



**International  
CUPRO HARD POWDER SUPPLIER**

**BOLSTER UP CHEMICAL SOLUTION COMPANY**

## TECHNICAL DATA SHEET

### Additive Values Of Consumption For The Hard Sulphate Copper Plating Bath

The Consumption are in 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 1000AH.
- ii. Bolster Up Company Additive - (40gm), mix in 10 litter Dm water.
- iii. Temperature - 25 °C - 40 °C.
- iv. Current Density 20 - 40amp/dm<sup>2</sup>.

The Consumption values changes in function of the temperature and of the cylinder immersion. The dosing must be made possibly in a regular way.

#### **Note:-**

It is important for a good bath stability, have an excellent agitation of the Electrolyte

It is suggested to filtrate the solution with active cole in every 4 working months.

## **MATERIAL SAFETY DATA SHEET**

**Name of the preparation : BOLSTER UP CUPRO HARD POWDER (001)**

### **Application:**

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

### **1. FIRST AID MEASURE :**

#### ***General Information:***

Instantly remove and clothing soiled by the product.

#### ***After Inhalation:***

Supply fresh air consult doctor in case of complains.

#### ***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.

### **2. HAZARDS INDENTIFICATION :**

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.



### 3. 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. **Measures for environmental protection** : Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/surface or ground water. Measures for cleaning/ collecting: Pick mechanically.

### 4. 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 the light.

#### ***Storage class :***

Class according to regulation on flammable liquids : Void

### 5. 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 breaks and at the end at the end of the work.

**Breathing equipment** : Short term filter device : Filter P 2

**Protection of hands** : Protective gloves.

**Materials of gloves** : Plastic gloves. Penetration time of glove material.

**Eye Protection** : Safety glasses

**Body Protection** : Protective work clothing.

### **6. FIRE FIGHTING MEASURES :**

#### **Suitable extinguishable agents :**

Carbon dioxide extinguishing powder or water spray. Fight larger fire with water spray of alcohol resistant foam.

Special hazards caused by the materials, its products of combustion or resulting fumes : Nitrogen oxides, sulphur dioxide.

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

### **7. Physical and chemical properties :**

1. General Information :

2. Form : Powder

3. Colour : White

4. Odour : Odourless

5. Hardness : 175-230HV, 40g to be diluted to 10 ltr.

Change in conditions :

Melting point/melting range : 171°C-187°C (DIN 51761)

Boiling point/boiling range : Undetermined.

Flash point : Not applicable.

Ignition temperature : 440° (DIN 51794)

Decomposition temperature : > 130°C

Danger of explosion : dist explosion possible.

Density at 20° C : 1,405 g/cm.3 (DIN 51757)

Bulk density at 20°C : 640 kg/m3

Solubility in / Miscibility with Water at 20°C : 136g/1

pH-value at 20°C:5,0

Organic solvents : 0,0%

solids content : 100,0%

#### 8. **STABILITY AND REACTIVITY :**

Thermal decomposition / condition to be avoided : To avoid thermal decomposition to be not overheat.

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

Dangerous products of decomposition : Nitrogen oxides. Hydrogen sulphide Sulphur oxides (SOx).

#### 9. **TOXICOLOGICAL INFORMATION**

- \* Acute toxicity
- \* LD @ LC 50 values that are relevant for classification :
- \* Oral LD 50 1'750mg/kg (Rat)
- \* Dermal LD 50 2'800 mg/kg (rabbit)
- \* Intertatie LC 50/4h>0.17 mg/1 (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 throxine in the thyroid gland. embryotoxic effect Observed in animal lost are probably in relation to disorders in the throid gland.

#### 10. **DISPOSAL CONSIDERATIONS :**

##### ***Product :***

Recommendation : After prior treatment products has to be disposed of in a 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.

#### 11. **REGULATORY INFORMATION :**

Designation according to EU guidelines :

The products 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 void release to the environment. Refer to special instruction / safety data sheets.

## 12. ECOLOGICAL INFORMATION :

Information about elimination (persistence and degradability) :

Other Information : The product is not easily biodegradable.

- i) **Ecotoxical effects**
- ii) **Acquatic toxicity**
- iii) **C50 1.8 mg/1**
- iv) **C50/96h 6.8 mg/1**
- v) **C50/48h> 10.000 mg/1**
- vi) **LC 50/96 H 10'000 mg/1**

### vii) **General Notes :-**

Water hazard class 2 (German Regulation) (Assessment by list0 hazardous for water. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. Also poisonous for fish and plankton in water bodies.

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