

Pre and Post-Treatment Options for HDI & UHDI Fine Pitch Applications

ACL-738 – Acid soak solution cleans and activates copper substrates prior to plating. It removes organic residues, including light oils as well as oxides, from the copper substrate. It is the ideal surface preparation for applications such as Ni/Au and Ni/Pd/Au.

The binder is adsorbed onto the active area and seals the resin, preventing the palladium ions from attaching and rendering them inactive. ACL-738 will not damage permanent resists and rinses readily with water. It is widely recommended for fine pattern applications.

Accemulta WHE-4 - Activator post-dip is used following palladium activation and before nickel plating for ENIG or ENEPIG in fine line applications. It adsorbs palladium from the resin, (most notably, the spacing between fine pattern circuit lines or pads) and renders all residual palladium on the resin inactive.

The binder adsorbs onto the active area and any remaining palladium ions; palladium activity is lowered by the adsorbed binder, and a nickel reduction reaction is prevented.

	Chemical	Temp. (C°)	Plating time (min.)
Cleaner	ACL-738	50	5
Acid Dipping	10% H ₂ SO ₄	r.t.	1
Soft Etching	SPS / MGE-9	25	1
Pre-dip	3% H ₂ SO ₄	r.t.	1
Activator	MNK-4 / MFD-5	30	2
EL-Ni	NPR-4	80	30
EL-Pd	TPD-23	50	10
EL-Au	TWX-42	78	14

	Chemical	Temp. (C°)	Plating time (min.)
Cleaner	ACL-738	50	5
Acid Dipping	10% H ₂ SO ₄	r.t.	1
Soft Etching	SPS / MGE-9	25	1
Pre-dip	3% H ₂ SO ₄	r.t.	1
Activator	MNK-4 / MFD-5	30	2
Post dip	WHE-4	25 (r.t.)	2
EL-Ni	NPR-4	80	30
EL-Pd	TPD-23	50	10
EL-Au	TWX-42	78	14



Corporate Headquarters: 3990 Concours, #425 • Ontario, CA 91764 • Ph: (909) 466-5635

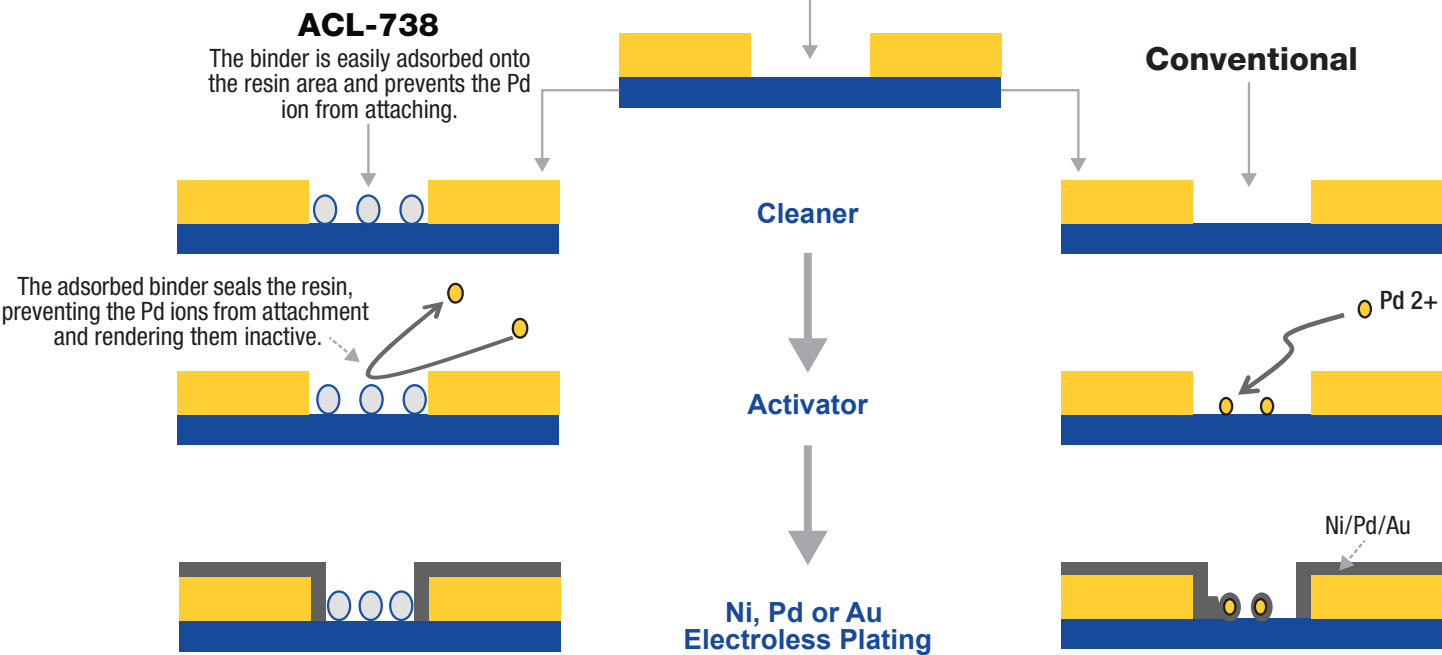
Tech Center: 240 Town Line Road • Southington, CT 06489 • Ph: (860) 793-4011

www.uyemura.com

Performance of ACL-738 and WHE-4

ACL-738 Performance

The area that easily adsorbs Pd ions from the activator



WHE-4 Performance

The targeted area that easily adsorbs Pd ions

