



# KROHN INDUSTRIES

*Quality & Service Since 1955*



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## **Copper-Mirror<sup>TM</sup>** **Bright Mirror Copper Plating Solution**

### **Product Description**

**Copper-Mirror<sup>TM</sup>** is a bright mirror copper plating bath which can be used in many plating applications. The mirror quality finish is ideal for all types of metals. The control over the bath is very easy due to a superb combination of brighteners and replenishers which provide excellent coverage and leveling ability.

**Copper-Mirror<sup>TM</sup>** offers an easily maintainable alternative to other heavy cyanide copper plating baths.

**Copper-Mirror<sup>TM</sup>** is supplied as ready to use for trouble free set-up and operation.

### **Applications:**

Over Copper, Brass, and Copper-Primer Substrates

### **Cautions:**

1. Use only with proper ventilation.
2. Wear gloves, safety goggles, apron.
3. Avoid contact with eyes and skin.

### **Operating Conditions:**

Temperature	<b>Room, Do Not Exceed 80° F.</b>
Current Density	2-3 Volts (10-40 ASF) 2-10 minutes
PH	0.4-1.0
Beaker	Pyrex
Air Agitation	<b>Continuous air agitation is required.</b>
Anodes	Copper Anodes (Phosphorized)
Baume' Range:	Rack: 22-26 15-30 microinches per minute

### Bath Setup:

1. Fill beaker with Copper-Mirror™
2. Check connections from rectifier to anode and work to be sure the negative (-) and positive (+) wires are connected properly. The work should be charged negative (-), and the anode positive (+). Turn Rectifier On.
3. Turn air agitation on. **(No oil in air !)**
4. Plate for 2-10 minutes at 2-3 volts depending on size of part and degree of shine desired.
5. Larger parts require slightly higher voltage, while smaller parts require lower voltage. If part shows any burning such as dark deposits around the edges, you are burning the part and must lower the voltage. If part is not shiny after 5-10 minutes of plating, voltage is too low, therefore, increase voltage slightly.
6. After plating rinse part thoroughly in water and continue plating process with another **Mirror** finish such as Nickel-Mirror, or Nickel-Free, followed by a **Decorative** finish such as gold or silver.
7. If you are not going to continue the plating process immediately, then dry the part thoroughly. When you continue the plating process, re-activate the part in Activator-T to assure better adhesion.

### Trouble Shooting:

Pieces not Plating

- Check power supply, make sure switch is on.
- If switch is on, check fuse.
- Check connections from power supply to anode or cathode (part).

Pieces turn dark gray or black

- Anode/cathode connections are reversed.
- Current is too high.

Pieces turn hazy, cloudy, and too dull

- Current too low. Adjust to higher current.
- Plate for a longer time.
- Organics are too high. Solution is used up - discard.

### Discard & Replace:

**Copper-Mirror™** is a rugged bath and guidelines have been provided to help assure the long life of this bath. If, however, a problem should arise that cannot be solved by any of the above recommendations, or recommendations by our or any other qualified laboratory, the bath may need to be replaced: Transfer to a D.O.T. approved container. Check with local authorities for proper disposal.