Bolster Up
Chemical Solution Company

International
CUPRO HARD POWDER SUPPLIER

BOLSTER UP CHEMICAL SOLUTION COMPANY

ADDITIVE VALUES OF CONSUMPTION FOR THE HARD SULPHATE COPPER PLATING BATH

- The consumption is a function of the chosen hardness. For a hardness of 175-230 Vickers, the consumption will be:
  i. **Bolster Up Company Additive** - 200-250 ml per 1000 AH.
  ii. **Bolster Up Company Additive** - 40 g, mixed in 10 litre DM water.
  iii. **Temperature** - 25°C-40°C.
  iv. **Current Density** - 20-40 amp/dm².
- The consumption values change as a function of temperature and cylinder immersion. The dosing must be made possibly in a regular way.
- **Note:**
  It is important for good bath stability to have excellent agitation of the electrolyte.
  It is suggested to filtrate the solution with active coal every 4 working months.

1. IDENTIFICATION

Product Name: Cupro Hard Powder

Manufactured by: Bolster Up Chemical Solution Company, Varanasi

2. COMPOSITION / INFORMATION ON INGREDIENTS

Components: Additives of the highly refined chemical base powder form chemical additives.

3. FIRST AID MEASURE

General Information: Instantly remove any clothing soiled by the product.

After Inhalation: Supply fresh air. Consult a doctor in case of complaints.

After Skin Contact: Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.

After Eye Contact: Rinse opened eye for 15 minutes under running water.

After Swallowing: Rinse out mouth and then drink plenty of water. Induce vomiting and call for medical help.

4. HAZARDS IDENTIFICATION

Information pertaining to particular dangers for man and environment:

- Harmful if swallowed.
- Limited evidence of a carcinogenic effect.
- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- Possible risk of harm to the unborn child.

5. ACCIDENTAL RELEASE MEASURES

Person-Related Safety Precautions: Avoid formation of dust. Ensure adequate ventilation.

Measures for Environmental Protection: Avoid formation of dust. Ensure adequate ventilation. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers, surface water or ground water.

Measures for Cleaning / Collecting: Pick mechanically.

6. HANDLING AND STORAGE

Handling:
Information for Safe Handling: Prevent formation of dust.
Information about Protection Against Explosions and Fires: Dust can combine with air to form an explosive mixture.

Storage:
Requirement to be Met by Storerooms and Containers: Use polyolefine receptacles. Store only in the original receptacle.
Information About Storage in One Common Storage Facility: Not required.
Further Information About Storage Conditions: Protect from exposure to light.
Storage Class: Class according to regulation on flammable liquids: Void.

7. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Additional Information About Design of Technical Systems: No further data; see item 6.

Components with Limited Values that Require Monitoring at the Workspace: Not required.

Additional Information: The lists that were valid during the creation were used as basis.

Personal Protective Equipment:
General Protective and Hygienic Measures: Keep away from foodstuffs, beverages and food. Wash hands during breaks and at the end of the work.

EQUIPMENT TYPE	SPECIFICATION
Breathing Equipment	Short-term filter device: Filter P2
Protection of Hands	Protective gloves.
Materials of Gloves	Plastic gloves. Penetration time of glove material.
Eye Protection	Safety glasses.
Body Protection	Protective work clothing.

8. FIRE FIGHTING MEASURES

Suitable Extinguishing Agents: Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol-resistant foam.

Special Hazards Caused by the Materials, Its Products of Combustion or Resulting Gases: Nitrogen oxides, sulphur dioxide.

Protective Equipment: Wear self-contained respiratory protective devices. Wear fully protective suit.

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information:

PROPERTY	VALUE / SPECIFICATION
Form	Powder
Colour	White
Odour	Odourless
Hardness	175-230 HV, 40 g to be diluted to 10 ltr.
Melting Point / Melting Range	171°C-187°C (DIN 51761)
Boiling Point / Boiling Range	Undetermined.
Flash Point	Not applicable.
Ignition Temperature	440°C (DIN 51794)
Decomposition Temperature	> 130°C
Danger of Explosion	Dust explosion possible.
Density at 20°C	1,405 g/cm³ (DIN 51757)
Bulk Density at 20°C	640 kg/m³
Solubility in / Miscibility with Water at 20°C	136 g/l
pH-Value at 20°C	5.0
Organic Solvents	0.0%
Solids Content	100.0%

10. STABILITY AND REACTIVITY

Thermal Decomposition / Conditions to be Avoided: To avoid thermal decomposition, do not overheat.

Dangerous Reactions: Risk of dust explosion. React with strong oxidizing agents. Toxic fumes may be released if heated above the decomposition point.

Dangerous Products of Decomposition: Nitrogen oxides, hydrogen sulphide, sulphur oxides (SOx).

11. TOXICOLOGICAL INFORMATION

- Acute toxicity
- LD / LC 50 values that are relevant for classification:
  - Oral LD 50: 1'750 mg/kg (Rat)
  - Dermal LD 50: 2'800 mg/kg (Rabbit)
  - Inhalative LC 50/4h: > 0.17 mg/l (Rat)
- Primary irritant effect:
  - On the skin: No irritant effect.
  - On the eye: No irritating effect.
- Sensitization: No sensitizing effect known.

Subacute to Chronic Toxicity: It inhibits the formation of thyroxine in the thyroid gland. Embryotoxic effects observed in animal tests are probably in relation to disorders in the thyroid gland.

12. DISPOSAL CONSIDERATIONS

Product Recommendation: After prior treatment, products have to be disposed of in an incinerator for hazardous waste, adhering to the regulations pertaining to the disposal of particularly hazardous waste.

Uncleaned Packagings Recommendation: Disposal must be made according to official regulations.

Recommended Cleaning Agent: Water, if necessary with cleaning agent.

13. REGULATORY INFORMATION

Designation According to EU Guidelines: The product has been classified and marked in accordance with EU directives / Ordinance on Hazardous Materials.

Dangerous for the Environment:

Risk Phrases:
- Harmful if swallowed.
- Limited evidence of a carcinogenic effect.
- Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
- Possible risk of harm to the unborn child.

Safety: Wear suitable protective clothing and gloves. Avoid release to the environment. Refer to special instructions / safety data sheets.

14. ECOLOGICAL INFORMATION

Information About Elimination (Persistence and Degradability):
Other Information: The product is not easily biodegradable.

i. Ecotoxical effects
ii. Aquatic toxicity
iii. EC50: 1.8 mg/l
iv. EC50/96h: 6.8 mg/l
v. EC50/48h: > 10,000 mg/l
vi. LC50/96h: 10,000 mg/l

General Notes:
Water hazard class 2 (German Regulation) (Assessment by list) hazardous for water. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water when small quantities leak into the ground. Also poisonous for fish and plankton in water bodies.

15. ACCIDENTAL RELEASE MEASURES

Spill Clean-Up Procedures: Spill clean-up procedures, containment methods, and personal precautions to avoid slipping.

16. OTHER INFORMATION

Other Information: Date of the latest revision, abbreviations and disclaimer.

NAME OF THE PREPARATION: BOLSTER UP CUPRO HARD POWDER (001)

Application: Hardness additive for copper bath, 40 g to be diluted to 10 ltrs.

Thanks & Regards
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