



KROHN INDUSTRIES

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Copper -Primer™

Alkaline Cyanide Free Copper Plate
(Primer)

Product Description

Copper-Primer™ is an alkaline copper bath which can be used as a copper strike or heavy copper plate over many different substrates. It is ideal for all types of white metal castings, as well as, steel, brass, zinc or lead. The color is very similar to that of a cyanide copper and provides excellent coverage and leveling ability.

Copper-Primer™ offers a low cost, easily maintainable alternative to other cyanide copper plating baths.

Copper-Primer™ is supplied as ready to use for trouble free set-up and operation.

Applications:

Brass, Copper, Cast Iron, Nickel

Steel, Tin, Lead, Zinc and many similar alloys

Cautions:

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

Operating Conditions:

Temperature	130-150°F (55° - 65°C)
Current Density	1-2 Volts (5-10 ASF) 2-5 minutes
PH	8.2-8.7
Beaker	Pyrex
Anodes	Copper Anodes (Phosphorized)

5-10 micro-inches per hour

Bath Set Up:

1. Fill beaker with **Copper-Primer™** & heat to 130° F.
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. Plate for 1-10 minutes at 1-2 volts depending on size of part and degree of coverage required. Part should be completely covered with pink copper without any black or grey specs or dots noticeable.
4. Larger parts require slightly higher voltage, while smaller parts require lower voltage. If part shows any burning such as dark deposits around the edges, or black all over, you are burning the part and must lower the voltage. If part is not covering after 5-10 minutes of plating, voltage is too low, therefore, increase voltage slightly.
5. After plating rinse part thoroughly in water and continue plating process with **Mirror** finishes such as **Copper-Mirror™** and/or **Nickel-Mirror™**.
6. 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Anode/cathode connections are reversed.• Current is too high.
Parts dark with yellow tarnish	<ul style="list-style-type: none">• Copper metal too low, solution is spent - Discard.
Blistering or peeling parts	<ul style="list-style-type: none">• Insufficient cleaning• PH incorrect• contamination-discard
Bath changes color from transparent blue to milky blue	<ul style="list-style-type: none">• Solution out of balance, 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.

**RECOMMENDED STEPS OF OPERATION FOR COPPER-PRIMER
OVER BRASS, COPPER & CAST IRON**

- 1) SOAK CLEAN/ULTRASONIC
- 2) ELECTROCLEAN
- 3) CASCADE RINSE
- 4 ACID DIP (1-3% SULFURIC OR HCL)
- 5) CASCADE RINSE
- 6) PRE-DIP IN CAUSTIC (OPTIONAL)
- 7) COPPER STRIKE/PLATE

**RECOMMENDED STEPS OF OPERATION FOR COPPER-PRIMER
OVER NICKEL STEEL & STAINLESS STEEL**

- 1) SOAK CLEAN
- 2) ELECTROCLEAN-ANODIC & CATHODIC
- 3) CASCADE RINSE
- 4) ACID DIP (25% SULFURIC @140°F)
- 5) CASCADE RINSE
- 6) COPPER STRIKE/PLATE
- 7) CASCADE RINSE
- 8) ACID DIP (2% SULFURIC)
- 9) RINSE

**RECOMMENDED STEPS OF OPERATION FOR COPPER-PRIMER
OVER ZINC AND ZINC ALLOYS**

- 1) SOAK CLEAN/ULTRASONIC CLEAN
- 2) ELECTROCLEAN-ANODIC & CATHODIC
- 3) CASCADE RINSE
- 4) SODIUM FLUORIDE DIP
- 5) CASCADE RINSE
- 6) COPPER STRIKE/PLATE
- 7) CASCADE RINSE
- 8) ACID DIP (2% SULFURIC)
- 9) RINSE