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## Product Data Sheet

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**PRODUCT #:** N8039

# **POSICLEAN™ M**

Acid Copper Cleaner

### **DESCRIPTION:**

An acid soak cleaner that removes oxidation, tarnish and organic soils from copper surfaces. **POSICLEAN™ M** is formulated to clean effectively in a variety of applications such as pre-clean prior to copper pattern plate, prior to dry film lamination, prior to oxide process, and as a pre-clean for tin or tin/lead electroplating. **POSICLEAN™ M** can be followed by a microetch when necessary for increased adhesion.

### **BENEFITS:**

- **Cleans oxides and organic soils**
- **Low copper etch rate - less than one millionth of an inch per minute**
- **Versatile - can be used in a variety of processes**
- **Economical - used at 10% concentration**

### **SPECIFICATIONS:**

<b>Density:</b>	1.16 gm/ml, 9.6 lbs./gal.
<b>pH at 10% :</b>	< 1
<b>Flash Point (TCC):</b>	None
<b>Shelf life:</b>	Indefinite
<b>Appearance:</b>	Colorless to pale yellow liquid

### **INSTRUCTIONS:**

<b>Concentration:</b>	10% by volume
<b>Temperature:</b>	110° - 130°F
<b>Immersion Time:</b>	3 - 5 minutes

**POSICLEAN™ M** is used in soak applications. Make up the bath with 10% **POSICLEAN™ M** by volume with 90% water. Moderate agitation is recommended to increase the effectiveness of cleaning. Rinse panels thoroughly.

Control: Maintain the concentration of **POSICLEAN™ M** by analyzing the working bath according to the procedure on reverse.

Equipment should be constructed of PVC, polypropylene or polyethylene. Heaters should be quartz or Teflon®.

### **CAUTIONS:**

**POSICLEAN™ M** is acidic: avoid contact with eyes or skin. Wear goggles or safety glasses, and rubber gloves when handling this product. In case of contact with skin or eyes, flush immediately with water and obtain medical attention. For further information, refer to Material Safety Data Sheet.

**DISPOSAL:**

Neutralize with caustic to raise the pH to 6.0 - 8.0. Allow precipitate to settle, and analyze supernatant liquid of residual metal. If within local limits, the supernatant liquid may be discharged. Dispose of supernatant liquid and precipitated metal sludge in accordance with all local, state and federal regulations.

***POSICLEAN™M***

## Analysis for Concentration

**Equipment required:** 5 ml pipette  
50 ml burette  
250 ml Erlenmeyer flask  
pH meter (optional)

**Reagents required:** 0.1N sodium hydroxide standard solution  
Phenolphthalein indicator

**Procedure:**

1. Pipette a 5 ml sample of the working bath into a 250 ml Erlenmeyer flask. Add 100-150 mls water.
2. Add 1 ml indicator solution.
3. Titrate with 0.1N NaOH to a permanent, pink end point. Record the volume of sodium hydroxide used.
4. Titrate with 0.1N NaOH using a pH meter to an end point of pH 8.

**Calculation:**  $\text{mls of NaOH} \times \text{N of NaOH} \times 3.3 = \text{Percent } POSICLEAN^{\text{TM}}M$

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.