

### SECTION 1: Identification of the substance/mixture

#### 1.1. Product identifier

Product form	: Substance
Substance name	: Ammonium Chloride
Formula	: NH <sub>4</sub> Cl
Molecular weight	: 53.49 g/mol
CAS No.	: 12125-02-9
Product code	: LW-NH4Cl
Synonyms	: Ammonium Chloride

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

Use of the substance/mixture : Laboratory chemicals, Synthesis of substances

#### 1.3. Emergency telephone number

Emergency number : 1.800.424.9300 (USA)  
+1.703.527.3887 (INT)

### SECTION 2: Hazards Identification

#### 2.1. Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302

Eye irritation (Category 2A), H319

Acute aquatic toxicity (Category 2), H401

Chronic aquatic toxicity (Category 2), H411

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

#### 2.2. GHS Label elements, including precautionary statements

Pictogram



Signal word

: Warning

Hazard statement(s)

H302

: Harmful if swallowed.

H319

: Causes serious eye irritation.

H411

: Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P264

: Wash skin thoroughly after handling.

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- P270 : Do not eat, drink or smoke when using this product.
- P273 : Avoid release to the environment.
- 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.
- P391 : Collect spillage.
- P501 : Dispose of contents/ container to an approved waste disposal plant.

### 2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

none

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

#### Hazardous components

Component	Classification	Concentration
Ammonium Chloride	Acute Tox. 4; Eye Irrit. 2A; Aquatic Acute 2; Aquatic Chronic 2; H302, H319, H411	<= 100 %

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

## SECTION 4: Description of first aid measures

### 4.1. Description of first aid measures

- General advice : Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
- First-aid measures after inhalation : If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- First-aid measures after skin contact : Wash off with soap and plenty of water. Consult a physician.
- First-aid measures after eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2. Special hazards arising from the substance or mixture

No data available

### 5.3. Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4. More Information

no data available

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

For personal protection see section 8.

### 6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### 6.3. Methods and material for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4. Reference to other sections

For disposal see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

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Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Hygroscopic.

Storage class (TRGS 510): Non Combustible Solids

### 7.3. 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

### 8.1. Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Ammonium Chloride	12125-02-9	TWA	10.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Eye & Upper Respiratory Tract irritation		
		STEL	20.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Eye & Upper Respiratory Tract irritation		
		TWA	10.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		ST	20.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	10.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Eye irritation		
		STEL	20.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Eye irritation		
		TWA	10.000000 mg/m3	USA. NIOSH Recommended Exposure Limits

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		ST	20.000000 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		PEL	10 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		STEL	20 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

### 8.2. Exposure controls

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday

### 8.3. Personal protective equipment

Eye protection : Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection : Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method:

EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the

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	CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body protection	: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Environmental exposure controls	: Do not let product enter drains.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Appearance	: Form: Crystalline powder
Odor	: No data available
Odor Threshold	: No data available
pH	: 4.5 - 5.5 at 50.00000 g/l at 20.0 °C (68.0 °F)
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: No data available
Flash point	: no data available
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper/lower flammability or explosive limits	: no data available
Vapor pressure	: 1.3 hPa (1.0 mmHg) at 160.4 °C (320.7 °F)
Vapor density	: no data available
Relative density	: no data available
Water solubility	: soluble
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available

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Decomposition temperature	: no data available
Viscosity	: no data available
Explosive properties	: no data available
Oxidizing properties	: no data available

### 9.2. Other safety information

Bulk density	: 500 kg/m3
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No data available

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

No data available

### 10.4. Conditions to avoid

Exposure to moisture may affect product quality.

### 10.5. Incompatible materials

Strong acids, Strong bases, Strong oxidizing agents

### 10.6. Hazardous decomposition products

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NOx), Hydrogen chloride gas  
In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: LD50 Oral - Rat - 1,650 mg/kg
	Inhalation: No data available
	Dermal: No data available
	No data available
Skin corrosion/irritation	: Skin - Rabbit
	Result: No skin irritation
Serious eye damage/irritation	: Eyes - Rabbit
	Result: Eye irritation
Respiratory or skin sensitization	: Will not occur

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Germ cell mutagenicity	: No data available
<b>Carcinogenicity</b>	
IARC:	: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP:	: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
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	: RTECS: BP4550000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## SECTION 12: Ecological information

### 12.1. Toxicity

Toxicity to fish	: LC50 - Cyprinus carpio (Carp) - 209.00 mg/l - 96 h LC50 - Oncorhynchus mykiss (rainbow trout) - 3.98 mg/l - 96 h NOEC - Oncorhynchus mykiss (rainbow trout) - 57 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	: LC50 - Daphnia magna (Water flea) - 161 mg/l - 48 h Growth inhibition NOEC - Daphnia magna (Water flea) - 0.1 mg/l - 216 h

**12.2. Persistence and degradability** : No data available

**12.3. Bioaccumulative potential** : No data available

**12.4. Mobility in soil** : No data available

**12.5. Results of PBT and vPvB assessment** : PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6. Other adverse effects** : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.



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Toxic to aquatic life with long lasting effects.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Product : Offer surplus and non-recyclable solutions to a licensed disposal company.
- Contaminated Packaging : Dispose of as unused product.

### SECTION 14: Transport information

#### DOT (US)

- UN number : 3077
- Class : 9
- Packing group : III
- Proper shipping name : Environmentally hazardous substances, solid, n.o.s. (Ammonium chloride)
- Reportable Quantity (RQ) : 5000 lbs
- Poison Inhalation Hazard : No

#### IMDG

Not dangerous goods

#### IATA

Not dangerous goods

### SECTION 15: Regulatory information

#### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### SARA 311/312 Hazards

Acute Health Hazard

#### Massachusetts Right To Know Components

Ammonium Chloride	CAS-No.	Revision Date
	12125-02-9	1994-04-01

#### Pennsylvania Right To Know Components

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Ammonium Chloride	CAS-No.	Revision Date
	12125-02-9	1994-04-01

### New Jersey Right To Know Components

Ammonium Chloride	CAS-No.	Revision Date
	12125-02-9	1994-04-01

### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## SECTION 16: Other information

### Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	: Acute toxicity
Aquatic Acute	: Acute aquatic toxicity
Aquatic Chronic	: Chronic aquatic toxicity
Eye Irrit.	: Eye irritation
H302	: Harmful if swallowed.
H319	: Causes serious eye irritation.
H401	: Toxic to aquatic life.

### HMIS Rating

Health Hazard	: 2
Chronic Health Hazard	:
Flammability	: 0
Physical Hazard	: 0

### NFPA Rating

Health hazard	: 2
Fire Hazard	: 0
Reactivity Hazard	: 0

### Further Information

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and Loudwolf Holdings Ltd. assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his/her application.