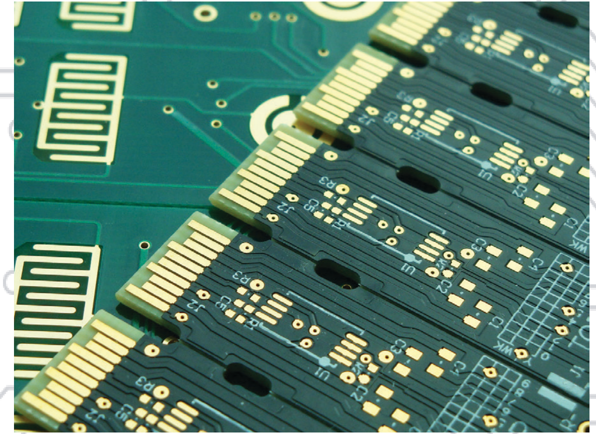
TechniPad

High-Performance ENEPIG

TechniPad ENEPIG

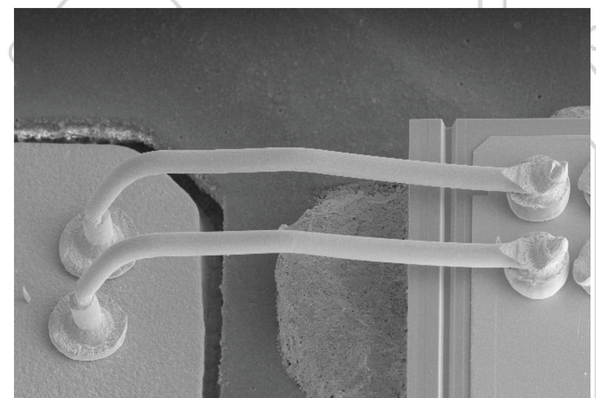
TechniPad ENEPIG utilizes unique EN stabilizers and a novel Pd complex to eliminate fabrication issues and dramatically reduce maintenance. In addition, gold deposition is a substrate catalyzed, eliminating Ni corrosion common with typical replacement chemistry.

To the fabricator, this means excellent coverage, no extraneous plating, and reduced operating costs. To the assembler and OEM, the result is excellent solderability, superior bondability, and reliable, low contact resistance.



Features and Benefits

- Flat EN deposit
- Substrate catalyzed Au deposit eliminates corrosion of electroless Ni
- Precise activation
- Long bath life
- Pure Pd deposit from a stable process
- Unique EN stabilizers with a wide process window



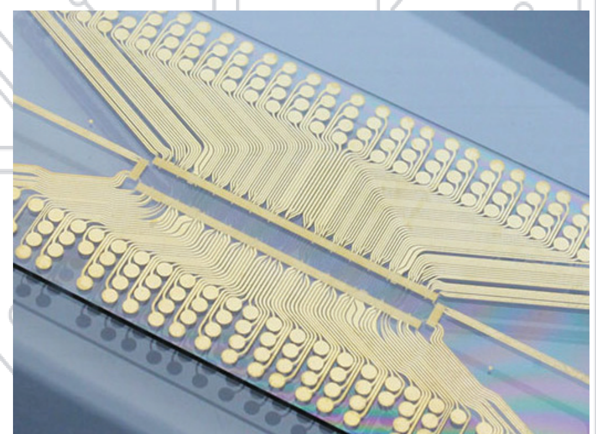
Advantages

For Fabrication

- Lowest operating cost
- Reduced gold & palladium usage
- Long bath life
- Reduced maintenance and analytical costs
- No extraneous plating

For Assembly

- Best in class solderability
- Low contact resistance
- Excellent bondability
- World-class acceptability per IPC Criteria



TechniPad
ENEPIG Process

For today's electronics market, the performance of any final finish on a PCB is measured by its solderability, wire bonding, and low contact resistance.

Solderability

The TechniPad ENIG process provides excellent solderability. If solder joint adhesion is critical due to the size of the component attachment pad, TechniPad ENEPIG is recommended. For soldering applications, 2-5 micro inches of Pd is recommended.

Wire Bonding

The TechniPad ENEPIG process provides excellent solderability providing a gold wire bondable surface with over 6 grams of pull even with no surface failures. Based on testing, a minimum of 5 micro inches of electroless Pd is recommended .

Contact Resistance

TechniPad ENIG provides excellent low contact resistance for single insertions. However, for multiple insertions or more critical applications, TechniPad ENEPIG with a minimum of 10 micro inches of Pd is recommended.

SEM/EDS

Analysis has shown that TechniPad ENEPIG has lubricity similar to electrolytic hard gold deposits. Lubricity allows for self-healing of the final finish with each insertion. However, at 10 micro inches of Pd, EDS analysis shows stable, low Ni levels at the surface after multiple insertions.

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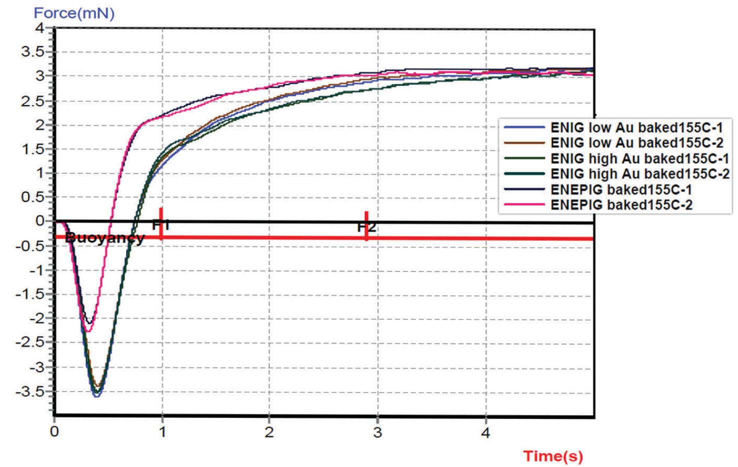
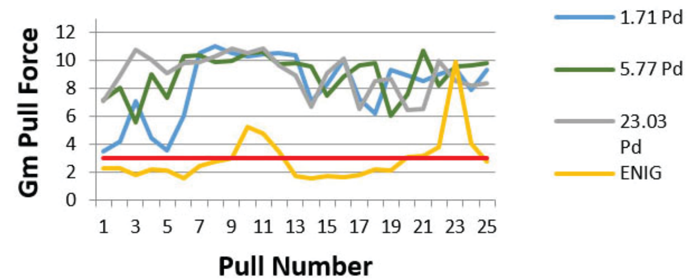
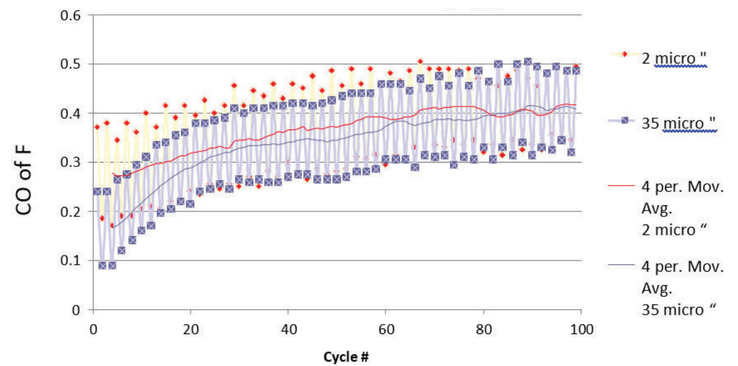
TechniPad Wetting Balance after 2 hour 250 °C



Wire Pull Data after 4 hour bake175 °C



Coefficient of Friction Low vs. High Pd Thickness



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