

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Hydroxyl ammonium chloride pure

Revision date: 01.08.2023

Product code: 06152

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

### 1.1. Product identifier

Hydroxyl ammonium chloride pure

REACH Registration Number: 01-2120766309-45-XXXX  
CAS No: 5470-11-1  
Index No: 612-123-00-2  
EC No: 226-798-2

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

#### Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

#### Uses advised against

Do not use for private purposes (household).

### 1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH  
Street: Stempelstraße 6  
Place: D-47167 Duisburg  
Telephone: 0203/5194-0  
E-mail: info@analytichem.de  
Contact person: Abteilung Produktsicherheit  
E-mail: produktsicherheit@analytichem.de  
Internet: www.analytichem.de  
Responsible Department: Abteilung Produktsicherheit  
Telefax: 0203/5194-290  
Telephone: 0203/5194-107/117

### 1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

### Further Information

No data available

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No 1272/2008

Met. Corr. 1; H290  
Carc. 2; H351  
Acute Tox. 4; H312  
Acute Tox. 4; H302  
Skin Irrit. 2; H315  
Eye Irrit. 2; H319  
Skin Sens. 1; H317  
STOT RE 2; H373  
Aquatic Acute 1; H400

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### Regulation (EC) No 1272/2008

Signal word: Warning

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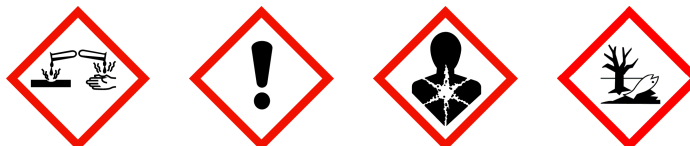
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#### Pictograms:



#### Hazard statements

H290	May be corrosive to metals.
H302+H312	Harmful if swallowed or in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

#### Precautionary statements

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P281	Use personal protective equipment as required.
P273	Avoid release to the environment.

#### 2.3. Other hazards

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Sum formula:	NH <sub>2</sub> OH * HCl
Molecular weight:	69,49 g/mol

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
5470-11-1	hydroxylammonium chloride			100 %
	226-798-2	612-123-00-2	01-2120766309-45-XXXX	
	Met. Corr. 1, Carc. 2, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT RE 2, Aquatic Acute 1; H290 H351 H312 H302 H315 H319 H317 H373 H400			

Full text of H and EUH statements: see section 16.

#### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
5470-11-1	226-798-2	hydroxylammonium chloride	100 %
	dermal: ATE = 1100 mg/kg; oral: ATE = 500 mg/kg		

#### Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

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#### General information

Self-protection of the first aider

#### After inhalation

Provide fresh air.

Call a physician immediately.

#### After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

#### After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

Remove contact lenses, if present and easy to do. Continue rinsing.

Consult an ophthalmologist.

#### After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

Irritant

Gastrointestinal complaints

Vomiting

Spasms

Circulatory collapse

Narcotic effects

Respiratory complaints

Allergic reactions

Cyanosis (blue coloured blood)

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

No data available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

##### Unsuitable extinguishing media

no restriction

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

Combustible solids

Danger of dust explosion.

Decomposition with: Danger of explosion

Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NO<sub>x</sub>)

Hydrochloric gas

#### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Avoid contact with skin, eyes and clothes.

#### Additional information

Use water spray jet to protect personnel and to cool endangered containers.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

### SECTION 6: Accidental release measures

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

##### **General advice**

Corrosive to metals.

##### **For non-emergency personnel**

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Do not breathe dust/fume/gas/mist/vapours/spray.

##### **For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

#### **6.2. Environmental precautions**

Danger of explosion

Do not allow to enter into surface water or drains.

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

##### **For containment**

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Take up carefully when dry. Take up dust-free and set down dust-free.

##### **For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

##### **Other information**

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

#### **6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

## **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

Avoid exposure - obtain special instructions before use.

Keep container tightly closed.

Do not breathe dust.

Use extractor hood (laboratory).

Avoid contact with skin, eyes and clothes.

Read label before use.

Handle with care - avoid bumps, friction and impact.

##### **Advice on protection against fire and explosion**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

##### **Advice on general occupational hygiene**

Wash contaminated clothing prior to re-use.

Avoid contact with skin, eyes and clothes.

##### **Further information on handling**

Wash contaminated clothing before reuse.

Wash hands before breaks and after work.

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Draw up and observe skin protection programme.

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

##### **Requirements for storage rooms and vessels**

Keep container tightly closed.

Store in a place accessible by authorized persons only.

Unsuitable container/equipment material: Metal

##### **Further information on storage conditions**

Store in a dry place.

storage temperature +5°C - +30°C

#### **7.3. Specific end use(s)**

Laboratory chemicals

### **SECTION 8: Exposure controls/personal protection**

#### **8.1. Control parameters**

#### **8.2. Exposure controls**

##### **Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

##### **Individual protection measures, such as personal protective equipment**

##### **Eye/face protection**

goggles

##### **Hand protection**

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) With specification (test according to EN374):

By long-term hand contact

Trade name/designation KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. 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](http://www.kcl.de)).

##### **Skin protection**

Wear suitable protective clothing.

Wash hands before breaks and after work.

Draw up and observe skin protection programme.

##### **Respiratory protection**

Respiratory protection necessary at: dust formation

Filtering device with filter or ventilator filtering device of type: P3

##### **Environmental exposure controls**

Danger of explosion

Do not allow to enter into surface water or drains.

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**SECTION 9: Physical and chemical properties**

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

Physical state:	solid
Colour:	colourless
Odour:	like: Chlorine
Odour threshold:	No data available
Melting point/freezing point:	~154 °C
Boiling point or initial boiling point and boiling range:	No data available
Flammability:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	~165 °C
pH-Value (at 20 °C):	2,5 -3,5 (50 g/l)
Viscosity / kinematic:	No data available
Water solubility: (at 20 °C)	470 g/L
Solubility in other solvents	No data available
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	No data available
Dispersion stability:	No data available
Vapour pressure: (at 50 °C)	0,054 hPa
Vapour pressure:	No data available
Density (at 20,2 °C):	1,7 g/cm <sup>3</sup>
Relative density:	No data available
Bulk density:	~900 kg/m <sup>3</sup>
Relative vapour density:	No data available
Particle characteristics:	No data available

**9.2. Other information**

**Information with regard to physical hazard classes**

Explosive properties	
Danger of dust explosion.	
Sustaining combustion:	No data available
Self-ignition temperature	
Solid:	No data available
Gas:	No data available
Oxidizing properties	
No data available	

**Other safety characteristics**

Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	100,00 %
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
No data available:	

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Viscosity / dynamic:

No data available

Flow time:

No data available

#### Further Information

Corrosive to metals

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Danger of dust explosion

Danger of explosion

Handle with care - avoid bumps, friction and impact.

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

Oxidising agent

Alkali (lye)

### 10.4. Conditions to avoid

Handle with care - avoid bumps, friction and impact.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.5. Incompatible materials

Aluminium

Copper

Zinc

tin

Metal

### 10.6. Hazardous decomposition products

In case of fire may be liberated:

SECTION 5: Firefighting measures

#### Further information

No data available

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Toxicokinetics, metabolism and distribution

Avoid exposure - obtain special instructions before use.

#### Acute toxicity

Harmful if swallowed.

Harmful in contact with skin.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
5470-11-1	hydroxylammonium chloride				
	oral	ATE mg/kg	500		
	dermal	ATE mg/kg	1100		

#### Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

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#### Sensitising effects

May cause an allergic skin reaction. (hydroxylammonium chloride)

#### Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing cancer. (hydroxylammonium chloride)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (hydroxylammonium chloride)

#### Aspiration hazard

Based on available data, the classification criteria are not met.

#### Information on likely routes of exposure

No data available

#### Specific effects in experiment on an animal

No data available

#### Additional information on tests

No data available

#### Practical experience

No data available

### 11.2. Information on other hazards

#### Endocrine disrupting properties

No data available

#### Other information

No data available

### Further information

Irritant

Gastrointestinal complaints

Vomiting

Spasms

Circulatory collapse

Narcotic effects

Respiratory complaints

Allergic reactions

Cyanosis (blue coloured blood)

## SECTION 12: Ecological information

### 12.1. Toxicity

Very toxic to aquatic life.

### 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

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

### 12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.



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**12.7. Other adverse effects**

Discharge into the environment must be avoided.

**Further information**

Do not allow to enter into surface water or drains.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

**Contaminated packaging**

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	UN 2923
<b>14.2. UN proper shipping name:</b>	CORROSIVE SOLID, TOXIC, N.O.S. (hydroxylammonium chloride)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8+6.1
Classification code:	CT2
Special Provisions:	274
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	3
Hazard No:	86
Tunnel restriction code:	E

**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	UN 2923
<b>14.2. UN proper shipping name:</b>	CORROSIVE SOLID, TOXIC, N.O.S. (hydroxylammonium chloride)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8+6.1
Classification code:	CT2
Special Provisions:	274 802
Limited quantity:	5 kg
Excepted quantity:	E1

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	UN 2923
<b>14.2. UN proper shipping name:</b>	CORROSIVE SOLID, TOXIC, N.O.S. (hydroxylammonium chloride)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8+6.1
Special Provisions:	223, 274
Limited quantity:	5 kg
Excepted quantity:	E1
EmS:	F-A, S-B

**Air transport (ICAO-TI/IATA-DGR)**

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<b>14.1. UN number or ID number:</b>	UN 2923
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<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8+6.1
Special Provisions:	A3 A803
Limited quantity Passenger:	5 kg
Passenger LQ:	Y845
Excepted quantity:	E1
IATA-packing instructions - Passenger:	860
IATA-max. quantity - Passenger:	25 kg
IATA-packing instructions - Cargo:	864
IATA-max. quantity - Cargo:	100 kg

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	Yes
Danger releasing substance:	hydroxylammonium chloride

#### 14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

#### 14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

### SECTION 15: Regulatory information

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

##### EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 75

Information according to 2012/18/EU (SEVESO III): E1 Hazardous to the Aquatic Environment

##### National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water hazard class (D): 3 - highly hazardous to water

##### Additional information

Sprengstoffgesetz (SprengG): Yes.

#### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

### SECTION 16: Other information

#### Changes

This data sheet contains changes from the previous version in section(s): 12.

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#### Abbreviations and acronyms

Met. Corr: Substance or mixture corrosive to metals  
Acute Tox: Acute toxicity  
Skin Irrit: Skin irritation  
Eye Irrit: Eye irritation  
Skin Sens: Skin sensitisation  
Carc: Carcinogenicity  
STOT RE: Specific target organ toxicity - repeated exposure  
Aquatic Acute: Acute aquatic hazard

#### Relevant H and EUH statements (number and full text)

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H302+H312	Harmful if swallowed or in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

#### Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.