

CC-108 Cleaner/Conditioner

DESCRIPTION

CC-108 contains a concentrated blend of surfactants and wetting agents that has designed to clean the copper foil surface prior to the electroless copper deposition.

CC-108 has been formulated to remove fingerprints and light oils from copper foil. It contains conditioning agents which activate glass fibers and epoxy, allowing for a reliable absorption of the catalyst. **CC-108** has been designed so it can be easily removed from the copper surface with cold tap water.

OPERATING PARAMETERS

Make-Up	3% to 5% by volume diluted with water
Temperature	130 to 140°F (54 to 60°C)
Immersion Time	4 to 6 minutes
Process	Batch Tank
Agitation	Will speed cleaning action
Ventilation	Advised
Tanks	Polypropylene, Polyethylene
Racks/Baskets	Stainless Steel, Plastisol covered steel
Heaters	Quartz, Stainless Steel, Teflon Coils

PHYSICAL PROPERTIES

Specific gravity	1.02-1.06
Appearance	Clear to light amber liquid
pH(1% solution)	9.0-10.0
Odor	Soapy amine
Flash Point	>200F

CONTROL PROCEDURES

Replenishment additions can be made based on workload processed. An addition of 300 mls of **CC- 108** concentrate should be made to the process tank for every 1000 square feet processed. The preferred method of analysis is a simple bench analysis. An active **CC-108** bath should be maintained between 3% and 5% by volume. Additions can be made up to 2 times the concentration of the original working solution, then the working solution should be replaced.

ANALYSIS

Reagents and Equipment

0.1 N Acid, either sulfuric or hydrochloric
Cresol Red indicator solution
250 ml Erlenmeyer Flask
50 ml buret
20 ml pipet

Procedure (Cresol Red indicator):

1. Pipet 10 ml of a cooled solution into an Erlenmeyer Flask.
2. Add 50–75 mL of DI water.
3. Add 3 - 5 drops of cresol red indicator.
4. While stirring the solution, titrate with 0.1 N Acid to a yellow endpoint.
Note: cresol red changes from purple - red (above pH 8.8) to yellow (below pH 7.0)
5. Calculation:

$$\text{CC-108 Content (\% volume)} = (\text{ml acid}) \times (\text{Normality of Acid}) \times 3.0$$

Alternate Procedure (pH):

1. Pipet 10 ml of a cooled solution into a 400 mL beaker.
2. Add 50 – 75 mL of DI water, a magnetic stir bar, and a pH probe.
3. While stirring, titrate with 0.1 N Acid until the pH drops below 7.0.
Note: the pH will change rapidly near 7.0.
4. Calculation:

$$\text{CC-108 Content (\% volume)} = (\text{ml acid}) \times (\text{Normality of Acid}) \times 3.0$$

SAFETY AND STORAGE

CC-108 is an alkaline solution. It contains wetting agents and organic surface conditioners. Avoid breathing vapors. Use in a well-ventilated area. When handling concentrate or working solution, wear protective clothing, gloves and chemical safety goggles. In case of skin contact, remove contaminated clothing and flush affected area with plenty of cold water. In case of eye contact, flush immediately with plenty of cold water and seek medical attention immediately.

Store **CC-108** in its original container. Keep away from direct sunlight and temperature extremes. Protect from freezing.

WASTE TREATMENT

CC-108 contains organic alkali and surfactants. In the process of cleaning copper clad material, some copper may be removed and dissolved from solution. Consult with local officials for waste disposal regulations. Please ask a Florida CirTech technical sales rep. for more information regarding waste treatment of this chemistry and our complete line of waste treatment chemistry if additional help or information is desired.

MISCELLANEOUS

Available in 5-gallon pails and 55 gallon drums. Consult MSDS for additional information.