Material Safety Data Sheet

Version 3.0
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Copper(I) cyanide

Product Number : 216305
Brand : Sigma-Aldrich

Company : Sigma-Aldrich Canada, Ltd
2149 Winston Park Drive
OAKVILLE ON L6H 6J8
CANADA
Telephone : +19058299500
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Cuprous cyanide

Formula : CCuN
Molecular Weight : 89.56 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Copper cyanide			
544-92-3	208-883-6	006-007-00-5	-

3. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs

Central nervous system, Heart, Blood

WHMIS Classification

D1A Very Toxic Material Causing Immediate and Serious Toxic Effects

Highly toxic by skin absorption
Highly toxic by inhalation

HMIS Classification

Health hazard: 4
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 0

Potential Health Effects

Inhalation May be fatal if inhaled. May cause respiratory tract irritation.
Skin May cause skin irritation. May be fatal if absorbed through skin.
Eyes May cause eye irritation.

Ingestion Harmful if swallowed.

4. 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. Take victim immediately to hospital. 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.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point	no data available
Ignition temperature	no data available

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

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 for cleaning up
Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage
Keep container tightly closed in a dry and well-ventilated place.
Do not store near acids.

Store under inert gas. Air sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control	Update	Basis

			parameters		
Copper cyanide	544-92-3	STEL	10 ppm 11 mg/m3	2000-01-12	Canada. Quebec OELs
Remarks	Skin (percutaneous) A substance which may not be recirculated in accordance with section 108 CEILING : The designation "C" in the STEV/Ceiling column refers to a concentration never be exceeded during any length of time whatsoever.				
		STEL	5 mg/m3	2004-08-01	Canada. British Columbia OEL
	Contributes significantly to the overall exposure by the skin route. ceiling limit				

Personal protective equipment

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).

Hand protection
Handle with gloves.

Eye protection
Face shield and safety glasses

Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	solid

Safety data

pH	no data available
Melting point	474 °C (885 °F)
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	2.92 g/mL at 25 °C (77 °F)
Water solubility	no data available

10. STABILITY AND REACTIVITY

Storage stability
Stable under recommended storage conditions.

Materials to avoid
acids, Oxidizing agents, Bases, Nitrates, Magnesium

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NOx), Copper oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 1,265 mg/kg

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

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.

Signs and Symptoms of Exposure

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., Dermatitis, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

Inhalation	May be fatal if inhaled. May cause respiratory tract irritation.
Skin	May cause skin irritation. May be fatal if absorbed through skin.
Eyes	May cause eye irritation.
Ingestion	Harmful if swallowed.
Target Organs	Central nervous system, Heart, Blood,

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

no data available

Further information on ecology

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

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

13. DISPOSAL CONSIDERATIONS

Product
Observe all federal, state, and local environmental regulations. 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.

14. TRANSPORT INFORMATION

DOT (US)
UN-Number: 1587 Class: 6.1 Packing group: II
Proper shipping name: Copper cyanide
Reportable Quantity (RQ): 10 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN-Number: 1587 Class: 6.1 Packing group: II EMS-No: F-A, S-A
Proper shipping name: COPPER CYANIDE
Marine pollutant: Marine pollutant

IATA
UN-Number: 1587 Class: 6.1 Packing group: II
Proper shipping name: Copper cyanide

15. REGULATORY INFORMATION

DSL Status
All components of this product are on the Canadian DSL list.

WHMIS Classification

D1A	Very Toxic Material Causing Immediate and Serious Toxic Effects	Highly toxic by skin absorption Highly toxic by inhalation

16. OTHER INFORMATION

Further information

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 Co., 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.