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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	30196
NAME:	Copper(I) chloride
SYNONYMS:	Copper monochloride Cuprous chloride
24 HOUR EMERGENCY TELEPHONE:	(800) 535-5053(USA) 352-323-3500 (INTERNATIONAL)
TO REQUEST AN MSDS:	(800) 869-9290
CUSTOMER SERVICE:	(630) 766-2112

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)
ACUTE TOXICITY, ORAL (CATEGORY 4), H302
SERIOUS EYE DAMAGE (CATEGORY 1), H318

SHORT-TERM (ACUTE) AQUATIC HAZARD (CATEGORY 1), H400
LONG-TERM (CHRONIC) AQUATIC HAZARD (CATEGORY 1), H410

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE
SECTION 16.

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS
PICTOGRAM**



SIGNAL WORD DANGER

HAZARD STATEMENT(S)

H302 HARMFUL IF SWALLOWED.
H318 CAUSES SERIOUS EYE DAMAGE.
H410 VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING
EFFECTS.

PRECAUTIONARY STATEMENT(S)

P264 WASH SKIN 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 + P312 + P330 IF SWALLOWED: CALL A POISON CENTER OR DOCTOR/
PHYSICIAN IF YOU FEEL UNWELL. RINSE MOUTH.
P305 + P351 + P338 + IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL
P310 MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND
EASY TO DO. CONTINUE RINSING. IMMEDIATELY CALL A
POISON CENTER OR DOCTOR/ PHYSICIAN.
P391 COLLECT SPILLAGE.
P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED
WASTE DISPOSAL PLANT.

**HAZARDS NOT
OTHERWISE
CLASSIFIED (HNOC)
OR NOT COVERED
BY GHS** NONE

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF:	CuCl
MW:	99.00
CAS-NO.	7758-89-6
PURITY:	≥ 90% (Assay by titration)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Copper(I) chloride		
	ACUTE TOX. 4; EYE DAM. 1; AQUATIC ACUTE 1; AQUATIC CHRONIC 1; H302, H318, H400, H410 M-FACTOR - AQUATIC ACUTE: 10 - AQUATIC CHRONIC: 1	<= 100 %

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

SECTION 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.
IF INHALED	IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT A PHYSICIAN.
IN CASE OF SKIN CONTACT	WASH OFF WITH SOAP AND PLENTY OF WATER. CONSULT A PHYSICIAN.
IN CASE OF EYE CONTACT	RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.
IF SWALLOWED	NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN.
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.
INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED	NO DATA AVAILABLE

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA	USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE.
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	HYDROGEN CHLORIDE GAS, COPPER OXIDES
ADVICE FOR FIREFIGHTERS	WEAR SELF-CONTAINED BREATHING APPARATUS FOR FIREFIGHTING IF NECESSARY.
FURTHER INFORMATION	NO DATA AVAILABLE

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES	USE PERSONAL PROTECTIVE EQUIPMENT. AVOID DUST FORMATION. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. EVACUATE PERSONNEL TO SAFE AREAS. AVOID BREATHING DUST. FOR PERSONAL PROTECTION SEE SECTION 8.
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 MATERIALS FOR CONTAINMENT AND CLEANING UP	PICK UP AND ARRANGE DISPOSAL WITHOUT CREATING DUST. SWEEP UP AND SHOVEL. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.
REFERENCE TO OTHER SECTIONS	FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING	AVOID CONTACT WITH SKIN AND EYES. AVOID FORMATION OF DUST AND AEROSOLS.FURTHER PROCESSING OF 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.
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PROVIDE APPROPRIATE EXHAUST VENTILATION AT PLACES WHERE DUST IS FORMED.
FOR PRECAUTIONS SEE SECTION 2.2.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE.

AIR, LIGHT, AND MOISTURE SENSITIVE.

Store at RT

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

CONTROL PARAMETERS

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

COMPONENT	CAS-NO.	VALUE	CONTROL PARAMETERS	BASIS
Copper(I) chloride	7758-89-6	TWA	1 MG/M3	USA. NIOSH RECOMMENDED EXPOSURE LIMITS
		PEL	1 MG/M3	CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS

EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE. WASH HANDS BEFORE BREAKS AND AT THE END OF WORKDAY.

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 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:DERMATRIL (KCL 740, SIZE M)

SPLASH CONTACT

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.11 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M)

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 OFFICER 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.

BODY PROTECTION

COMPLETE SUIT PROTECTING AGAINST CHEMICALS, 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 FULLFACE 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).

CONTROL OF ENVIRONMENTAL EXPOSURE

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	White to green crystalline solid
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	5 AT 50 G/L AT 20 °C
MELTING	430 °C (Approx.)
POINT/FREEZING POINT	
INITIAL BOILING POINT	1490 °C
AND BOILING RANGE	
FLASH POINT	
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER	NO DATA AVAILABLE
FLAMMABILITY OR	
EXPLOSIVE LIMITS	
VAPOUR PRESSURE	1.7 HPA AT 546 °C
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	4.14 g/mL @ 25 °C
WATER SOLUBILITY	0.047 G/L AT 20 °C - SLIGHTLY SOLUBLE
PARTITION COEFFICIENT: N- OCTANOL/WATER	NO DATA AVAILABLE
AUTO-IGNITION	NO DATA AVAILABLE
TEMPERATURE	
DECOMPOSITION	NO DATA AVAILABLE
TEMPERATURE	
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	NO DATA AVAILABLE

OTHER SAFETY INFORMATION

BULK DENSITY	1.7 G/L AT 20 °C
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SECTION 10. STABILITY AND REACTIVITY

REACTIVITY	NO DATA AVAILABLE
CHEMICAL STABILITY	STABLE UNDER RECOMMENDED STORAGE CONDITIONS.
POSSIBILITY OF HAZARDOUS REACTIONS	NO DATA AVAILABLE
CONDITIONS TO AVOID	AIR AVOID MOISTURE. LIGHT.

**INCOMPATIBLE
MATERIALS**

OXIDIZING AGENTS, ALKALI METALS

**HAZARDOUS
DECOMPOSITION
PRODUCTS**

HAZARDOUS DECOMPOSITION PRODUCTS FORMED
UNDER FIRE CONDITIONS. - HYDROGEN CHLORIDE
GAS, COPPER OXIDES
OTHER DECOMPOSITION PRODUCTS - NO DATA
AVAILABLE
IN THE EVENT OF FIRE: SEE SECTION 5

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS**ACUTE TOXICITY**

LD50 ORAL - RAT - 336 MG/KG

INHALATION: NO DATA AVAILABLE

DERMAL: NO DATA AVAILABLE

NO DATA AVAILABLE

**SKIN
CORROSION/IRRITATION**

NO DATA AVAILABLE

**SERIOUS EYE
DAMAGE/EYE IRRITATION**

EYES - RABBIT
RESULT: RISK OF SERIOUS DAMAGE TO EYES.

**RESPIRATORY OR SKIN
SENSITISATION**

MAXIMISATION TEST - GUINEA PIG
DOES NOT CAUSE SKIN SENSITISATION.
(OECD TEST GUIDELINE 406)

**GERM CELL
MUTAGENICITY**

RAT
ASCITES TUMOR
CYTOGENETIC ANALYSIS

CARCINOGENICITY

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
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SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	NO DATA AVAILABLE
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ASPIRATION HAZARD	NO DATA AVAILABLE
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ADDITIONAL INFORMATION	RTECS: GL6990000
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SYMPTOMS OF SYSTEMIC COPPER POISONING MAY INCLUDE: CAPILLARY DAMAGE, HEADACHE, COLD SWEAT, WEAK PULSE, AND KIDNEY AND LIVER DAMAGE, CENTRAL NERVOUS SYSTEM EXCITATION FOLLOWED BY DEPRESSION, JAUNDICE, CONVULSIONS, PARALYSIS, AND COMA. DEATH MAY OCCUR FROM SHOCK OR RENAL FAILURE. CHRONIC COPPER POISONING IS TYPIFIED BY HEPATIC CIRRHOSIS, BRAIN DAMAGE AND DEMYELINATION, KIDNEY DEFECTS, AND COPPER DEPOSITION IN THE CORNEA AS EXEMPLIFIED BY HUMANS WITH WILSON'S DISEASE. IT HAS ALSO BEEN REPORTED THAT COPPER POISONING HAS LEAD TO HEMOLYTIC ANEMIA AND ACCELERATES ARTERIOSCLEROSIS. TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

STOMACH - IRREGULARITIES - BASED ON HUMAN EVIDENCE

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY	
TOXICITY TO FISH	LC50 - ONCORHYNCHUS MYKISS (RAINBOW TROUT) - 0.05 - 0.36 MG/L - 96.0 H

PERSISTENCE AND DEGRADABILITY	NO DATA AVAILABLE
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BIOACCUMULATIVE POTENTIAL	NO DATA AVAILABLE
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MOBILITY IN SOIL	NO DATA AVAILABLE
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**RESULTS OF PBT AND
VPVB ASSESSMENT**

PBT/VPVB ASSESSMENT NOT AVAILABLE AS
CHEMICAL SAFETY ASSESSMENT NOT
REQUIRED/NOT CONDUCTED

OTHER ADVERSE EFFECTS

AN ENVIRONMENTAL HAZARD CANNOT BE
EXCLUDED IN THE EVENT OF UNPROFESSIONAL
HANDLING OR DISPOSAL.
VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING
EFFECTS.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT

OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS
TO A LICENSED DISPOSAL COMPANY. CONTACT A
LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE
TO DISPOSE OF THIS MATERIAL. DISSOLVE OR MIX THE
MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN
IN A CHEMICAL INCINERATOR EQUIPPED WITH AN
AFTERBURNER AND SCRUBBER.

**CONTAMINATED
PACKAGING**

DISPOSE OF AS UNUSED PRODUCT.

SECTION 14. TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: COPPER CHLORIDE
UN NUMBER: 2802
CLASS: 8
PACKING GROUP: III
REPORTABLE QUANTITY
(RQ):
POISON INHALATION HAZARD: NO

IMDG

PROPER SHIPPING NAME: COPPER CHLORIDE
UN NUMBER: 2802
CLASS: 8
PACKING GROUP: III
EMS-NO: F-A, S-B
MARINE POLLUTANT: YES

IATA

PROPER SHIPPING NAME: COPPER CHLORIDE

UN NUMBER: 2802
CLASS: 8
PACKING GROUP: III

SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS THIS MATERIAL DOES NOT CONTAIN ANY COMPONENTS WITH A SECTION 302 EHS TPQ.

SARA 313 COMPONENTS

THE FOLLOWING COMPONENTS ARE SUBJECT TO REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313:

	CAS-NO.	REVISION DATE
Copper(I) chloride	7758-89-6	07-08-2015

SARA 311/312 HAZARDS ACUTE HEALTH HAZARD, CHRONIC HEALTH HAZARD

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

	CAS-NO.	REVISION DATE
Copper(I) chloride	7758-89-6	07-08-2015

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.
H410	VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

MSDS LEGEND

MW:	MOLECULAR WEIGHT
MF:	MOLECULAR FORMULA
VOC:	VOLATILE ORGANIC COMPOUNDS
ACGIH:	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
CAS:	CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
OSHA:	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PEL:	PERMISSIBLE EXPOSURE LIMIT (OSHA)
TLV:	THRESHOLD LIMIT VALUE (ACGIH)

IMPORTANT:

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