

MATERIAL SAFETY DATA SHEET

Science K.
& Boreal
Laboratories

777 East Park Drive
Tonawanda, NY 14150-6781
(716) 874-6920

Boreal Laboratories Ltd.
1800 Mattawa Avenue
Montreal, Quebec L4X 1K6

MSDS No. CC 420
Effective Date July 1, 1986

SECTION I NAME		24 HOUR EMERGENCY ASSISTANCE		
Product	COPPER, METAL	CHEMTREC 800-424-9300 Day 716-226-6177 Night 716-334-4222 NFPA HAZARD RATING LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4	Health	0
Chemical Synonyms	Copper: shot, granules, powder, sheet, foil, turnings.		Fire	0
Formula	Cu		Reactivity	0
Unit(s) Size	30 grams to 2.5 Kg.			
C.A.S. No.	7440-50-8			

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES		
Principal Hazardous Component(s)	%	TLV Units
Copper Metal: shot, granules, powder, sheet, foil, turnings.	100%	Fume 0.2 mg/m³ Dust and mist, as Copper 1 mg/m³.
CAUTION! DO NOT BREATHE METAL DUST.		

SECTION III PHYSICAL DATA		
Melting Point (°F)	1083°C	Specific Gravity (H ₂ O = 1) 8.92 at 20°C
Boiling Point (°F)	2324°C	Percent Volatile by Volume (%) Non-volatile (NA)
Vapor Pressure (mm Hg)	1 mm @ 1628°C	Evaporation Rate (Non-volatile (NA))
Vapor Density (Air = 1)	Data not listed	
Solubility in Water	Insoluble	
Appearance and Odor	Reddish, lustrous metal in the form of shot, granules, powder, sheet, foil, turnings.	

SECTION IV FIRE AND EXPLOSION HAZARD DATA			
Flash Point (Method Used)	Non-combustible (NA)	Flammable Limits in Air % by Volume	Lower Upper
Extinguisher Media	Dry sand, earth, dolomite, and sodium chloride.		

SPECIAL FIREFIGHTING PROCEDURES	Use no water in fighting fires.
	In fire conditions, wear a NIOSH-approved self-contained breathing apparatus and protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS	Fire or excessive heat may produce hazardous decomposition products. Dangerous in dispersed form when exposed to flame or sparks or by chemical reaction with oxidizers.
------------------------------------	--

D.O.T.	NON-REGULATED
--------	---------------

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA	
Threshold Limited Value	TWA: 1.0 mg/m³ for 8 hour working day. Copper (fume) T.L.V. 0.2 mg/m³.

Effects of Overexposure	INHALATION: Of high concentrations of the dust can cause intense sneezing, nausea, weakness and fever.
	SKIN: May cause skin irritation.

Emergency and First Aid Procedures	INHALATION: Remove to fresh air. If illness or discomfort develops, get medical attention. SKIN: Flush with water. If irritation develops, get medical attention.
------------------------------------	--

SECTION VI REACTIVITY DATA	
Stability	Unstable Stable
	x
Conditions to Avoid High acidity.	

Incompatibility (Materials to avoid)	Strong acids, bromates, chlorates, iodates and halogens.
--------------------------------------	--

Hazardous Decomposition Products	Nitrogen oxide if reacted with nitric acid.
Hazardous Polymerization	Conditions to Avoid
May Occur	Will Not Occur
	x

SECTION VII SPILL OR LEAK PROCEDURES	
Steps to be taken in case material is released or spilled	Sweep up and place in a suitable container. If copper powder is involved, avoid making dust clouds by sprinkling moderately with damp sand.

Waste Disposal Method	Dispose of in an approved chemical landfill or contract a licensed chemical waste disposal service.
-----------------------	---

Discharge, treatment, or disposal may be subject to federal, state, or local laws.

SECTION VIII SPECIAL PROTECTION INFORMATION			
Respiration Protection (Specify Type)	None should be needed in normal laboratory handling. If dusty conditions prevail, work in a ventilation hood or wear a NIOSH-approved dust mask.		
Ventilation	Local Exhaust	Yes-for dust	Special No
	Mechanical (General)	Yes-fume or dust	Other No

Protective Gloves	Light plastic	Eye Protection	Chemical safety glasses.
Other Protective Equipment	Smock, apron, proper gloves, eye wash station and a ventilation hood.		

SECTION IX SPECIAL PRECAUTIONS	
Precautions to be Taken in Handling and Storing	Store in a cool, dry place avoiding contact with fumes or hot surfaces. Wash thoroughly after handling.
Keep container tightly closed when not in use.	

Other Precautions	Read label on container before using.
-------------------	---------------------------------------

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Rev. No.	No. 1	Date	1/12/87	Approved	Alexander Piccirilli	Chemical Safety Coordinator
----------	-------	------	---------	----------	----------------------	-----------------------------

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees.