



116 Research Dr, Suite 129
Bethlehem, PA 18015
Phone: 610.849.5041
Email: info@LBN-Inc.com

CuP-100 Patent Pending Technical Data Sheet (TDS)

Description

CuP-100 is a novel cost effective alkaline aqueous copper advanced Micro Etch formulation used in multiple copper surface prep applications. CuP-100 provides superior substrate cleaning with controlled copper roughness providing improved adhesion. CuP-100 is the first in a series of copper surface preparation family of products providing NO to very low copper etch. For effective adhesion of copper to organic and inorganic substrates.

Applications

Where smooth Copper surface is required, typically at higher signal speeds greater than 20 GHz. Intended to replace Pumice Scrub processes, Persulfate based Micro Etch and oxide treatment processes that generate too much copper roughness (pitting). Copper surface preparation for effective bonding of copper to solder mask, dry film and photoresist.

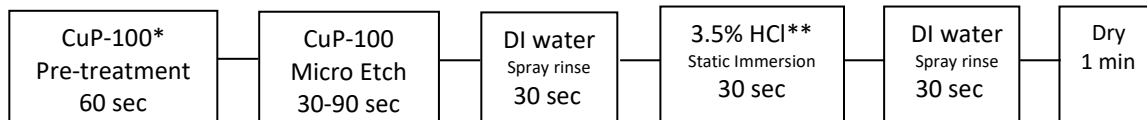
CuP-100 Benefits

1. No etch, removes only copper oxides
2. Minimize insertion loss due to skin effect
3. Improve adhesion
4. Minimum copper sludge build up in the treatment bath
5. Cu bath loading does not affect performance
6. Removes oils and surface greases

CuP-100 process replaces most existing POR Micro Etch and Pretreatment steps, such as:

1. Sodium Persulfate
2. Sodium Persulfate mixed with Sulfuric Acid
3. Sulfuric Acid mixed in with Peroxide
4. Copper oxide treatment

Process Recommendation: (Suggested recipe, adjustments may be needed to meet various process specs)



CuP-100 is CuP-100 spiked with an oxidizer to improve surface contamination removal and increase etch rate.
HCl** treatment is optional for organic film laminate adhesion.*

Material Compatibility

Compatibility chart is available upon request. Materials include but are not limited to High Density polyethylene (HDPE), PFA, Polypropylene, 316L Stainless steel, and Teflon (PTFE) are normally suitable materials of construction.

Handling/Storage/Shipping

Read the product MSDS before handling and using the product. CuP-100 has a twelve (12) month shelf life when stored in unopened containers. Store at 0-30° C. Open drums and diluted product must kept under a N₂ (nitrogen) blanket.

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