

# COPPER (METAL) ELECTROLYTIC POWDER

GHS Safety Data Sheet

Version No:5.1.1.1

Page 1 of 7

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

COPPER (METAL) ELECTROLYTIC POWDER

### PROPER SHIPPING NAME

METAL POWDER, FLAMMABLE, N.O.S.(contains copper powder)

### PRODUCT USE

- Material is mixed and used in accordance with manufacturers directions.
- Handle and open container with care.

### SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V.Ind.Estate,

248, Worli Road,

Mumbai- 400030, India

www.sdfine.com

Telephone: 91- 22 24959898/99

Fax: 91- 22 2493 7232

Email: technical@sdfine.com

## Section 2 - HAZARDS IDENTIFICATION

### GHS Classification

Flammable Solid Category 2



### EMERGENCY OVERVIEW

#### HAZARD

WARNING

Determined by using GHS criteria

H228 Flammable solid.

### PRECAUTIONARY STATEMENTS

#### Prevention

##### Code

P210

P240

P241

P280

##### Phrase

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use explosion- proof electrical/ventilating/lighting/ ... /equipment

Wear protective gloves/protective clothing/eye protection/face protection.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME

copper (metal) powder electrolytic

CAS RN

%  
>99

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# COPPER (METAL) ELECTROLYTIC POWDER

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## Section 4 - FIRST AID MEASURES

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### SWALLOWED

- Rinse mouth out with plenty of water.

If poisoning occurs, contact a doctor or Poisons Information Centre.

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

### EYE

- If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.

### SKIN

- Brush off dust If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

### INHALED

- If dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear breathing passages.
- Ask patient to rinse mouth with water but to not drink water.
- Seek immediate medical attention.

### NOTES TO PHYSICIAN

- for copper intoxication:

- Unless extensive vomiting has occurred empty the stomach by lavage with water, milk, sodium bicarbonate solution or a 0.1% solution of potassium ferrocyanide (the resulting copper ferrocyanide is insoluble).
- Administer egg white and other demulcents.
- Maintain electrolyte and fluid balances.
- Morphine or meperidine (Demerol) may be necessary for control of pain.

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## Section 5 - FIRE FIGHTING MEASURES

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### EXTINGUISHING MEDIA

- Metal dust fires need to be smothered with sand, inert dry powders.

DO NOT USE WATER, CO<sub>2</sub> or FOAM.

- Use DRY sand, graphite powder, dry sodium chloride based extinguishers, G-1 or Met L-X to smother fire.
- Confining or smothering material is preferable to applying water as chemical reaction may produce flammable and explosive hydrogen gas.

### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.

Cool fire exposed containers with water spray from a protected location.

DO NOT approach containers suspected to be hot.

If safe to do so, remove containers from path of fire.

Equipment should be thoroughly decontaminated after use.

### FIRE/EXPLOSION HAZARD

- Combustible solid.

Moderate fire and explosion hazard, in the form of dust, when exposed to heat or flame.

- Metal powders, while generally regarded as non-combustible, may burn when metal is finely divided and energy input is high.
- DO NOT use water or foam as generation of explosive hydrogen may result.
- May be ignited by friction, heat, sparks or flame.
- Metal dust fires are slow moving but intense and difficult to extinguish.

### FIRE INCOMPATIBILITY

- Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous.
- Reacts slowly with water.

# COPPER (METAL) ELECTROLYTIC POWDER

GHS Safety Data Sheet

Version No:5.1.1.1

Page3 of 7

## Section 5 - FIRE FIGHTING MEASURES

- CAUTION contamination with moisture will liberate explosive hydrogen gas, causing pressure build up in sealed containers.
- Reacts violently with caustic soda, other alkalies - generating heat, highly flammable hydrogen gas.
- If alkali is dry, heat generated may ignite hydrogen - if alkali is in solution may cause violent foaming.
- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

## Section 6 - ACCIDENTAL RELEASE MEASURES

### MINOR SPILLS

- Clean up all spills immediately Avoid contact with skin and eyes.
- Wear impervious gloves and safety glasses.  
Remove all ignition sources.  
Use dry clean up procedures and avoid generating dust.  
Place spilled material in clean, dry, sealable, labelled container.

### MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
  - Prevent, by any means available, spillage from entering drains or water courses.
- No smoking, naked lights or ignition sources. Increase ventilation.  
Stop leak if safe to do so.  
Avoid generating dust.  
Collect recoverable product into labelled containers for recycling.  
Collect residues and seal in labelled drums for disposal.  
Wash area down with large quantity of water and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services.

**Personal Protective Equipment advice is contained in Section 8 of the MSDS.**

## Section 7 - HANDLING AND STORAGE

### PROCEDURE FOR HANDLING

- Handle and open container with care.
- Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this MSDS •  
Keep dry.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
- Avoid contact with skin and eyes.  
Avoid generating and breathing dust.
- Wear personal protective equipment when handling.
  - Avoid smoking, naked lights, heat or ignition sources.
- Use in a well-ventilated area.  
Avoid contact with incompatible materials.  
When handling, DO NOT eat, drink or smoke.  
Avoid physical damage to containers.  
Always wash hands with soap and water after handling. Work clothes should be laundered separately.

### SUITABLE CONTAINER

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

### STORAGE INCOMPATIBILITY

Avoid storage with acetylene, ammonium nitrate fertiliser, chlorates, chlorine, ethylene oxide, fluorine, hydrazine, hydrogen peroxide, hydrogen sulfide, iodates, lead azide, phosphorus, nitric acid, potassium peroxide, sodium azide, sodium peroxide, sulfur plus chlorates,

### STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.

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# COPPER (METAL) ELECTROLYTIC POWDER

GHS Safety Data Sheet

Version No:5.1.1.1

Page 4 of 7

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

#### MATERIAL DATA

COPPER (METAL) POWDER ELECTROLYTIC:

- No exposure limits set by NOHSC or ACGIH.

#### PERSONAL PROTECTION



#### RESPIRATOR

- Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

#### EYE

- Safety glasses with side shields; or as required,
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

#### HANDS/FEET

- Barrier cream with polyethylene gloves • PVC gloves or • Rubber Gloves.
- Safety footwear.

#### OTHER

- Overalls.
- Ensure that there is ready access to eye wash unit.

#### ENGINEERING CONTROLS

- Use in a well-ventilated area.

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### APPEARANCE

Bright copper solid metal powder; insoluble in water. Mild fatty odour.

### PHYSICAL PROPERTIES

Solid.

Does not mix with water.

Sinks in water.

|                           |                |                            |                 |
|---------------------------|----------------|----------------------------|-----------------|
| State                     | Divided solid  | Molecular Weight           | Not Applicable  |
| Melting Range (°C)        | Not available  | Viscosity                  | Not Available   |
| Boiling Range (°C)        | Not available  | Solubility in water (g/L)  | Immiscible      |
| Flash Point (°C)          | Not applicable | pH (1% solution)           | Not applicable. |
| Decomposition Temp (°C)   | Not Available  | pH (as supplied)           | Not applicable  |
| Autoignition Temp (°C)    | Not applicable | Vapour Pressure (kPa)      | Not available   |
| Upper Explosive Limit (%) | Not available. | Specific Gravity (water=1) | 8.5 approx      |

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# COPPER (METAL) ELECTROLYTIC POWDER

GHS Safety Data Sheet

Version No:5.1.1.1

Page 5 of 7

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

|                           |                |                                 |                |
|---------------------------|----------------|---------------------------------|----------------|
| Lower Explosive Limit (%) | Not available. | Relative Vapour Density (air=1) | Not available. |
| Volatile Component (%vol) | Nil @ 38 C.    | Evaporation Rate                | Non volatile   |

## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of water Storage in unsealed containers.
- Product is considered stable under normal handling conditions.  
Hazardous polymerisation will not occur.  
*For incompatible materials - refer to Section 7 - Handling and Storage.*

## Section 11 - TOXICOLOGICAL INFORMATION

### Health hazard summary table:

|                                   |                |
|-----------------------------------|----------------|
| Acute toxicity                    | Not applicable |
| Skin corrosion/irritation         | Not applicable |
| Serious eye damage/irritation     | Not applicable |
| Respiratory or skin sensitization | Not applicable |
| Germ cell mutagenicity            | Not applicable |
| Carcinogenicity                   | Not applicable |
| Reproductive toxicity             | Not applicable |
| STOT- single exposure             | Not applicable |
| STOT- repeated exposure           | Not applicable |
| Aspiration hazard                 | Not applicable |

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

- Considered an unlikely route of entry in commercial/industrial environments.

##### INHALED

- Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.
- If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.

##### CHRONIC HEALTH EFFECTS

- Principal routes of exposure are usually by inhalation of generated dust and skin contact with the material.
- As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.
- Chronic exposure to copper dusts may cause runny nose, atrophic changes, irritation of the mucous membranes and renal damage.
- Nasal ulcerations and blood may occur from inhaling fine dust.
- Long term inhalation of very fine powders may cause lung scarring (pulmonary fibrosis).
- Pre-existing skin disorders, impaired kidney, liver, pulmonary function or pre-existing Wilson's disease may be aggravated by exposure,

##### TOXICITY AND IRRITATION

- Not available. Refer to individual constituents.

## Section 12 - ECOLOGICAL INFORMATION

This material and its container must be disposed of as hazardous waste.

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# COPPER (METAL) ELECTROLYTIC POWDER

GHS Safety Data Sheet

Version No:5.1.1.1  
Page 6 of 7

## Section 12 - ECOLOGICAL INFORMATION

### Ecotoxicity

| Ingredient                         | Persistence:<br>Water/Soil | Persistence: Air    | Bioaccumulation     | Mobility            |
|------------------------------------|----------------------------|---------------------|---------------------|---------------------|
| Copper (metal) Powder Electrolytic | NoData<br>Available        | NoData<br>Available | NoData<br>Available | NoData<br>Available |

## Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible Consult manufacturer for recycling options.
  - Material from spill may be contaminated with water resulting in generation of highly flammable hydrogen gas with pressurising of closed containers.
  - Hold spill material in vented containers only and plan for prompt disposal.
- Consult State Land Waste Management Authority for disposal.  
Bury residue in an authorised landfill.  
Puncture containers to prevent re-use.

## Section 14 - TRANSPORTATION INFORMATION



Labels Required: FLAMMABLE SOLID

### HAZCHEM:

4Y

#### Land Transport UNDG:

|                                                                        |      |                  |      |
|------------------------------------------------------------------------|------|------------------|------|
| Class or division:                                                     | 4.1  | Subsidiary risk: | None |
| UNNo.:                                                                 | 3089 | UNpackinggroup:  | II   |
| Shipping Name:METAL POWDER, FLAMMABLE, N.O.S. (contains copper powder) |      |                  |      |

#### Air Transport IATA:

|                     |      |                    |      |
|---------------------|------|--------------------|------|
| ICAO/IATA Class:    | 4.1  | ICAO/IATA Subrisk: | None |
| UN/IDNumber:        | 3089 | PackingGroup:      | II   |
| Special provisions: | A3   |                    |      |

Shipping name:METAL POWDER, FLAMMABLE, N.O.S.(contains copper powder)

#### Maritime Transport IMDG:

|             |            |                     |      |
|-------------|------------|---------------------|------|
| IMDG Class: | 4.1        | IMDG Subrisk:       | None |
| UNNumber:   | 3089       | PackingGroup:       | II   |
| EMS Number: | F- G, S- G | Special provisions: | 223  |

Shipping name:METAL POWDER, FLAMMABLE, N.O.S.(contains copper powder)

## Section 15 - REGULATORY INFORMATION

### REGULATIONS

copper (CAS: 7440-50-8) is found on the following regulatory lists;  
OECD Representative List of High Production Volume (HPV) Chemicals  
WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water

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# COPPER (METAL) ELECTROLYTIC POWDER

GHS Safety Data Sheet

Version No:5.1.1.1  
Page 7 of 7

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## Section 16 - OTHER INFORMATION

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The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

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