

MATERIAL SAFETY DATA SHEET

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Copper Oxide		<small>PRIDE-CHEM INDUSTRIES PTE LTD DISCLAIMER: THE INFORMATION AND RECOMMENDATIONS PRESENTED HEREIN ARE BASED ON SOURCES BELIEVED TO BE RELIABLE. CRC MAKES NO REPRESENTATION ON ITS COMPLETENESS OR ACCURACY. IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE CHEMICAL'S SUITABILITY FOR ITS INTENDED USE, THE CHEMICAL'S SAFE USE, AND THE CHEMICAL'S PROPER DISPOSAL. NO REPRESENTATIONS AND/OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE, ARE MADE WITH RESPECT TO THE INFORMATION PROVIDED IN THIS MSDS OR TO THE CHEMICAL TO WHICH INFORMATION MAY REFER. SENG HIN CHEMICAL NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT, ANY OTHER ADDITIONAL RESPONSIBILITY OR LIABILITY FOR THE USE OF, OR RELIANCE UPON, THIS INFORMATION.</small>	
SECTION 1 : PRODUCT AND COMPANY INFORMATION			
Characterization		Product Name	
Powder		Cupric Oxide	
DOT Proper Shipping Name		Chemical Formula	
Not Regulatory		CuO	
DOT Hazard Class and Label Requirements		DOT Abstract Service (CAS) Number	NIOSH No.
Not Regulatory		1317-38-0	
DOT Identification Number		Synonyms	
Not Regulatory		Copper(II) Oxide ; Black Copper Oxide	
SECTION 2 : COMPOSITION/INFORMATION ON INGREDIENTS			
Hazardous Components			
31.3 – 62.6% Cupric oxide			
SECTION 3 : HAZARDS IDENTIFICATION			
Health	Fire	Reactive	Other
2	0	0	N.A.
Degree of Hazard		Colour Coding	
0 = No Hazard		Health = Blue	
1 = Slight Hazard		Fire = Red	
2 = Moderate Hazard		Reactivity = Yellow	
3 = Serious Hazard		Other = White	
4 = Severe Hazard		Other Codes	
		OX = Oxidizer	
		ACID = Acid	
		ALK = Alkali	
		COR = Corrosive	
		W = Use No Water	
SECTION 4 : FIRST AID MEASURES			
Hazard Rating		Type of Hazard	
Caution		Warning! Harmful if swallowed. Affects the liver and kidneys. Causes irritation to skin, eyes and respiratory tract.	
Product Inhalation		Emergency and First-aid Procedures	
Causes irritation to respiratory tract, symptoms may include coughing, sore throat, and shortness of breath. May result in ulceration and perforation of respiratory tract. When heated, this compound may give off copper fume, which can cause symptoms similar to the common cold, including chills and stuffiness of the head.		Remove from exposure to fresh air keep warm and at rest. If respondent is under respiratory distress, give oxygen. If breathing stops or shows signs of failing, apply artificial respiration. Obtain medical attention urgently.	
Product on Skin & Eyes		Emergency and First-aid Procedures	
Causes irritation, redness and pain to skin and eyes.		Immediately wash with plenty of water, continue washing for at least 15 minutes, occasionally lifting eyelids. Wash with plenty of water and soap. Seek medical attention. Contaminated clothing should be washed thoroughly before re-use.	
Product Ingestion		Emergency and First-aid Procedures	
Systemic copper poisoning may result from ingestion of this compound. Symptoms may include capillary damage, headache, cold sweat, weak pulse, kidney and liver damage, central nervous excitation followed by depression, jaundice, convulsions, blood effects, paralysis and coma. Death may occur from shock or renal failure.		Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician immediately.	

SECTION 5 : FIRE FIGHTING MEASURES		
Flash Point N.A.	Auto-Ignition temperature N.A.	Explosive Limit (LEL) N.A.
Extinguishing Media Use extinguishing agent such as dry powder extinguishers and dry sand or suitable for the type of surrounding fire.		
Special Fire Fighting Procedures Wear full protective clothing and "NIOSH/MSHA approved" self-contained breathing apparatus (SCBA). Heat will build pressure and may rupture closed storage containers.		
Fire & Explosive Hazard N.A.		
SECTION 6 : ACCIDENTAL RELEASE MEASURES		
Steps to be taken in case of Material Release or Spillage Cleanup workers must wear protective clothing, goggles, respiratory protection & equipment to prevent body contact. Stop spill if you can without risk. Preferred clean-up procedure: With clean shove, carefully transfer the powder to a clean, dry container and cover it tightly. Flush clean-up area with water. For large leakage of cupric oxide, shove up powder with vacuum equipment or pump for disposal, or flush holding area with water. Notify local authorities if flushed spillage unavoidably enters public sewer or water systems.		
SECTION 7 : HANDLING AND STORAGE		
Precautions to be taken in Handling and Storage Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.		
Unsuitable: N.A.	Suitable: N.A.	
SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION		
Respiratory Protection If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.		
Ventilation	Local exhaust ventilation or general mechanical systems general is recommended.	
Eyes Protection	Chemical goggles and/or Face mask	
Skin Protection	Butyl Rubber gloves, rubber boots with protective clothing or coverall to be worn when handling. Safety showers and eyewash should be provided nearby where skin contact can occur.	
Other Additional Protective Measures Always wash hands thoroughly after handling chemical; never bring food, drink or smoking materials into vicinity of chemicals.		
SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES		
Boiling point N.A.	Specific Gravity (H ₂ O=1) 6.315	
Vapour Pressure (MM HG) N.A.	Molecular Weight 79.55	
Vapour Density (Air=1) N.A.	Melting Point 1026°C (1879F)	
Solubility in water Insoluble in water		
Synonyms Copper (II) oxide ; black copper oxide		
Appearance and Odour Black crystalline powder or granules		

SECTION 10 : STABILITY AND REACTIVITY		
Stability	Condition to avoid	
Stable	Incompatibles	
	Incompatibility Reducing agents, Aluminum, boron, cesium acetylene carbide, dirubidium acetylide, hydrazine, hydrogen, hydrogen sulfide, lead oxide, magnesium, metals, phospham, potassium, phthalic anhydride, rubidium acetylene carbide, sodium, titanium, and zirconium. Forms acetylides with acetylene, sodium hypobromite and nitromethane.	
Hazardous Polymerization	Conditions to Avoid	
Will not Occur	N.A.	
	Incompatibility	
N.A.		
Section 11 : TOXICOLOGICAL INFORMATION		
Hazard Rating	Moderate	Toxicity LD ₅₀ (Oral Rat) :
		N.A.
Permissible Exposure Limit (PEL) :	Short-Term Exposure Limit (STEL) :	Threshold Limit Value (TLV/TWA) :
1 mg/m ³	N.A.	1 mg/m ³
SECTION 12 : ECOLOGICAL INFORMATION		
Acute Ecological Effects		
When released into the soil, this material is not expected to biodegrade. When released into water, this material is not expected to biodegrade. When released into water, this material is not expected to evaporate significantly.		
Chronic Ecological Effects		
N.A.		
SECTION 13 : DISPOSAL CONSIDERATIONS		
Waste Disposal Method		
Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options.		
SECTION 14 : TRANSPORT & PACKAGING INFORMATION		
N.A.		
SECTION 15 : REGULATORY INFORMATION		
N.A.		
SECTION 16 : OTHER INFORMATION		
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