Fisher Scientific

Material Safety Data Sheet
Copper(II) chloride dihydrate

MSDS# 05625

Section 1 - Chemical Product and Company Identification

MSDS Name:	Copper(II) chloride dihydrate
Catalog Numbers:	AC206340000, AC206345000, AC270530000, AC270530010, AC270530025, AC315280000 AC315280000, AC315281000, AC405840000, AC405840050, AC405845000, C454-3, C454-500, C455-500, AC270532500
Synonyms:	Cupric chloride dihydrate.

Company Identification:	Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410
For information in the US, call:	201-796-7100
Emergency Number US:	201-796-7100
CHEMTREC Phone Number, US:	800-424-9300

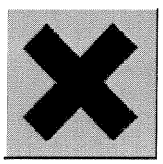
Section 2 - Composition, Information on Ingredients

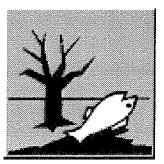
Risk Phrases:

CAS#:	10125-13-0
Chemical Name:	Copper(II) chloride dihydrate
%:	98
EINECS#:	unlisted
Hazard Symbols:	

Text for R-phrases: see Section 16

Hazard Symbols: XN N





Risk Phrases: 22 36/37/38 50/53

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! Hygroscopic (absorbs moisture from the air). Harmful if swallowed. Causes eye, skin, and respiratory tract irritation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Target Organs: Respiratory system, eyes, skin.

Potential Health Effects

Eye:	Causes eye irritation.
Skin:	Causes skin irritation. May be harmful if absorbed through the skin.
Ingestion:	Harmful if swallowed. May cause irritation of the digestive tract.
Inhalation:	Causes respiratory tract irritation. May be harmful if inhaled.
Chronic:	Prolonged or repeated skin contact may cause dermatitis. Effects may be delayed. Individuals with Wilson's disease are unable to metabolize copper. Thus, copper accumulates in various tissues and may result in liver, kidney, and brain damage.

Section 4 - First Aid Measures

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower

Eyes:	eyelids. Get medical aid.
Skin:	Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion:	Do not induce vomiting. Get medical aid immediately. Call a poison control center.
Inhalation:	Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Notes to Physician:	Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is noncombustible.
Extinguishing Media:	Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.
Autoignition Temperature:	Not applicable.
Flash Point:	Not applicable.
Explosion Limits: Lower:	Not available
Explosion Limits: Upper:	Not available
NFPA Rating:	health: 2; flammability: 0; instability: 1;

Section 6 - Accidental Release Measures

General Information:	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:	Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling:	Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use with adequate ventilation.
Storage:	Store in a cool, dry place. Store in a tightly closed container. Store under argon.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Cupric chloride anhydrous	none listed	1 mg/m3 TWA (dust and mist, as Cu, except copper fume) (listed under Copper compounds, n.o.s.).100 mg/m3 IDLH (dust and mist, as Cu) (listed under Copper compounds, n.o.s.).	none listed
Copper(II) chloride dihydrate	none listed	1 mg/m3 TWA (dust and mist, as Cu, except copper fume) (listed under Copper compounds, n.o.s.).100 mg/m3 IDLH (dust and	none listed

		mist, as Cu) (listed under Copper compounds, n.o.s.).		

OSHA Vacated PELs: Cupric chloride anhydrous: None listed Copper(II) chloride dihydrate: None listed

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Color: blue - green

Odor: odorless

pH: 3 - 3.8 (5% aq.sol.)

Vapor Pressure: Not available

Vapor Density: 5.9 (air=1)

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: 100 deg C (decom)

Decomposition Temperature:

Solubility in water: 1150 g/L (20°C)

Specific Gravity/Density: 2.54 (water=1)

Molecular Formula: CuCl2.2H2O

Molecular Weight: 170.48

Section 10 - Stability and Reactivity

Chemical Stability: Hygroscopic: absorbs moisture or water from the air.

Conditions to Avoid: Incompatible materials, dust generation, excess heat, exposure to moist air or water.

Incompatibilities with Other Materials: Strong oxidizing agents, alkali metals.

Hazardous Decomposition Products: Hydrogen chloride, metallic oxides.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 7447-39-4: GL7000000
CAS# 10125-13-0: GL7030000

LD50/LC50: RTECS:
CAS# 7447-39-4: Oral, mouse: LD50 = 233 mg/kg;
Oral, rat: LD50 = 584 mg/kg;
Oral, rat: LD50 = 140 mg/kg;

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RTECS:
CAS# 10125-13-0:.

Carcinogenicity: Cupric chloride anhydrous - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Copper(II) chloride dihydrate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: COPPER CHLORIDE
Hazard Class: 8
UN Number: UN2802
Packing Group: III
Canada TDG
Shipping Name: COPPER CHLORIDE
Hazard Class: 8
UN Number: UN2802
Packing Group: III

USA RQ: CAS# 7447-39-4: 10 lb final RQ; 4.54 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN N

Risk Phrases:

R 22 Harmful if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 29 Do not empty into drains.

S 37/39 Wear suitable gloves and eye/face protection.

S 57 Use appropriate containment to avoid environmental contamination.

WGK (Water Danger/Protection)

CAS# 7447-39-4: 2

CAS# 10125-13-0: Not available

Canada

CAS# 7447-39-4 is listed on Canada's DSL List

Canadian WHMIS Classifications: D1B, E

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7447-39-4 is not listed on Canada's Ingredient Disclosure List.

CAS# 10125-13-0 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 7447-39-4 is listed on the TSCA Inventory.

CAS# 10125-13-0 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form in on the Inventory (40CFR720.3(u)(2)).

Section 16 - Other Information

MSDS Creation Date: 6/09/1999

Revision #13 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

REVIEWED

DATE: MAY 14 2012