

Issue Date 05-Nov-2015

Revision Date 05-Nov-2015

Version 1

1. IDENTIFICATION

Product identifier

Product Name Cuprous Chloride

Other means of identification

Product Code 1810

UN/ID no. UN2802

Synonyms Copper (I) chloride; copper monochloride

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory chemicals.

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address

Harrell Industries, Inc.
2495 Commerce Drive
Rock Hill, SC 29730

www.harrellindustries.com

Emergency telephone number

Company Phone Number 803-327-6335

Fax Number 803-327-7808

24 Hour Emergency Phone Number 800-633-8253 (PERS)

Emergency Telephone (800) 633-8253 (PERS)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1

Label elements

Emergency Overview

Danger

Hazard statements

Causes serious eye damage

Harmful if swallowed

Causes skin irritation

Very toxic to aquatic life

Very toxic to aquatic life with long lasting effects



WARNING! HARMFUL IF SWALLOWED OR INHALED. AFFECTS THE LIVER AND KIDNEYS. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

Appearance White Crystals

Physical state Solid

Odor Odorless

Precautionary Statements - Prevention

Wash skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid release to the environment
Wear eye protection/ face protection
Wear protective gloves

Precautionary Statements - Response

If SWALLOWED, call a POISON CENTER or doctor/physician.
IF ON SKIN: Wash with plenty of soap and water
If INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If SWALLOWED: Rinse mouth. If ON SKIN: Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses. Continue rinsing. Get medical attention.
If skin irritation occurs. Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
Get immediate medical advice/attention
IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
Collect spillage
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Precautionary Statements - Storage

Store in accordance with local regulations

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Synonyms

Copper (I) chloride; copper monochloride.

Formula

CuCl

Chemical Name	CAS No.	Weight-%
Copper(I) chloride	7758-89-6	90

4. FIRST AID MEASURES

Description of first aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a doctor. Causes irritation, redness, pain, discoloration and possible eye damage.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Causes irritation, redness, and pain. Some individuals may develop copper allergies. Consult a physician.
Inhalation	Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.
Ingestion	May cause burning pain in mouth, esophagus, and stomach. Hemorrhagic gastritis, nausea, vomiting, abdominal pain, metallic taste, and diarrhea may occur. If vomiting does not occur immediately systematic copper poisoning may occur. Symptoms may include capillary damage, headache, cold sweat, weak pulse, kidney and liver damage, central nervous excitation followed by depression, jaundice, convulsions, blood effects, paralysis and coma. Death may occur from shock or renal failure.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

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

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

Hydrogen chloride gas, Copper oxides.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

Methods and material for containment and cleaning up

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

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Air, light and moisture sensitive. Storage class (TRGS 510): Non Combustible Solids.

Incompatible materials Oxidizing agents. Alkali metals. Potassium. Acetylene. Hydrazine. Nitromethane. Reacts violently with lithium nitride and heat.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Copper(I) chloride 7758-89-6	TWA: 1 mg/m ³ Cu dust and mist	-	IDLH: 100 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Cu dust and mist

Appropriate engineering controls

Engineering Controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the work day.

Individual protection measures, such as personal protective equipment

Eye/face protection Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body 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. Full Contact: Material: Nitrile rubber, Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dematril (R) (KCL 740 Aldrich Z677272, Size M). Splash contact: Material Nitrile rubber. Minimum Layer thickness: 0.11 mm Break through time: 480 min Material tested Dermatril (R) (KCL 740/Aldrich Z677272, Size M). data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0) 6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety office familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario. Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100(US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid	Odor	Odorless
Appearance	White Crystals	Odor threshold	No information available
Color	No information available		
Property	Values	Remarks • Method	
pH	No information available		
Melting point / freezing point	430 °C / 806 °F		
Boiling point / boiling range	1490 °C / 2714 °F		
Flash point	No information available		
Evaporation rate	No information available		
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	0.975 @ 546C (1015F)		
Vapor density	No information available		
Relative density	4.14		
Water solubility	slightly soluble		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other Information			
Softening point	No information available		
Molecular weight	No information available		
VOC Content (%)	No information available		
Density	No information available		
Bulk density	No information available		

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

air. Exposure to moisture. light.

Incompatible materials

Oxidizing agents. Alkali metals. Potassium. Acetylene. Hydrazine. Nitromethane. Reacts violently with lithium nitride and heat.

Hazardous Decomposition Products

No information available. In event of fire see section 5.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact Risk of serious damage to eyes.

Skin contact Irritating to skin.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Copper(I) chloride 7758-89-6	= 140 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen

Numerical measures of toxicity - Product Information

12. ECOLOGICAL INFORMATION

Ecotoxicity

100% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability

Bioaccumulation

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

Chemical Name	California Hazardous Waste Status
Copper(I) chloride 7758-89-6	Toxic

14. TRANSPORT INFORMATION

DOT Regulated

UN/ID no. UN2802

Proper shipping name Copper Chloride

Hazard Class 8

Packing Group	III
Reportable Quantity (RQ)	2.5 KG
TDG	Regulated
UN/ID no.	UN2082
Proper shipping name	COPPER CHLORIDE
Hazard Class	8
Packing Group	III
IATA	Regulated
UN/ID no.	UN2082
Proper shipping name	Copper Chloride
Hazard Class	8
Packing Group	III
IMDG	Regulated
UN/ID no.	UN2082
Proper shipping name	Copper Chloride
Hazard Class	8
Packing Group	III

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Copper(I) chloride - 7758-89-6	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Copper(I) chloride 7758-89-6	-	X	-	-

CERCLAUS State RegulationsCalifornia Proposition 65U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Copper(I) chloride 7758-89-6	X	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION
--

<u>NFPA</u>	Health hazards 2	Flammability 0	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 2*	Flammability 0	Physical hazards 0	Personal protection X

Issue Date 05-Nov-2015

Revision Date 05-Nov-2015

Revision Note

No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet