

## SAFETY DATA SHEET

according to Regulation (EU) No. 1907/2006  
Version 3.0 Revision Date 15.07.2007  
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### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : **Ammonium chloride**

Product Number : 11209  
Brand : Riedel

Company : Sigma-Aldrich Company Ltd.  
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### 2. HAZARDS IDENTIFICATION

**Risk advice to man and the environment**  
Harmful if swallowed. Irritating to eyes.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Salmiac

Formula : NH<sub>4</sub>Cl  
Molecular Weight : 53.49 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration [%]
<b>Ammonium chloride</b>				
12125-02-9	235-186-4	017-014-00-8	Xn, R22- R36	-

### 4. FIRST AID MEASURES

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

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

#### 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.

## 5. FIRE-FIGHTING MEASURES

### Suitable extinguishing media

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

### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

### Further information

The product itself does not burn.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

### Environmental precautions

Do not let product enter drains.

### Methods for cleaning up

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

## 7. HANDLING AND STORAGE

### Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

### Storage

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

hygroscopic

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Ammonium chloride	12125-02-9	STEL	20 mg/m <sup>3</sup>	1997-01-01	UK. Health and Safety Commission, EH 40/2005, Workplace exposure limits
Remarks	The word 'fume' is often used to include gases and vapours. This is not the case for exposure limits where 'fume' should normally be applied to solid particles generated by chemical reactions or condensed from the gaseous state, usually after volatilization from melted substances. The generation of fume is often accompanied by a chemical reaction such as oxidation or thermal breakdown.				
		TWA	10 mg/m <sup>3</sup>	1997-01-01	UK. Health and Safety Commission, EH 40/2005, Workplace exposure limits
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## Personal protective equipment

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Hand protection

Handle with gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

### Eye protection

Safety glasses

### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

### Hygiene measures

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	solid
Colour	no data available

### Safety data

pH	4.5 - 5.5 at 50.00000 g/l at 20.0 °C
Melting point	340.0 °C
Boiling point	no data available
Flash point	not applicable
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	1.3 hPa at 160.4 °C
Density	1.00 g/cm <sup>3</sup>
Water solubility	soluble

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Conditions to avoid

Exposure to moisture may affect product quality.

### Materials to avoid

Strong acids, Strong bases, Strong oxidizing agents

### Hazardous decomposition products

#### Hazardous decomposition products formed under fire conditions.

Ammonia, Hydrogen chloride gas

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - rat - 1,650 mg/kg

### Irritation and corrosion

Skin - rabbit - No skin irritation

Eyes - rabbit - Eye irritation

### Sensitisation

Will not occur

### Chronic exposure

no data available

### Signs and Symptoms of Exposure

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

### Potential Health Effects

<b>Inhalation</b>	May be harmful if inhaled. May cause respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. May cause skin irritation.
<b>Eyes</b>	Causes eye irritation.
<b>Ingestion</b>	Harmful if swallowed.

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

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

### Further information on ecology

no data available

## 13. DISPOSAL CONSIDERATIONS

### Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

### Contaminated packaging

Dispose of as unused product.

#### 14. TRANSPORT INFORMATION

ADR/RID

IMDG

IATA

#### 15. REGULATORY INFORMATION

##### Labelling according to EC Directives

EC Label

Hazard symbols

Xn Harmful

R-phrase(s)

R22 Harmful if swallowed.

R36 Irritating to eyes.

S-phrase(s)

S22 Do not breathe dust.

#### 16. OTHER INFORMATION

##### Further information

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