

Affinity Flex

For ENIG and ENEPIG Applications

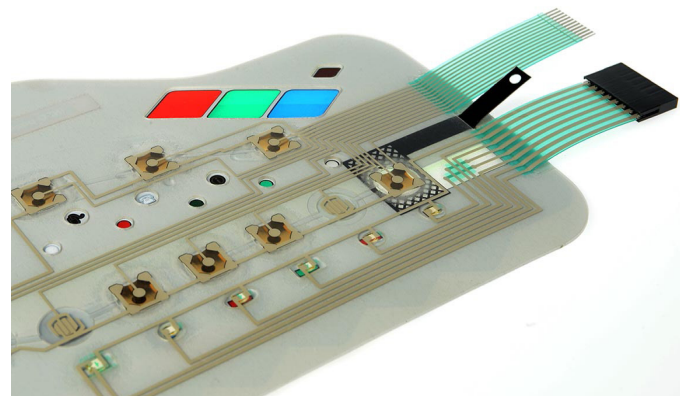
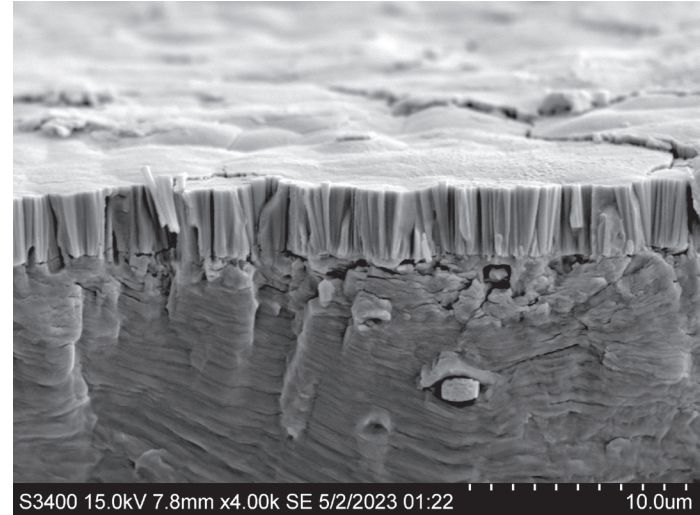
Superior Electroless Nickel Provides Stress Relief for Flexible Circuit Applications

Affinity Flex is MacDermid Alpha's latest Electroless Nickel technology designed for ENIG and ENEPIG fabrication of flexible circuits. Traditional Electroless Nickel (EN) systems leave flexible circuits vulnerable to large crack propagation and risk of short circuits upon bending. Affinity Flex EN's unique columnar grain structure induces stress relief via multiple smaller microcracks which prevent propagation through to copper.

Affinity Flex boasts high reliability and performance over a long Electroless Nickel operating life, no dummy activation and reduced palladium consumption, and reduced operating costs while providing high reliability.

KEY FEATURES

- Suitable for ENIG and ENEPIG applications
- Compatible with Cyanide Free Gold technology
- EN fracture mechanism that prevents propagation to the underlying copper
- Consistent performance up to 6 MTO's
- IPC 4556A and 4552B compliant
- Reduced waste treatment costs
- Reduced chemical consumption
- Reduced precious metal consumption
- Lower CO2 emissions



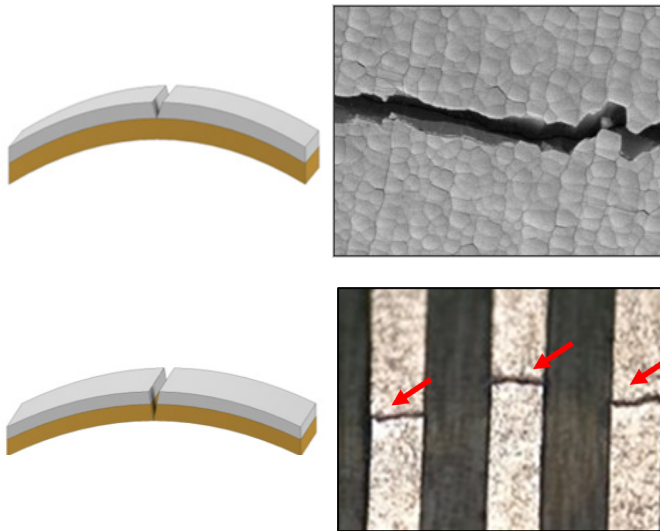
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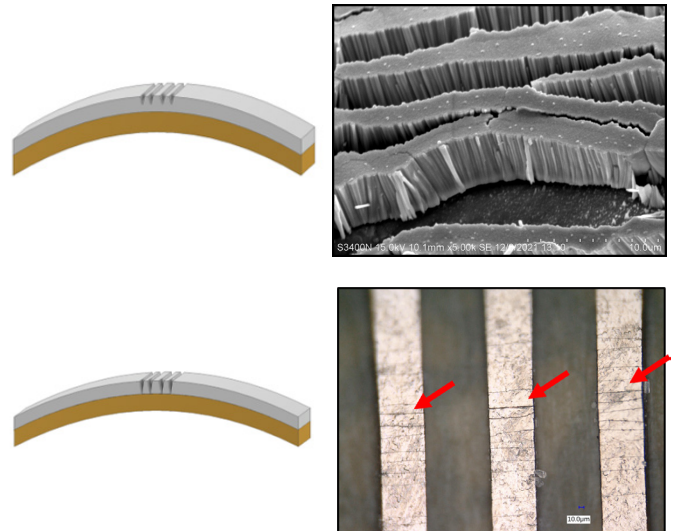
A Unique Grain Structure that Cannot be Beat

During bending of standard ENIG, stress relief is provided through a single large crack which propagates through to the underlying copper. Affinity Flex's columnar grain structure induces stress relief via multiple smaller cracks, preventing propagation through to the underlying copper.

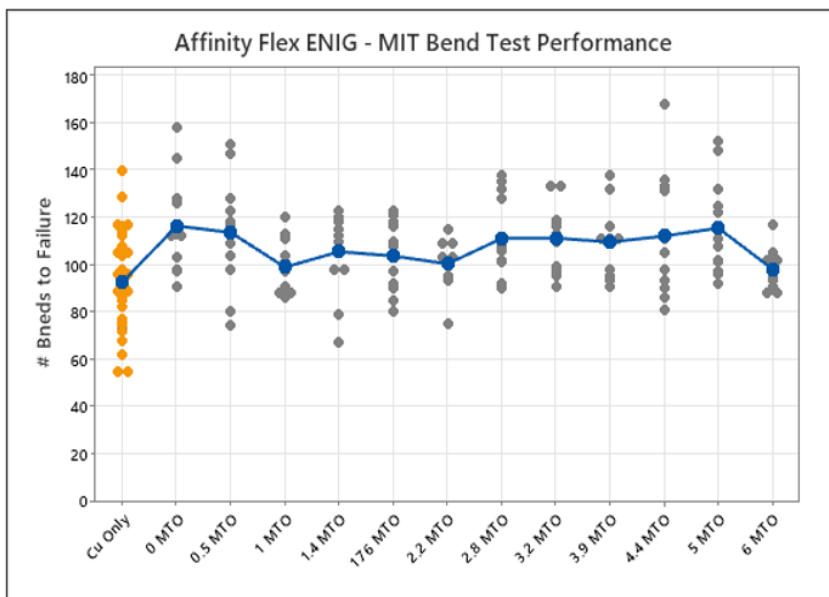
Standard ENIG



Flex ENIG



Superior Reliability



- Affinity Flex ENIG bend test results are comparable to bare copper substrate
- Consistent bend test performance up to 6 MTO's

