



CC-131

Cleaner Conditioner for OMEGA II

DESCRIPTION

CC-131 is the first step in the OMEGA II Direct Metallization T M plating process. This process produces a non-electroless conductive coating on printed circuit boards. With this process you can electroplate directly onto the coated surface in any acid copper-plating bath using any of the normal panel plating or pattern plating methods.

CC-131 consists of a concentrated blend of surfactants and wetting agents designed to change the surface activity of non-conductive materials. The conditioning agents found in **CC-131** helps to promote adhesion of the coating promoting excellent copper to copper bonding in acid copper.

OPERATING PARAMETERS

Make-Up	Add to De-Ionized Water 10% CC-131
Temperature	60°C to 65°C 140°F to 150°F
Immersion Time	5 to 7 minutes
Process	Batch Tank
Agitation	Will promote conditioning action
Circulation	Continuous to promote conditioning action
Ventilation	Advised
Tanks	Polypropylene, Polyethylene, PVC
Racks/Baskets	Stainless Steel, Plastisol Covered Steel
Heaters	Teflon Coils

PHYSICAL PROPERTIES

Appearance	Clear liquid
Specific gravity	1.05-1.10



CONTROL PROCEDURES

Replenishment additions can be made based on the amount of work processed. An addition of 1000 mls of **CC-131** should be made to the process tank for every 1000 surface square feet processed. An active **CC-131** bath should be maintained between 9.0 % and 11.0 %. The solution should be discarded when 500 surface square feet are processed per working gallon.

ANALYSIS

ANALYSIS **CC-131**

REAGENTS NEEDED

0.1 N base, either sodium or potassium hydroxide
Bromophenol Blue Indicator Solution

Procedure:

1. Pipette 5 ml of **CC-131** solution into a 250 ml flask, dilute with 50 ml of de-ionized water.
2. Add 4 to 5 drops of Bromophenol Blue indicator and titrate with 0.1 Normal base until the color changes from clear to a light blue endpoint. Record amount used.

CALCULATIONS % CC-131 = (mls of base) x (Normality of Base) x 9.5

Maintain the concentration of CC-131 between 9.0 and 11.0 %.

SAFETY AND STORAGE

CC-131 is an acidic solution. It contains fluoride salts, 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-131** in its original container. Keep away from direct sunlight and temperature extremes. Protect from freezing.

WASTE TREATMENT

CC-131 contains organic surfactants. In the process of cleaning copper clad material, some copper dust is removed and dissolved in solution. The spent working solution of

CC-131 may be treated by removing the copper and then raising the pH with dilute caustic soda solution before sending the spent solution to the sewer. Consult with local officials for further waste disposal regulations.

MISCELLANEOUS

Available in 5-gallon pails and 55 gallon drums.