

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 03/14/2019

Reviewed on 03/14/2019

## 1 Identification

- **Product identifier**
- **Product Name:** 1000 µg/mL Copper
- **Part Number:** PLCU1-2X
- **Application of the substance / the mixture** Certified Reference Material
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SPEX CertiPrep, LLC.  
203 Norcross Ave, Metuchen,  
NJ 08840 USA
- **Information department:** product safety department
- **Emergency telephone number:**  
Emergency Phone Number (24 hours)  
CHEMTREC (800-424-9300)  
Outside US: 703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture** The product is not classified, according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Not Regulated
- **Hazard pictograms** Not Regulated
- **Signal word** Not Regulated
- **Hazard statements** Not Regulated
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	0	Health = *0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

### · **Dangerous components:**

7647-01-0	hydrochloric acid	2.0%
<b>· Chemical identification of the substance/preparation</b>		
7440-50-8	copper	0.1%
7732-18-5	water, distilled, conductivity or of similar purity	97.9%

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Do not give anything to eat or drink - Do not induce vomiting
- **Information for Doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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· **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

7647-01-0	hydrochloric acid	1.8 ppm
7440-50-8	copper	3 mg/m <sup>3</sup>

· **PAC-2:**

7647-01-0	hydrochloric acid	22 ppm
7440-50-8	copper	33 mg/m <sup>3</sup>

· **PAC-3:**

7647-01-0	hydrochloric acid	100 ppm
7440-50-8	copper	200 mg/m <sup>3</sup>

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
No special measures required.  
Follow good laboratory practices.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

7647-01-0 hydrochloric acid	
PEL	Ceiling limit value: 7 mg/m <sup>3</sup> , 5 ppm
REL	Ceiling limit value: 7 mg/m <sup>3</sup> , 5 ppm
TLV	Ceiling limit value: 2.98 mg/m <sup>3</sup> , 2 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** The usual precautionary measures for handling chemicals should be followed.
- **Respiratory protection:** Not required.

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**· Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**· Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**· Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**· Eye protection:** Goggles recommended during refilling.**9 Physical and chemical properties****· Information on basic physical and chemical properties****· General Information****· Appearance:**

**Form:** Liquid

**Color:** According to product specification

**· Odor:** Characteristic

**· Odour Threshold:** Not applicable.

**· pH-value:** Not applicable.

**· Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 100 °C (212 °F)

**· Flash point:** Not applicable.

**· Flammability (solid, gaseous):** Not applicable.

**· Decomposition temperature:** Not applicable.

**· Auto igniting:** Product is not selfigniting.

**· Danger of explosion:** Product does not present an explosion hazard.

**· Explosion limits:**

**Lower:** Not applicable.

**Upper:** Not applicable.

**· Vapor pressure at 20 °C (68 °F):** 23 hPa (17.3 mm Hg)

**· Density at 20 °C (68 °F)** 1.01096 g/cm<sup>3</sup> (8.43646 lbs/gal)

**· Relative density** Not applicable.

**· Vapor density** Not applicable.

**· Evaporation rate** Not applicable.

**· Solubility in / Miscibility with**

**Water:** Fully miscible.

**· Partition coefficient (n-octanol/water):** Not applicable.

**· Viscosity:**

**Dynamic:** Not applicable.

**Kinematic:** Not applicable.

**· Solvent content:**

**Water:** 97.9 %

**VOC content:** 0.00 %

**Solids content:** 0.1 %

**· Other information** No further relevant information available.

**10 Stability and reactivity**

**· Reactivity** No further relevant information available.

**· Chemical stability**

**· Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**· Possibility of hazardous reactions** No dangerous reactions known.

**· Conditions to avoid** No further relevant information available.

**· Incompatible materials:** No further relevant information available.

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· **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

7647-01-0 hydrochloric acid

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· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

### 12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:** Not hazardous for water.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:** Smaller quantities can be disposed of with household waste.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

· **UN-Number**

· **DOT, ADR, IMDG, IATA**

UN1789

· **UN proper shipping name**

· **DOT**

Hydrochloric acid

· **ADR**

1789 HYDROCHLORIC ACID

· **IMDG, IATA**

HYDROCHLORIC ACID

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<ul style="list-style-type: none"> <li>· Transport hazard class(es)</li> <li>· DOT, ADR, IMDG, IATA</li> </ul>	
<ul style="list-style-type: none"> <li>· Class</li> <li>· Label</li> </ul>	8 Corrosive substances 8
<ul style="list-style-type: none"> <li>· Packing group</li> <li>· DOT, ADR, IMDG, IATA</li> </ul>	III
<ul style="list-style-type: none"> <li>· Environmental hazards:</li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· Special precautions for user</li> <li>· Danger code (Kemler):</li> <li>· EMS Number:</li> <li>· Segregation groups</li> <li>· Stowage Category</li> </ul>	Warning: Corrosive substances 80 F-A,S-B Acids E
<ul style="list-style-type: none"> <li>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· Transport/Additional information:</li> </ul>	
<ul style="list-style-type: none"> <li>· ADR</li> <li>· Excepted quantities (EQ)</li> </ul>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> <li>· IMDG</li> <li>· Limited quantities (LQ)</li> <li>· Excepted quantities (EQ)</li> </ul>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> <li>· UN "Model Regulation":</li> </ul>	UN 1789 HYDROCHLORIC ACID, 8, III

### 15 Regulatory information

<ul style="list-style-type: none"> <li>· Safety, health and environmental regulations/legislation specific for the substance or mixture</li> <li>· Sara</li> </ul>		
<ul style="list-style-type: none"> <li>· Section 313 (Specific toxic chemical listings):</li> </ul>		
7647-01-0	hydrochloric acid	
7440-50-8	copper	
<ul style="list-style-type: none"> <li>· TSCA (Toxic Substances Control Act):</li> </ul>		
All ingredients are listed.		
<ul style="list-style-type: none"> <li>· Proposition 65</li> </ul>		
<ul style="list-style-type: none"> <li>· Chemicals known to cause cancer:</li> </ul>		
None of the ingredients is listed.		
<ul style="list-style-type: none"> <li>· Chemicals known to cause reproductive toxicity for females:</li> </ul>		
None of the ingredients is listed.		
<ul style="list-style-type: none"> <li>· Chemicals known to cause reproductive toxicity for males:</li> </ul>		
None of the ingredients is listed.		
<ul style="list-style-type: none"> <li>· Chemicals known to cause developmental toxicity:</li> </ul>		
None of the ingredients is listed.		
<ul style="list-style-type: none"> <li>· Carcinogenic categories</li> </ul>		
<ul style="list-style-type: none"> <li>· EPA (Environmental Protection Agency)</li> </ul>		
7440-50-8	copper	D
<ul style="list-style-type: none"> <li>· TLV (Threshold Limit Value established by ACGIH)</li> </ul>		
7647-01-0	hydrochloric acid	A4
<ul style="list-style-type: none"> <li>· NIOSH-Ca (National Institute for Occupational Safety and Health)</li> </ul>		
None of the ingredients is listed.		
<ul style="list-style-type: none"> <li>· GHS label elements Not Regulated</li> </ul>		

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- **Hazard pictograms** Not Regulated
- **Signal word** Not Regulated
- **Hazard statements** Not Regulated
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Department issuing SDS:** product safety department

- **Contact:**

SPEX CertiPrep, LLC.  
1-732-549-7144

- **Date of preparation / last revision** 03/14/2019 / -

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit