



Product Data Sheet

Date: 11/23/05
Supersedes: NEW
PRODUCT #: N5118

CIRCUTEK CU-825

Copper Colloidal Catalyst

DESCRIPTION: A new colloidal catalyst designed to activated no-conductive substrates such as epoxy-glass, ceramics and other plastics. **CIRCUTEK CU-825** will catalyze printed circuit boards for electroless through hole plating.

BENEFITS:

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| <ul style="list-style-type: none"> • Stable colloidal catalyst • Particularly effective on ceramics |
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EQUIPMENT:

Tanks should be constructed of polyethylene, polypropylene or PVC. Racks should be constructed of 304 or 316 stainless steel, polypropylene, PVC or Teflon coated wire. Heater should be made of quartz or Teflon®.

Filtration of the **CIRCUTEK CU-825** solution is recommended. Use filters of polypropylene or dynel (5-10 micron filter porosity). The turn-over rate should be 3-5 times per 8 hours.

DO NOT introduce air into the system.

**MAKE-UP &
OPERATING
INSTRUCTIONS:**

Make-up of CIRCUTEK CU-825 Bath:

CIRCUTEK CU-825	30% by vol.
Deionized Water:	67-68% by vol.
Pre-dip:	2 – 3% by vol.

Operating Conditions:

Temperature:	80-90°F
Immersion Time:	10-15 minutes
Agitation/Vibration:	Work bar agitation, vibration recommended for small hole processing
pH:	6.0 to 8.0

**CONTROL
PARAMETERS:**

To achieve best results, the baths should be maintained at the following concentration.

<u>CIRCUTEK CU-825</u>	<u>OPTIMUM</u>	<u>RANGE</u>
Copper Concentration:	1.5 g/L	1.3 - 1.8 g/L
pH:	6.0 - 7.0	5.0 - 8.0

**ANALYSIS &
REPLENISHMENT:**

Procedure for the Analysis of *CIRCUTEK CU-825*

Copper Concentration:

Equipment: 20 ml pipette 250 ml Erlenmeyer flask
50 ml burette Hot Plate

Reagents: Sodium or Potassium Persulfate
0.05 M EDTA
Phenolphthalein Indicator

Procedure:

1. Pipette 20 ml sample of *CIRCUTEK CU-825* working bath into 250 ml Erlenmeyer flask.
2. Add 1 to 2 grams of persulfate solid to Erlenmeyer and heat on hot plate until solution stops gasing.
3. Add 75 mls of deionized water mix and cool to below 30°C.
4. Add 5 to 7 drops of PAN indicator and titrate with 0.05 M EDTA to a green end point.

Calculation: $\text{Copper (g/L)} = \text{mls EDTA} \times 0.05 \text{ M EDTA} \times 3.2$

Maintenance: Maintain copper level between 1.3 to 1.8 g/L

Add 2% by volume to increase copper level by 0.1 g/L.

Replace bath after 2400 ft²/gallon of surface area has been processed.

This product should be used only for its intended purpose. The information stated above is based on our laboratory tests and experience, and is accurate to the best of our knowledge. Since actual use is beyond our control, the recommendations or suggestions are made without warranty, expressed or implied.