

10/3/07



SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 09/26/2007
Date Updated: 02/05/2006
Version 1.40

Section 1 - Product and Company Information

| | | | |
|----------------------------------|--|-------------------------|--------------|
| Product Name | Chlorophyllin sodium copper salt, Commercial Grade | | |
| Product Number | C6003 | | |
| Brand | Sigma Chemical | | |
| Company | Sigma-Aldrich | | |
| Street Address | 3050 Spruce Street | | |
| City, State, Zip, Country | SAINT LOUIS, MO 63103 US | | |
| Technical Phone: | 800-325-5832 | Emergency Phone: | 314-776-6555 |
| Fax: | 800-325-5052 | | |

Section 2 - Composition/Information on Ingredient

| Substance Name | CAS # | SARA 313 | EC no | Annex I Index Number |
|--|------------|----------|-----------|----------------------|
| CHLOROPHYLLIN SODIUM-COPPER COMMERCIAL GRADE | 11006-34-1 | Yes | 234-242-5 | |

Formula C34H31CuN4O6.3Na
Synonyms Chlorophyllin, potassium, sodium, and copper metallo-complex, Chlorine e6, copper deriv., trisodium salt, Chlorophyllin, copper sodium complex (8Cl), Chlorophyllin sodium copper salt, Potassium sodium copper chlorophyllin, Sodium-copper chlorin e6

Section 3 - Hazards Identification

Emergency Overview

Caution: Avoid contact and inhalation.

HMIS Rating

Health: 1 Flammability: 0 Reactivity: 1

NFPA Rating

Health: 1 Flammability: 0 Reactivity: 1

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Dermal Exposure

In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A

Extinguishing Media

Suitable

Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s)

Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

Methods for Cleaning Up

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling

User Exposure

Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage

Suitable

Keep tightly closed. Store at 2-8°C

Special Requirements

Light sensitive.

Section 8 - Exposure Controls / PPE

Engineering Controls

Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment

Respiratory

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.

Hand

Protective gloves.

Eye

Chemical safety goggles.

General Hygiene Measures
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance
Physical State **Color**
Solid Green-Black

Molecular Weight: 724.1 AMU

pH N/A
BP/BP Range N/A
MP/MP Range N/A
Freezing Point N/A
Vapor Pressure N/A
Vapor Density N/A
Saturated Vapor Conc. N/A
SG/Density N/A
Bulk Density N/A
Odor Threshold N/A
Volatile% N/A
VOC Content N/A
Water Content N/A
Solvent Content N/A
Evaporation Rate N/A
Viscosity N/A
Partition Coefficient N/A
Decomposition Temp. N/A
Flash Point °F N/A
Flash Point °C N/A

Explosion Limits N/A

Flammability N/A
Autoignition Temp N/A
Solubility
Solubility in Water: Soluble.

N/A = not available

Section 10 - Stability and Reactivity

Stability
Stable.
Stable.
Conditions of Instability
Light sensitive.
Materials to Avoid
Strong oxidizing agents.

Hazardous Decomposition Products
Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide, Nitrogen oxides, Copper oxide.

Hazardous Polymerization
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure
Skin Contact
May cause skin irritation.
Skin Absorption
May be harmful if absorbed through the skin.
Eye Contact
May cause eye irritation.
Inhalation
May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion
May be harmful if swallowed.

Signs and Symptoms of Exposure
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.

RTECS Number: GS2168866

Toxicity Data

Oral - Mouse: 7000 mg/kg (LD50)
Remarks: Nutritional and Gross Metabolic: Weight loss or decreased weight gain.
Intraperitoneal - Mouse: 190 MG/KG (LD50)

Chronic Exposure - Mutagen

| Species | Dose | Route | Mutation test |
|---------|------------|-------|-----------------------------|
| Mouse | 1500 UG/KG | Oral | Other mutation test systems |

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation
Bury in a landfill site approved for the disposal of chemical and hazardous wastes.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

EU Additional Classification
Safety Statements **S:** 22 24/25
Do not breathe dust. Avoid contact with skin and eyes.

US Classification and Label Text

US Statements

Caution: Avoid contact and inhalation.

United States Regulatory Information

SARA Listed: Yes

Deminimis: 1.0 %

Notes: This product is subject to SARA section 313 reporting requirements - copper compounds.

TSCA Inventory Item: Yes

Canada Regulatory Information

WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16 - Other Information

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

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. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.