

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Revision Date 30.11.2017

Version 6.8

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**SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Catalogue No. 102739

Product name Copper(I) chloride for analysis EMSURE® ACS

REACH Registration Number A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No. 7758-89-6

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

Identified uses Reagent for analysis  
For additional information on uses please refer to the Merck Chemicals portal ([www.merckgroup.com](http://www.merckgroup.com)).

**1.3 Details of the supplier of the safety data sheet**

Company Merck KGaA \* 64271 Darmstadt \* Germany \* Phone:+49 6151 72-0

Responsible Department LS-QHC \* e-mail: [prodsafe@merckgroup.com](mailto:prodsafe@merckgroup.com)

**1.4 Emergency telephone number** Please contact the regional company representation in your country.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

---

## SECTION 2. Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4, Oral, H302

Serious eye damage, Category 1, H318

Acute aquatic toxicity, Category 1, H400

Chronic aquatic toxicity, Category 1, H410

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

### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

##### *Hazard pictograms*



##### *Signal word*

Danger

##### *Hazard statements*

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

##### *Precautionary statements*

###### Prevention

P273 Avoid release to the environment.

P280 Wear eye protection.

###### Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

---

P313 Get medical advice/ attention.

## Reduced labelling (≤125 ml)

### Hazard pictograms



### Signal word

Danger

### Hazard statements

H318 Causes serious eye damage.

### Precautionary statements

P280 Wear eye protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P313 Get medical advice/ attention.

*Index-No.* 029-001-00-4

## 2.3 Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

### 3.1 Substance

Formula	CuCl	ClCu (Hill)
Index-No.	029-001-00-4	
EC-No.	231-842-9	
Molar mass	99 g/mol	

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

---

## Hazardous components (REGULATION (EC) No 1272/2008)

*Chemical name (Concentration)*

CAS-No. Registration number Classification

Copper (I)-chloride ( $\geq 80\%$  -  $\leq 100\%$ )

7758-89-6 \*)

Acute toxicity, Category 4, H302

Serious eye damage, Category 1, H318

Acute aquatic toxicity, Category 1, H400

Chronic aquatic toxicity, Category 1, H410

M-Factor: 10

\*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

## 3.2 Mixture

Not applicable

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

After inhalation: fresh air.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

Risk of serious damage to eyes.

Irritation and corrosion, Cough, Shortness of breath, Nausea, Vomiting

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# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

---

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

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

#### *Suitable extinguishing media*

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

#### *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

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

Not combustible.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of:

Hydrogen chloride gas

### 5.3 Advice for firefighters

#### *Special protective equipment for firefighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### *Further information*

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6. Accidental release measures

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

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

---

Protective equipment see section 8.

## 6.2 Environmental precautions

Do not let product enter drains.

## 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

## 6.4 Reference to other sections

Indications about waste treatment see section 13.

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## SECTION 7. Handling and storage

### 7.1 Precautions for safe handling

#### *Advice on safe handling*

Observe label precautions.

#### *Hygiene measures*

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

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

#### *Storage conditions*

Protected from light.

Tightly closed. Dry.

Recommended storage temperature see product label.

### 7.3 Specific end use(s)

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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

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## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

#### Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

#### *Eye/face protection*

Tightly fitting safety goggles

#### *Hand protection*

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

---

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)).

### *Other protective equipment*

protective clothing

### *Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

### **Environmental exposure controls**

Do not let product enter drains.

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## **SECTION 9. Physical and chemical properties**

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

Form	solid
Colour	light grey
Odour	odourless
Odour Threshold	Not applicable
pH	ca. 5 at 50 g/l 20 °C (slurry)



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

---

Melting point	422 °C
Boiling point/boiling range	1.367 °C at 1.013 hPa
Flash point	does not flash
Evaporation rate	No information available.
Flammability (solid, gas)	The product is not flammable.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	4,14 g/cm <sup>3</sup> at 25 °C
Relative density	No information available.
Water solubility	No information available.
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

---

Explosive properties Not classified as explosive.

Oxidizing properties none

## 9.2 Other data

Ignition temperature Not applicable

Bulk density ca.1.600 - 1.800 kg/m<sup>3</sup>

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## SECTION 10. Stability and reactivity

### 10.1 Reactivity

See section 10.3

### 10.2 Chemical stability

sensitive to moisture

Sensitivity to light

### 10.3 Possibility of hazardous reactions

Violent reactions possible with:

Alkali metals

### 10.4 Conditions to avoid

no information available

### 10.5 Incompatible materials

no information available

### 10.6 Hazardous decomposition products

in the event of fire: See section 5.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

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## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

#### *Acute oral toxicity*

LD50 Rat: ca. 336 mg/kg

(ECHA)

Symptoms: Nausea, Vomiting, Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

#### *Acute inhalation toxicity*

Symptoms: Irritation symptoms in the respiratory tract., Cough, Shortness of breath

#### *Acute dermal toxicity*

LD50 Rat: > 2.000 mg/kg

OECD Test Guideline 402

#### *Skin irritation*

This information is not available.

#### *Eye irritation*

Rabbit

Result: Irreversible effects on the eye

(ECHA)

Causes serious eye damage.

#### *Sensitisation*

Maximisation Test Guinea pig

Result: negative

Method: OECD Test Guideline 406

#### *Germ cell mutagenicity*

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

---

## *Genotoxicity in vitro*

Ames test

Escherichia coli/Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 471

## *Carcinogenicity*

This information is not available.

## *Reproductive toxicity*

This information is not available.

## *Teratogenicity*

This information is not available.

## *Specific target organ toxicity - single exposure*

This information is not available.

## *Specific target organ toxicity - repeated exposure*

This information is not available.

## *Aspiration hazard*

This information is not available.

## 11.2 Further information

Systemic effects:

Changes in the blood count

Toxic effect on:

Liver

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12. Ecological information

### 12.1 Toxicity

#### *Toxicity to fish*

static test LC50 *Oryzias latipes* (Orange-red killifish): 0,039 mg/l; 96 h

Analytical monitoring: yes

OECD Test Guideline 203

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

---

## *Toxicity to daphnia and other aquatic invertebrates*

static test EC50 Daphnia magna (Water flea): 0,25 mg/l; 48 h

Analytical monitoring: yes

OECD Test Guideline 202

## *Toxicity to algae*

static test EC50 Pseudokirchneriella subcapitata (algae): 0,058 mg/l; 72 h

Analytical monitoring: yes

OECD Test Guideline 201

## **12.2 Persistence and degradability**

### *Biodegradability*

The methods for determining the biological degradability are not applicable to inorganic substances.

## **12.3 Bioaccumulative potential**

No information available.

## **12.4 Mobility in soil**

No information 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**

Discharge into the environment must be avoided.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

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## SECTION 13. Disposal considerations

### *Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14. Transport information

### Land transport (ADR/RID)

14.1 UN number	UN 2802
14.2 Proper shipping name	COPPER CHLORIDE
14.3 Class	8
14.4 Packing group	III
14.5 Environmentally hazardous	yes
14.6 Special precautions for user	yes
Tunnel restriction code	E

### Inland waterway transport (ADN)

Not relevant

### Air transport (IATA)

14.1 UN number	UN 2802
14.2 Proper shipping name	COPPER CHLORIDE
14.3 Class	8
14.4 Packing group	III
14.5 Environmentally hazardous	yes
14.6 Special precautions for user	no

### Sea transport (IMDG)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

---

**14.1 UN number** UN 2802  
**14.2 Proper shipping name** COPPER CHLORIDE  
**14.3 Class** 8  
**14.4 Packing group** III  
**14.5 Environmentally hazardous** yes  
**14.6 Special precautions for user** yes  
**EmS** F-A S-B

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
Not relevant

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## SECTION 15. Regulatory information

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

#### *EU regulations*

Major Accident Hazard SEVESO III  
Legislation ENVIRONMENTAL HAZARDS  
E1  
Quantity 1: 100 t  
Quantity 2: 200 t

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

---

Substances of very high concern (SVHC)

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  $\geq 0.1\%$  (w/w).

### *National legislation*

Storage class 8B

## 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16. Other information

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

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

### Training advice

Provide adequate information, instruction and training for operators.

### Labelling

#### *Hazard pictograms*



#### *Signal word*

Danger



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 102739  
Product name Copper(I) chloride for analysis EMSURE® ACS

---

## *Hazard statements*

H302 Harmful if swallowed.  
H318 Causes serious eye damage.  
H410 Very toxic to aquatic life with long lasting effects.

## *Precautionary statements*

### Prevention

P273 Avoid release to the environment.  
P280 Wear eye protection.

### Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P313 Get medical advice/ attention.

## **Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

## **Regional representation**

This information is given on the authorised Safety Data Sheet for your country.

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*