SAFETY DATA SHEET

Version 1.0 Revision Date N/A Print Date 04/30/2020

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

1.1 Product identifiers

Product name : Copper(II) Chloride, 0.1 Molar solution

Product Number : 101019

Brand : World Precision Instruments, Inc.

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

Identified uses : Laboratory chemical, solution for various applications

1.3 Details of the supplier of the safety data sheet

Company : World Precision Instruments, Inc.
175 Sarasota Center Blvd
Sarasota, FL 34240

Telephone : +1 941-371-1003

Fax : +1 941-377-5428

1.4 Emergency telephone number

Emergency Phone # : +1-941-371-1003

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral(Category 4), H302

Skin irritation(Category 2), H315

Eye irritation(Category 2A), H319

Aquatic acute toxicity(Category 1), H410

Aquatic chronic toxicity(Category 1), H410

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

2.2 GHS Label elements, including precautionary statements

Signal Word: WARNING

Pictogram: GHS07/GHS09

Target organs: Respiratory system, Liver, Kidneys

Hazard statement:

H302: Harmful if swallowed.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H410: Very toxic to aquatic life with long lasting effects.

Precautionary statement:

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.

P302+P352: IF ON SKIN: Wash with plenty of water and soap.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313: If skin irritation occurs: Get medical advice/attention.

P337+P313: If eye irritation persists: Get medical advice/attention.

P362+P364: Take off contaminated clothing and wash before reuse.

P391: Collect spillage.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Health hazards not otherwise classified (HHNOC) – Not known

Physical hazards not otherwise classified (PHNOC) – Not known

SECTION 3: Composition/information on ingredients

3.1 Mixtures

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	98.3%	231-791-2
Cupric chloride, dihydrate	10125-13-0	1.7%	231-210-2(anhydrous)

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

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

If inhaled

MAY BE HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

In case of skin contact

MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

In case of eye contact

CAUSES SEVERE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

If swallowed

MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

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

5.2 Special hazards arising from the substance or mixture

Hydrogen chloride gas, Copper oxides.

5.3 Advice for firefighters

In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

5.4 Further information

No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe area. Use personal protective equipment; ensure adequate ventilation.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains. Avoid runoff into storm sewers and ditches which lead to waterways.

6.3 Methods and materials for containment and cleaning up

Absorb with an inert dry material, sweep up and shovel; keep in suitable, closed containers for disposal. Wash spill area with soap and water.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Read label on container before using. Wear suitable protective clothing; avoid contact with skin, eyes and clothing. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, well-ventilated area away from incompatible substances.

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Copper, dusts and mists, as Cu	TWA: 1 mg/m_3	TWA: 1 mg/m_3	TWA: 1 mg/m_3

8.2 Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166. 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 after use.

Body Protection

Lab coat/Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For most conditions, no respiratory protection is needed. For nuisance exposures use type P95(US) or type P1(EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance Form: Clear, light blue liquid

b) Odour No odor.

c) Odour Threshold No data available

d) pH 3-5 at 25˚C (77 ˚F)

e) Melting point/freezing point Approximately 0˚C (32 ˚F)(water)

f) Initial boiling point and boiling range Approximately 100˚C (212 ˚F)(water)

g) Flash point ()No data available

h) Evaporation rate (Water = 1) <1

i) Flammability (solid, gas) No data available

j) Upper/lower flammability or explosive limits No data available

k) Vapour pressure (mm Hg) 14 (water)

l) Vapour density (Air = 1) 0.7 (water)

m) Relative density(Specific gravity) Approximately 1.0 (water)

n) Water solubility Complete in water

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

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Hygroscopic material. Avoid exposure or contact to extreme temperatures and incompatible materials.

10.5 Incompatible materials

Potassium, sodium, hydrazine, nitromethane, aluminum, strong oxidizers, acetylene and sodium hypobromite.

10.6 Hazardous decomposition products

Copper oxides and hydrogen chloride.

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

(Copper Chloride) Oral-rat LD50: 290 mg/kg; Oral-human LD50: 200 mg/kg

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

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 on OSHA's list of regulated carcinogens.

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: GL7030000

Potential health effects:

Inhalation: Symptoms of over-exposure may include irritation, sore throat, shortness of breath, ulceration and perforation of the nasal septum and upper respiratory tract irritation.

Ingestion: May cause gastrointestinal irritation with symptoms such as nausea, vomiting and diarrhea.

Skin: Contact with skin may cause symptoms of itching, redness, blistering and possible scarring, dermatitis.

Eyes: Contact with eyes may cause redness, pain and blurred vision. Prolonged contact may cause corneal injury.

Signs and symptoms of exposure: Copper salts impart a metallic taste in the mouth. Damage to the kidneys may occur in person's with Wilson's disease. High concentrations in contact with skin may result in burns. Chronic exposure may also lead to liver damage, anemia and other blood cell abnormalities.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish: Bluegill LC50: 0.9 mg/L/96 hours (Copper Chloride)

Toxicity to daphnia and other aquatic invertebrates: Daphnia magna EC50: 0.04 mg/L/48 hours (Copper Chloride)

Toxicity to algae: Selenastrum EC50: 0.12 mg/L/96 hours (Copper Chloride)

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

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all

Contaminated packaging

Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

SECTION 14: Transport information

DOT (US)

UN number:3082 Hazard Class: 9 Packing group: III

Proper shipping name: RQ, Environmentally hazardous substance, liquid, n.o.s., (Cupric chloride solution)

Reportable Quantity: 10 lbs (4.54 kg)

Marine pollutant: Yes

Exceptions: Limited quantity equal to or less than 5 Lt.; Reportable quantity equal to or more than 4.54 kg

2016 ERG Guide # 171

IMDG

UN number: 3082 Hazard Class: 9 Packing group: III EMS-No: F-A, S-B

Proper shipping name: Copper Chloride

IATA

UN number:3082 Hazard Class: 9 Packing group: III

Proper shipping name: Copper chloride

SECTION 15: Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL
Cupric Chloride(Anhydrous)	Listed	10 lbs (4.54 kg)	Not listed	Listed	Not listed

SARA 302 Components

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

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Cupric chloride(anhydrous) CAS-No.10125-13-0 Revision Date

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Cupric chloride(anhydrous) CAS-No.10125-13-0 Revision Date

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

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. World Precision Instruments, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. See www.wpiinc.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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