

# Xenolyte<sup>®</sup> Ni/Pd/Au

ENEPIG, ENEP& ENIG for highest reliability



Electronics

Semiconductor

atotech.com

## ENEPIG as final finish for pad and RDL in wirebonding and soldering application

### Xenolyte<sup>®</sup> Ni/Pd/Au

The Xenolyte<sup>®</sup> portfolio includes cleaning and activation pre-treatment solutions and plating chemistries for the electroless deposition of nickel, palladium, and gold on Cu and Al alloys. It enables hard, corrosion-free, and stress-minimized metal stacks to protect underlying active structures and provide a robust, stable, and low-resistance solder joint connection to the IC substrate.

### Xenolyte<sup>®</sup> Ni

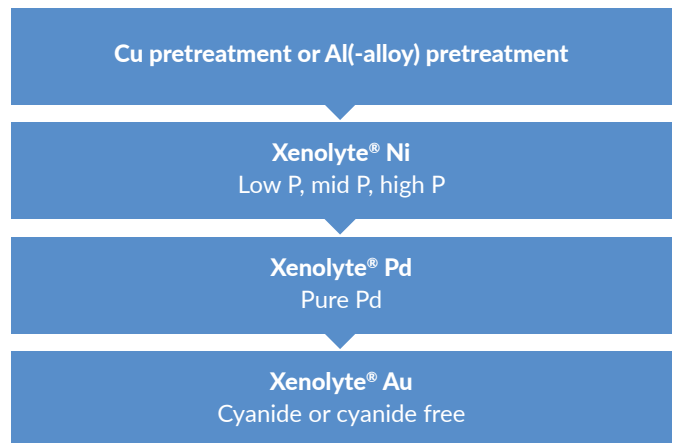
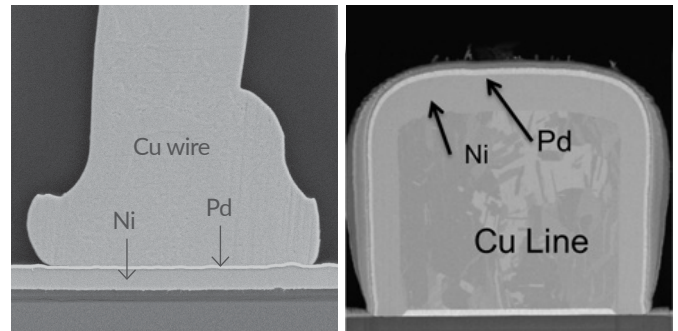
Xenolyte<sup>®</sup> Ni processes provide low, mid and high phosphorous Ni alloys that can be tailored to fulfill customer requirements as barrier layer for wirebonding and soldering applications. The resulting Ni deposition layers exhibit low stress, high toughness/hardness and low resistivity.

### Xenolyte<sup>®</sup> Pd

Xenolyte<sup>®</sup> Pd processes provide pure Pd deposits to ensure high reliability in wire bonding on Cu and Al-alloy pads. As auto-catalytic Pd deposition process Xenolyte<sup>®</sup> Pd provides the perfect surface finish for UBM qualified in automotive and MEMS applications.

### Xenolyte<sup>®</sup> Au

Xenolyte<sup>®</sup> Au processes provide pure Au deposits as final finish in ENEPIG and ENIG stacks for superior wettability and bondability. As cyanide free immersion Au process, it fulfills high standards regarding sustainability and HSE requirements without any drawback in performance.



# Xenolyte<sup>®</sup> Ni/Pd/Au

## ENEPIG, ENEP, ENIG for highest reliability

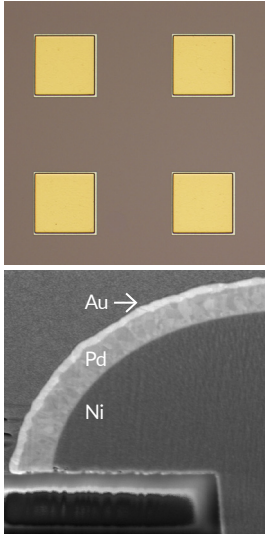


Figure:  
Top: ENEPIG on AlCu pad, (OM)  
Bottom: ENEPIG on AlCu pad  
(FIB/SEM)

### Xenolyte<sup>®</sup> Ni features

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- Low, mid, high phosphorous Ni processes available
- Fast deposition rates
- Low stress deposition layer
- Proven barrier layer
- Long bath life
- Stable deposition rate over bath life

### Xenolyte<sup>®</sup> Pd features

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- Pure Pd deposits
- Low process temperature
- Extended bath life
- Stable deposition rate over bath life

### Xenolyte<sup>®</sup> Au features

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- Cyanide or cyanide free
- One process for ENIG and ENEPIG
- Extended bath life
- Stable deposition rate over bath life

