.

Advice for firefighters

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

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-----

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid

generation of dusts.

Reference to other sections

For disposal see section 13.

SECTION 7. ----- HANDLING AND STORAGE-----

Precautions for safe handling

For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Hygroscopic.

Storage class (TRGS 510): 13: Non Combustible Solids

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-----

Control parameters

Ingredients with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
ammonium chloride	12125-02-9	TWA	10 mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		STEL	20 mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		TWA	10 mg/m ³	Canada. British Columbia OEL
		STEL	20 mg/m ³	Canada. British Columbia OEL
		TWAEV	10 mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		STEV	20 mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	10 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)

		STEL	20 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
--	--	------	----------	---

Exposure controls

Appropriate engineering controls

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

Personal protective equipment

Eye/face protection

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

Skin protection

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 (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L

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 (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L

Body Protection protective clothing

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

Do not let product enter drains.

SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -

Information on basic physical and chemical properties

- | | |
|--|---|
| a) Appearance | Form: solid
Color: white |
| b) Odor | odorless |
| c) Odor Threshold | Not applicable |
| d) pH | 5 - 5.5 at 25 °C (77 °F) |
| e) Melting point/freezing point | Melting point/range: 340 °C (644 °F) - lit. |
| f) Initial boiling point and boiling range | 520 °C 968 °F |
| g) Flash point | ()Not applicable |
| h) Evaporation rate | No data available |

- | | |
|---|---|
| i) Flammability (solid, gas) | The product is not flammable. - Flammability (solids) |
| j) Upper/lower flammability or explosive limits | No data available |
| k) Vapor pressure | 1.3 hPa at 160.4 °C (320.7 °F)
1.3 hPa at 30 °C(86 °F) |
| l) Vapor density | No data available |
| m) Relative density | No data available |
| n) Water solubility | 372 g/l at 20 °C (68 °F) |
| o) Partition coefficient: octanol/water | Not applicable for inorganic substances n- |
| p) Autoignition temperature | > 400 °C (> 752 °F) - Relative self-ignition temperature for solids does not ignite |
| q) Decomposition temperature | Not applicable |
| r) Viscosity | No data available |
| s) Explosive properties | No data available |
| t) Oxidizing properties | No data available |

Other safety information

No data available

SECTION 10. -----STABILITY AND REACTIVITY -----

Reactivity

No data available

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

Violent reactions possible with: alkali hydroxides acids

Risk of ignition or formation of inflammable gases or vapours with: halogen-halogen compounds alkalines

alkaline substances Risk of explosion with: nitrates chlorates

Heavy metal salts nitrites

Hydrogen cyanide (hydrocyanic acid) Chlorine silver salt

Strong oxidizing agents

Conditions to avoid

Exposure to moisture may affect product quality. no information available

Incompatible materials

Aluminum, Lead, Iron, Copper, copper compounds

Hazardous decomposition products

In the event of fire: see section 5

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

Acute toxicity

LD50 Oral - Rat - male and female - 1,410 mg/kg (OECD Test Guideline 401)

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Inhalation: No data available Symptoms: Possible damages: mucosal irritations

LD50 Dermal - Rat - male and female - > 2,000 mg/kg Remarks:

(ECHA)

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h (Draize Test)

Serious eye damage/eye irritation

Eyes - Rabbit Result: Eye irritation Remarks: (ECHA)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

No data available

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster lung cells

Metabolic activation: without metabolic activation

Method: OECD Test Guideline 473

Result: positive

Test Type: Micronucleus test

Species: Mouse

Cell type: Bone marrow

Application Route: Intraperitoneal injection

Method: OECD Test Guideline 474

Result: negative

Carcinogenicity

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 90 d - NOAEL (No observed adverse effect level) - 1,695.7 mg/kg

Remarks:
Subchronic toxicity

RTECS: BP4550000

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

The following applies to ammonium salts in general: after swallowing: local irritation symptoms, nausea, vomiting, diarrhoea. Systemic effect: after the uptake of very large

quantities: drop in blood pressure, collapse, CNS disorders, spasms, narcotic conditions, respiratory paralysis, haemolysis.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. ----- ECOLOGICAL INFORMATION -----

Toxicity

Toxicity to fish semi-static test LC50 - Cyprinus carpio (Carp) - 209.00 mg/l - 96 h
Remarks: (ECHA)

Toxicity to daphnia static test EC50 - Daphnia magna (Water flea) - 101 mg/l - 48 h
and other aquatic Remarks: (ECHA)
invertebrates

Toxicity to algae static test ErC50 - Chlorella vulgaris (Fresh water algae) - 1,300 mg/l
- 5 d
Remarks: (ECHA)

Toxicity to bacteria static test EC50 - activated sludge - 1,310 mg/l - 0.5 h
(OECD Test Guideline 209)

Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

No data available

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. ----- TRANSPORT INFORMATION -----

TDG

UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Ammonium chloride
Marine pollutant: no

IMDG

UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Ammonium chloride
Marine pollutant: no

IATA

UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Ammonium chloride

SECTION 15. ----- REGULATORY INFORMATION -----

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

SECTION 16. ----- OTHER INFORMATION -----

Further information: no limited for paper copy, just for internal uses.
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Issuing Date: 17-Aug-2021

End of SDS