

# Electrowon Copper Cathode

## Product Information

Electrowon Copper Cathode is used in the production of copper alloys.

Vale Inco Limited  
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Chemtrec 24 hr Emergency No. 1-800-424-9300

WHMIS Classification: D2B

## Hazardous Ingredients

Hazardous Ingredients	Composition (%)	C.A.S. No	Oral LD50 – rat	Exposure Limit (TLV <sup>1,2</sup> )–mg/m <sup>3</sup>
Copper (Cu)	99.99	7440-50-8	n. available	1

## Physical Data

Reddish odorless metal slab.

Ingredient	Mol. Wt.	Specific Gravity	Melting Point (°C)	Boiling Point (°C)	Solubility in H <sub>2</sub> O (g/100ml)
Copper	63.54	8.9	1083	2595	0

## Fire or Explosion Hazard

Not applicable.

## Reactivity Data

Not applicable.

## Toxicological Properties <sup>3</sup>

### Copper

#### Skin Contact:

A few instances of allergic skin rashes have been reported in workers exposed to metallic copper.

#### Ingestion:

The lowest observed toxic oral dose of copper (TDLo) is 120 µg/kg in humans. This dose caused gastrointestinal effects.

#### Pre-existing Conditions:

Wilson's disease can occur in certain individuals with a rare inherited metabolic disorder characterized by retention of excessive amounts of copper in the liver, brain, kidneys, and corneas. These deposits eventually lead to tissue necrosis and fibrosis, causing a variety of clinical effects, especially liver, (i.e. hepatic) disease and neurologic changes. Wilson's disease is progressive and, if untreated, leads to fatal liver (i.e. hepatic) failure.

## Preventative Measures

If user operations generate dust or fume, use ventilation to keep exposure to airborne copper and Copper fume below the exposure limit. If ventilation alone cannot so control exposures, use NIOSH-approved respirators selected according to the current edition of the Selection, Care and Use of Respirators CSA Z94.4.

Avoid repeated skin contact. Wear suitable gloves. Wash skin thoroughly after handling. Launder clothing and gloves as needed.

Copper-containing waste is normally collected to recover copper values. Should waste disposal be deemed necessary, follow the relevant governmental regulations.

## First Aid Measures

For skin rashes, seek medical attention.

For copper foreign bodies in the eye, immediately flush eyeballs with plenty of water for at least 15 minutes. Seek medical attention immediately.

## Preparation Information

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### **Note:**

**Vale Inco believes that the information in this Material Safety Data Sheet is accurate. However, Vale Inco makes no express or implied warranty as to the accuracy of such information and expressly disclaims any liability resulting from reliance on such information.**

### **Footnotes:**

- 1 Threshold Limit Value of the American Conference of Governmental Industrial Hygienists.
- 2 Exposure Limits for user operations will depend on the relevant governmental regulations.
- 3 Describes possible health hazards of the product supplied. If user operations change it to other chemical forms, whether as end products, intermediates or fugitive emissions, the possible health hazards of such forms must be determined by the user.