

## SECTION 1: Product and Company Identification

### Identification of the substance or mixture

**Catalog #:** 10211, 10211-1  
**Product Name:** Ammonium Chloride  
**CAS-No.:** 12125-02-9

### Company Identification

Cepharm Life Sciences Inc.  
 11830 W Market Place, Suite K  
 Fulton, MD 20759  
 USA  
 Toll Free: 1-800-257-1565  
 Phone: 410-636-4954

**24-hour Emergency Response for Hazardous Materials [or Dangerous Goods] Incident, Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Toll Free: 1-800-424-9300/ +1 703-527-3887 CCN 1010970**

**For Research Use Only. Not for use in diagnostic procedures.**

## SECTION 2: Hazards identification

### 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.

### GHS Label elements, including precautionary statements

Pictogram  
 Signal word  
 Hazard statement(s)  
 H302  
 H319  
 H411



Warning

Harmful if swallowed.  
 Causes serious eye irritation.  
 Toxic to aquatic life with long lasting effects.

#### Precautionary statement(s)

P264 Wash skin thoroughly after handling.  
 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.

**Hazards not otherwise classified (HNOC) or not covered by GHS – none**

## SECTION 3: Composition / Information on Ingredients

### Substances

Synonyms: Salmiac

Formula: H4CIN  
Molecular weight: 53.49 g/mol  
CAS-No.: 12125-02-9  
EC-No.: 235-186-4  
Index-No.: 017-014-00-8

### 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: First Aid Measures

### 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.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling.

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

No data available.

## SECTION 5: Firefighting Measures

### Extinguishing Media

#### Suitable extinguishing media

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

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

Carbon oxides, Nitrogen oxides (NOx)

#### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### Further information

No data available.

## SECTION 6: Accidental Release Measures

### Personal precautions, protective equipment and emergency procedures

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

### 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.

**Methods and materials for containment and cleaning up**

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

**Reference to other sections**

For disposal see section 13.

<b>SECTION 7: Handling &amp; Storage</b>
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**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.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

**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

**Specific end use(s)**

Apart from the users mentioned in section 1.2, no other specific uses are stipulated.

<b>SECTION 8: Exposure Controls / Personal Protection</b>
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**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	20.00000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Eye & Upper respiratory tract irritation		
		TWA	10.00000 mg/m3	USA. NIOSH Recommended Exposure Limits
		ST	20.0000 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	10.0000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper respiratory tract irritation		
		Eye irritation		
		STEL	20.0000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper respiratory tract irritation		
		Eye irritation		
		TWA	10.0000 mg/m3	USA. NIOSH Recommended Exposure Limits
		ST	20.0000 mg/m3	USA. NIOSH Recommended Exposure Limits
		PEL	10 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		STEL	20 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

**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.

**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).

#### **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.

#### **Body protection**

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

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

## **SECTION 9: Physical and Chemical Properties**

### **Information on basic physical and chemical properties**

a) Appearance	Form: Crystalline powder
b) Odor	No data available
c) Odor Threshold	No data available
d) pH	4.5 – 5.5 @ 50.00000 g/l @ 20 degrees C (68 degrees F)
e) Melting point/freezing point	340 degrees C (644 degrees F)
f) Initial boiling point and boiling range	No data available
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	1.3 hPa (1.0 mmHg) @ 160.4 degrees C (320.7 degrees F)
l) Vapour density	No data available
m) Relative density	No data available
n) Water solubility	soluble
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

### **Other safety information**

Bulk density	500 kg/m <sup>3</sup>
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## **SECTION 10: Stability & Reactivity**

### **Reactivity**

No data available

### **Chemical stability**

Stable under recommended storage conditions.

### **Possibility of hazardous reactions**

No data available

### **Conditions to avoid**

Exposure to moisture may affect product quality.

### **Incompatible materials**

Strong acids, Strong bases, Strong oxidizing agents

### **Hazardous decomposition products**

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Hydrogen chloride gas  
In the event of fire: see section 5

## SECTION 11: Toxicological Information

### 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/eye irritation

Eyes - Rabbit  
Result: Eye irritation

#### Respiratory or skin sensitization

Will not occur

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

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: AF3675000

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

## SECTION 12: Ecological Information

#### 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

Toxicity to daphnia and other aquatic invertebrates

NOEC - Oncorhynchus mykiss (rainbow trout) - 57 mg/l - 96 h  
LC50 - Daphnia magna (Water flea) - 161 mg/l - 48 h  
Growth inhibition NOEC - Daphnia magna (Water flea) - 0.1 mg/l - 216 h

#### Persistence and degradability

No data available

#### Bio-accumulative 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

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Toxic to aquatic life with long lasting effects.

No data available

## SECTION 13: Disposal Considerations

### 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

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

### SARA 313 Components

SARA 313: 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 Hazards

### Massachusetts Right To Know Components

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

### Pennsylvania Right To Know Components

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

### New Jersey Right To Know Components

Ammonium chloride                      CAS-No. 12125-02-9                      Revision Date 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.

### HMS Rating

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

**NFPA Rating**

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

**Disclaimer:**

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 does not represent any guarantee of the properties of the product. Cepham Life Sciences Incorporated and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.