

# Xenolyte<sup>®</sup> processes

## Electroless deposition



Electronics

Semiconductor

atotech.com

## Pad metallization and RDL housing

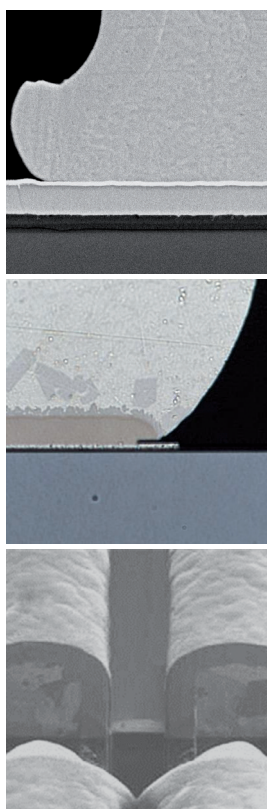


Figure 1-3:  
Wire bonding  
Soldering  
RDL housing

### Electroless plating solutions

The Xenolyte<sup>®</sup> portfolio includes cleaning and activation pre-treatment solutions and plating chemistries for the electroless deposition of nickel, palladium, and gold in RDL housing and pad metallization applications. 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.

### Applications

- MEMS
- Controllers
- Power ICs: IGBTs, MOSFETs, diodes
- Memory: DRAM, NAND
- Image sensors

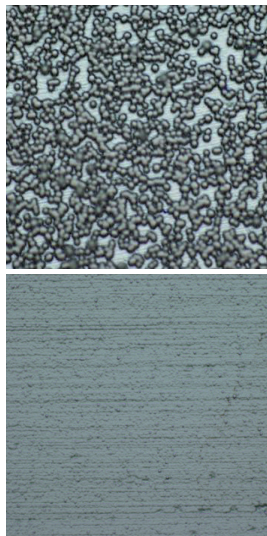


Significant cost savings  
compared to sputtering



Qualified according to automotive  
spec AEC-Q100-010 RE

# Xenolyte<sup>®</sup> Zincate CFA2 – universal zincation process for Al and Al alloy wafers



**Figure 4:**  
Standard Al zincation process;  
rough and non-closed Ni layer  
**Figure 5:**  
Universal Al zincation process;  
closed and regular Ni deposit

## Universal acidic zincation

Xenolyte<sup>®</sup> Zincate CFA2 is a universal pretreatment process for all types of Al and Al alloy wafers. The pretreatment is the first step in the electroless deposition of Ni, Pd, and Au. It removes the oxide layer of Al and replaces it with a Zn layer of several nanometers. Following pretreatment, the zinc layer may be plated with electroless Ni for further metallization.

## Features and benefits

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- Sufficient oxide removal and homogeneous zincation
- Compatible with all solder mask and resist types
- No Ag migration
- No harmful or volatile ingredients



## An eco-friendly solution

The Xenolyte<sup>®</sup> portfolio is cyanide and lead-free, and conforms to RoHS, the EU guideline for the restriction of hazardous substances. Xenolyte<sup>®</sup> processes enable customers to reduce their environmental footprint, while reducing costs and improving process efficiency.

