

Ammonium chloride

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Date of issue: 28/08/2013 Revision date: 07/03/2017

246948

Version: 2.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Substance name : Ammonium chloride
EC Index No : 017-014-00-8
EC No : 235-186-4
CAS No : 12125-02-9
Product code : 246948
Formula : ClH₄N
Product group : Raw material

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Pharmaceutical
Industrial/Professional use spec : Industrial
For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Duchefa Farma BV
A. Hofmanweg 71
2031BH Haarlem - Nederland
T +31(0)23-5319093
farma@ducheffa.nl - www.duchefa-farma.com

1.4. Emergency telephone number

Emergency number : Supplier contact information:
+31(0)23-5319093 (M-F 09:00-17:00)
+31(0)6-30109355 (outside office hours)

| Country | Organisation/Company | Address | Emergency number | Comment |
|----------------|--|---------------------------------|------------------|---------|
| United Kingdom | Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Centre Hospitalier Universitaire de Constantine | Avonley Road SE14 5ER London | 0870 243 2241 | |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 H302
Serious eye damage/eye irritation, Category 2 H319

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Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)

:



GHS07

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H302 - Harmful if swallowed
H319 - Causes serious eye irritation

Precautionary statements (CLP)

: P280 - Wear protective gloves, protective clothing, face protection, face shield, eye protection
P305+P351 - IF IN EYES: Rinse cautiously with water for several minutes
P301+P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type

: Pharmaceuticals

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|-------------------|--|-----|---|
| Ammonium chloride | (CAS No) 12125-02-9 (EC No) 235-186-4 (EC Index No) 017-014-00-8 | 100 | Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 |

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation

: Assure fresh air breathing. Allow the victim to rest. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

First-aid measures after skin contact

: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Drink plenty of water. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after ingestion : On ingestion in large quantities: Unconsciousness. Headache. Nausea.

4.3. Indication of any immediate medical attention and special treatment needed

Large amounts: Doctor: gastric lavage.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Making extinguishing agents environment-friendly.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not combustible.
- Hazardous decomposition products in case of fire : On burning: release of harmful gases/vapours. Chlorine. Ammonia solution. Hydrogen chloride.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid raising dust.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

Reference to other sections (8, 13).

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

- Additional hazards when processed : Avoid raising dust.
- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container in a cool, well-ventilated place. Keep container closed when not in use.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

Pharmaceutical industry.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

No additional information available

8.2. Exposure controls**Personal protective equipment:**

Avoid all unnecessary exposure.

Hand protection:

| Type | Material | Permeation | Thickness (mm) | Standard |
|--------|----------------------|-------------------|----------------|----------|
| Gloves | Nitrile rubber (NBR) | 6 (> 480 minutes) | 0,11 | EN 374 |

Eye protection:

Safety glasses (to European standard EN 166 or equivalent)

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Approved dust respirator. Dustmask with filtertype P2

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

- Physical state : Solid
- Colour : White.
- Odour : odourless.

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| | |
|---|---------------------------------|
| Odour threshold | : No data available |
| pH | : 4.5 - 5.5 |
| pH solution | : 50 g/l 20 ° C |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : 520 °C |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : > 350 °C |
| Flammability (solid, gas) | : Non flammable |
| Vapour pressure | : < 1.3 mbar 30 ° C |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Density | : 1.53 g/cm ³ 20 ° C |
| Solubility | : Water: 376 g/l 20 ° C |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : Product is not explosive. |
| Oxidising properties | : No data available |
| Explosive limits | : No data available |

9.2. Other information

Other properties : Bulk density: 500 kg/m³ at 20 ° C.

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Risk of decomposition. > 350 °C.

10.5. Incompatible materials

Strong acids. Strong bases. Chlorine. Halogen-halogen compounds. Nitrites. Nitrates. Chlorides.

10.6. Hazardous decomposition products

Hydrogen chloride. Ammonia solution.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

Acute toxicity : Oral: Harmful if swallowed.

| Ammonium chloride (12125-02-9) | |
|--------------------------------|------------|
| LD50 oral rat | 1650 mg/kg |

Skin corrosion/irritation : Not classified

pH: 4.5 - 5.5

Additional information : Slight skin irritant

Serious eye damage/irritation : Causes serious eye irritation.

pH: 4.5 - 5.5

Additional information : Serious eye damage/eye irritation, Category 2

Respiratory or skin sensitisation : Not classified

Additional information : Inhalation may cause irritation (cough, short breathing, difficulty in breathing)
Irritating to the skin and mucous membranes

Germ cell mutagenicity : Not classified

Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-single exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-repeated exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met

Potential adverse human health effects and symptoms : Harmful if swallowed.

IARC group : 4

SECTION 12: Ecological information**12.1. Toxicity**

No additional information available

12.2. Persistence and degradability

| Ammonium chloride (12125-02-9) | |
|--------------------------------|--|
| Persistence and degradability | SEZ (mammal): 3.0; SEZ (bacteria): 2.4; SEZ (fish): 3.6. |

12.3. Bioaccumulative potential

| Ammonium chloride (12125-02-9) | |
|--------------------------------|------------------|
| Bioaccumulative potential | Not established. |

12.4. Mobility in soil

No additional information available

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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Additional information : Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.
Waste treatment methods : WASTES FROM INORGANIC CHEMICAL PROCESSES.
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Dispose of contents/container to Dispose of this material and its container at hazardous or special waste collection point.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IATA |
|---|------------------------------------|
| 14.1. UN number | |
| Not applicable | Not applicable |
| 14.2. UN proper shipping name | |
| Not applicable | Not applicable |
| 14.3. Transport hazard class(es) | |
| Not applicable | Not applicable |
| Not applicable | Not applicable |
| 14.4. Packing group | |
| Not applicable | Not applicable |
| 14.5. Environmental hazards | |
| Dangerous for the environment : No | Dangerous for the environment : No |
| No supplementary information available | |

14.6. Special precautions for user

- Overland transport

No data available

- Air transport

No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Ammonium chloride is not on the REACH Candidate List

Ammonium chloride is not on the REACH Annex XIV List

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15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

| | | | |
|-----|--------------------------|----------|--|
| 1.4 | Emergency telephone | Modified | Added additional information |
| 2 | Classification (DSD/DPD) | Removed | Obsolete |
| 8.2 | Hand protection | Modified | Specified material, thickness, et cetera of gloves |
| 8.2 | Respiratory protection | Modified | Added additional information |

Abbreviations and acronyms:

| | |
|-------|---|
| SDS | Safety Data Sheet |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| IMDG | International Maritime Dangerous Goods |
| IATA | International Air Transport Association |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : REACH Disclaimer:
This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number). **DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness.

Full text of H- and EUH-statements:

| | |
|---------------------|---|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| H302 | Harmful if swallowed |
| H319 | Causes serious eye irritation |

SDS EU (REACH Annex II) Version 2017

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