

**MATERIAL SAFETY DATA SHEET (MSDS)**

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**BDH Inc.**

**MATERIAL SAFETY DATA SHEET****Section I. PRODUCT IDENTIFICATION AND USE****Manufacturer:**

BDH Inc.  
350 Evans Avenue  
Toronto  
Ontario  
M8Z 1K5

**Emergency Telephone No.:**

416-201-6383 (24 HR.)

**Information Telephone No.:**

416-255-8521 (0830-1630)

**Product Name:** Cuprous oxide

**Product Code(s):** B27858, CX2175

**Chemical Name/Other Name:** Cuprous oxide; copper(I)oxide; copper oxide red; copper hemioxide

**Chemical Formula:** Cu<sub>2</sub>O

**Chemical Family:** Inorganic salt

**TDG Shipping Name/UN:** Toxic solids, organic, N.O.S.(cuprous oxide) UN 2811

**TDG Classification/Packing group:** 6.1 PG III

**Use:** Laboratory reagent, industrial processes

**Section II. HAZARDOUS INGREDIENTS**

<b>Chemical name</b>	<b>CAS No.</b>	<b>%</b>
Cuprous oxide	1317-39-1	94
Cupric oxide	1317-38-0	5

**Section III. PHYSICAL DATA**

**Physical State:** Solid

**Appearance and Odour:** Yellow or red-brown crystals or powder

**Odour Threshold:** Not available

**Specific Gravity:** 6.0

**Vapour Pressure:** Not applicable

**Vapour Density:** Not applicable

**Evaporation Rate:** Not applicable

**Boiling Point:** 1800°C

**Freezing Point:** 1235°C

**pH:** Not available

**Coefficient of water/oil distribution:** Not available

**Section IV. FIRE OR EXPLOSION HAZARD**

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**Conditions of Flammability:** Noncombustible

**Extinguishing Media:** Use an extinguisher appropriate to the surrounding material that is burning

**Flash point / method:** Not applicable

**UEL:** Not applicable

**LEL:** Not applicable

**Autoignition Temperature:** Not applicable

**Hazardous Combustion Products:** Cu

**Explosion data - sensitivity to mechanical impact:** No

**- sensitivity to static discharge:** No

**Section V. REACTIVITY DATA**

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**Conditions of instability:** Gradually oxidizes in moist air to cupric oxide

**Incompatibilities:** Oxidizers, peroxyformic acid

**Conditions of reactivity:** Normally stable

**Hazardous decomposition products:** Cu

**Section VI. TOXICOLOGICAL PROPERTIES / HEALTH HAZARD DATA**

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**Route of entry:**

- skin contact:** Irritates
- skin absorption:** No information available
- eye contact:** Irritates
- inhalation:** Irritates
- ingestion:** Harmful

**LC<sub>50</sub>:** Not available

**LD<sub>50</sub>:** 470 mg/kg (orl, rat)

**Exposure Limits:** TLV: 1 mg/m<sup>3</sup> as Copper

**Effects of Acute Exposure:** This product is harmful if swallowed, inhaled or absorbed through the skin. It causes irritation to the eyes, skin, the mucous membranes and the upper respiratory tract.

**Effects of Chronic Exposure:** No information available

**Irritancy:** No experimental information available

**Sensitization to Product:** No information available

**Carcinogenicity:** No information available

**Reproductive Toxicity:** May cause reproductive effects, references cited: RTECS# GL8050000

**Teratogenicity:** No information available

**Mutagenicity:** No information available

**Toxicologically Synergistic Products:** None found

**Section VII. FIRST AID MEASURES**

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**Skin:** Flush the contact area with lukewarm running water for at least 15 minutes. Remove contaminated clothing, taking care not to spread the chemical. If contamination is extensive, remove clothing under running water. Discard or decontaminate clothing under running water. Discard or decontaminate clothing before use. Unless contact has been slight, seek medical

attention. Seek medical attention if irritation persists.

**Eye:** Flush the contaminated eye(s) for at least 15 minutes with lukewarm running water, holding the eyelids open. Take care not to rinse contaminated water into the non-affected eye. Always seek medical attention for accidents involving the eyes.

**Inhalation:** Take proper precautions to ensure your own safety before attempting rescue. Remove source of contamination or move victim to fresh air. If breathing has stopped, trained personnel should begin artificial respiration, or if the heart has stopped, cardiopulmonary resuscitation (CPR) immediately. Seek medical attention.

**Ingestion:** Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Rinse mouth thoroughly with water. Do not induce vomiting. Have victim drink 200-400 ml of water to dilute. If breathing has stopped, trained personnel should begin artificial respiration, or if the heart has stopped, cardiopulmonary resuscitation (CPR) immediately. Seek medical attention.

### **Section VIII. PREVENTIVE MEASURES**

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**Engineering Controls:** Engineering control methods to reduce hazardous exposures are preferred. Methods include mechanical ventilation (dilution and local exhaust), process or personnel enclosure, control of process conditions, and process modification. Administrative controls and personal protective equipment may also be required.

**Personal protective equipment:**

- gloves: Rubber or plastic
- respiratory protection: Dust mask as appropriate
- eye protection: Chemical safety goggles
- clothing: Plastic apron, sleeves and boots as appropriate

**Storage Requirements:** Store in suitable labelled containers. Keep containers tightly closed when not in use and when empty. Protect from damage. Store in a cool, dry, well-ventilated area, out of direct sunlight. Store away from incompatible materials.

**Handling Procedures and Equipment:** Follow routine safe handling procedures.

**Leak or Spill Clean-up:** Before dealing with spillages take necessary protective measures, inform others to keep at a safe distance and, for flammable materials, shut off all possible sources of ignition. Transfer carefully into container and arrange removal by disposal company. Wash site of spillage thoroughly with water and detergent.

**Disposal:** Follow all federal, provincial and local regulations for disposal. Use only licensed disposal and waste hauling companies. Disposal of small amounts of spilled material may be handled as described under "Leak or Spill Cleanup". Large spills must be dealt with separately and must be handled by qualified disposal companies.

**Special Shipping Information:** Follow all TDG regulations and see classification in Section I

### **Section IX. PREPARATION INFORMATION**

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**Prepared by:** Technical Affairs Department, BDH Inc.,  
Toronto, Ontario  
(416) 255-8521

**Date:** AUG 4, 1989

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