



Post Apple Scientific, inc
8893 Gulf Rd
North East, PA 16428

SAFETY DATA SHEET

Creation Date 08-Jan-2015

Revision Date 08-Jan-2015

Revision Number 1

1. Identification

Product Name Copper

Cat No. : C3140, C3150, C3180, C3200, C3210, C3220

Synonyms None.

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company

Post Apple Scientific, inc.
8893 Gulf Rd
North East, PA 16428
Tel: 814-725-3330

Emergency Telephone Number

CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Based on available data, the classification criteria are not met

Label Elements

None required

Hazards not otherwise classified (HNOC)

None identified

3. Composition / information on ingredients

| Component | CAS-No | Weight % |
|-----------|-----------|----------|
| Copper | 7440-50-8 | 100 |

4. First-aid measures

| | |
|---|--|
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur. |
| Inhalation | Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur. |
| Ingestion | Do not induce vomiting. Obtain medical attention. |
| Most important symptoms/effects Notes to Physician | No information available. Treat symptomatically |

5. Fire-fighting measures

| | |
|---|---|
| Suitable Extinguishing Media | Substance is nonflammable; use agent most appropriate to extinguish surrounding fire. |
| Unsuitable Extinguishing Media | No information available |
| Flash Point Method - | Not applicable No information available |
| Autoignition Temperature | No information available |
| Explosion Limits | |
| Upper | No data available |
| Lower | No data available |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | No information available |

Specific Hazards Arising from the Chemical

Non-combustible. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Copper oxides

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.

NFPA

| | | | |
|---------------|---------------------|--------------------|-------------------------|
| Health | Flammability | Instability | Physical hazards |
| 1 | 0 | 0 | N/A |

6. Accidental release measures

| | |
|---|---|
| Personal Precautions | Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. |
| Environmental Precautions | Avoid release to the environment. See Section 12 for additional ecological information. |
| Methods for Containment and Clean Up | Sweep up or vacuum up spillage and collect in suitable container for disposal. |

7. Handling and storage

| | |
|-----------------|--|
| Handling | Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. |
| Storage | Keep containers tightly closed in a dry, cool and well-ventilated place. |

8. Exposure controls / personal protection

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|-----------|--|--|---|
| Copper | TWA: 0.2 mg/m ³ TWA: 1 mg/m ³ | (Vacated) TWA: 0.1 mg/m ³ TWA: 0.1 mg/m ³ TWA: 1 mg/m ³ | IDLH: 100 mg/m ³ TWA: 1 mg/m ³ TWA: 0.1 mg/m ³ |

| Component | Quebec | Mexico OEL (TWA) | Ontario TWA EV |
|-----------|--|---|--|
| Copper | TWA: 0.2 mg/m ³ TWA: 1 mg/m ³ | TWA: 0.2 mg/m ³ TWA: 1 mg/m ³ STEL: 2 mg/m ³ | TWA: 0.2 mg/m ³ TWA: 1 mg/m ³ |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection

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 and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

| | |
|--|--------------------------|
| Physical State | Solid |
| Appearance | Red brown |
| Odor | Odorless |
| Odor Threshold | No information available |
| pH | No information available |
| Melting Point/Range | 1083 °C / 1981.4 °F |
| Boiling Point/Range | 2595 °C / 4703 °F |
| Flash Point | Not applicable |
| Evaporation Rate | No information available |
| Flammability (solid,gas) | No information available |
| Flammability or explosive limits | |
| Upper | No data available |
| Lower | No data available |
| Vapor Pressure | 1 mmHg @ 1628 °C |
| Vapor Density | No information available |
| Relative Density | 8.92 |
| Solubility | Insoluble in water |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | No information available |
| Decomposition Temperature | No information available |
| Viscosity | No information available |
| Molecular Formula | Cu |
| Molecular Weight | 63.54 |

10. Stability and reactivity

| | |
|------------------------|--|
| Reactive Hazard | None known, based on information available |
| Stability | Stable under normal conditions. |
| Conditions to Avoid | Incompatible products. Excess heat. |
| Incompatible Materials | Strong oxidizing agents |

Hazardous Decomposition Products Copper oxides**Hazardous Polymerization** Hazardous polymerization does not occur.**Hazardous Reactions** None under normal processing.**11. Toxicological information****Acute Toxicity****Product Information** No acute toxicity information is available for this product**Component Information****Toxicologically Synergistic Products** No information available**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Irritation** No information available**Sensitization** No information available**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|-----------|-----------|------------|------------|------------|------------|------------|
| Copper | 7440-50-8 | Not listed | Not listed | Not listed | Not listed | Not listed |

Mutagenic Effects No information available**Reproductive Effects** No information available.**Developmental Effects** No information available.**Teratogenicity** No information available.**STOT - single exposure** None known**STOT - repeated exposure** None known**Aspiration hazard** No information available**Symptoms / effects, both acute and delayed** No information available**Endocrine Disruptor Information** No information available**Other Adverse Effects** The toxicological properties have not been fully investigated.**12. Ecological information****Ecotoxicity**

This product contains the following substance(s) which are hazardous for the environment.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|-----------|--|---|------------|-----------------------|
| Copper | 0.031 - 0.054 mg/L EC50 96 h 0.0426 - 0.0535 mg/L EC50 72 h | 0.112 mg/L LC50 96 h 0.8 mg/L LC50 96 h 0.3 mg/L LC50 96 h 1.25 mg/L LC50 96 h 0.052 mg/L LC50 96 h 0.2 mg/L LC50 96 h 0.0068 - 0.0156 mg/L LC50 96 h | Not listed | 0.03 mg/L EC50 = 48 h |

Persistence and Degradability No information available**Bioaccumulation/ Accumulation** No information available.**Mobility** No information available.**13. Disposal considerations**

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

| | |
|-----------------|---------------|
| DOT | Not regulated |
| TDG | Not regulated |
| IATA | Not regulated |
| IMDG/IMO | Not regulated |

15. Regulatory information

All of the components in the product are on the following Inventory lists: Australia X = listed China Canada The product is classified and labeled according to EC directives or corresponding national laws The product is classified and labeled in accordance with Directive 1999/45/EC Europe TSCA Korea Philippines

International Inventories

| Component | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|-----------|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Copper | X | X | - | 231-159-6 | - | | X | - | X | X | X |

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

| Component | CAS-No | Weight % | SARA 313 - Threshold Values % |
|-----------|-----------|----------|-------------------------------|
| Copper | 7440-50-8 | 100 | 1.0 |

SARA 311/312 Hazardous Categorization

| | |
|-----------------------------------|----|
| Acute Health Hazard | No |
| Chronic Health Hazard | No |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

Clean Water Act

| Component | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|-----------|----------------------------|-----------------------------|------------------------|---------------------------|
| Copper | - | - | X | X |

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable**CERCLA**

| Component | Hazardous Substances RQs | CERCLA EHS RQs |
|-----------|--------------------------|----------------|
|-----------|--------------------------|----------------|

| | | |
|--------|---------|---|
| Copper | 5000 lb | - |
|--------|---------|---|

California Proposition 65 This product does not contain any Proposition 65 chemicals

State Right-to-Know

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-----------|---------------|------------|--------------|----------|--------------|
| Copper | X | X | X | X | X |

U.S. Department of Transportation

Reportable Quantity (RQ): N
 DOT Marine Pollutant N
 DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class Non-controlled

16. Other information

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Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of SDS