

## Product Data Sheet

Date: 01/03/06  
Supersedes: 03/18/02  
**PRODUCT #: N5110****CIRCUTEK A-778**

Accelerator

**DESCRIPTION:** An acidic liquid concentrate which modifies palladium catalyzed surfaces for subsequent deposition of electroless copper. **CIRCUTEK A-778** produces a highly active surface for initiating rapid copper deposition while protecting the electroless copper bath from drag in contamination from the activator solution.

**BENEFITS:**

- Produces highly active surface for rapid copper initiation
- Protects electroless copper bath from drag-in contaminants

**INSTRUCTIONS:**

**CIRCUTEK A-778** 10%  
**Deionized Water:** 90%  
**Temperature:** 65 - 90°F (18-32°C)  
**Immersion Time:** 3 - 6 minutes (4 min. optimal)  
**Agitation:** Work agitation

1. Fill a properly cleaned tank to  $\frac{3}{4}$  its final volume with deionized water.
2. While mixing, carefully add 10% by volume of **CIRCUTEK A-778**.
3. Bring to final volume with deionized water.
4. Thoroughly mix solution and begin use.

**Control and Replenishment**

Analyze according to procedure on reverse. Maintain the concentration of **CIRCUTEK A-778** within the range of 70 - 100% of original make-up concentration by additions of **CIRCUTEK A-778** concentrate according to the following chart.

<u>Accelerator Strength</u>	<u>CIRCUTEK A-778 addition for Tank volume 100 liters</u>
100%	----
90%	1000 ml
80%	2000 ml
70%	3000 ml
60%	4000 ml

For every 750 ft<sup>2</sup> of work processed, add 950 ml of **CIRCUTEK A-778** concentrate solution until a more accurate replenishment rate can be determined based on solution analysis.

**CIRCUTEK A-778** accelerator solution should be discarded when the copper concentration exceeds 1 g/l.

**EQUIPMENT:** Tanks should be constructed of polypropylene PVC, CPVC, PDVD, or white koroseal lined.

**CAUTIONS:** Acidic solution. Avoid eye, skin and oral contact. Wear protective goggles and clothing when handling this material. Flush exposed areas with water. In case of injury seek medical attention. Refer to material safety data sheet for further information.

**ANALYSIS:** **CIRCUTEK A-778 Percent Strength**

**Equipment:** 5 ml pipet  
50 ml buret  
250 ml Erlenmeyer flask

**Reagents:** 0.1N Sodium Hydroxide (NaOH) standard solution  
Methyl orange indicator

**Procedure:**

1. Pipet a 5 ml sample of the bath into a 250 ml Erlenmeyer flask. Add 50 ml of DI water.
2. Add 4 – 6 drops of methyl orange indicator.
3. Titrate with 0.1N NaOH from orange to yellow end point.

**Calculation:**  $\text{Mls of NaOH} \times \text{N of NaOH} \times 6.5 = \% \text{ CIRCUTEK A-778}$

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.