

# Noviganth® AF

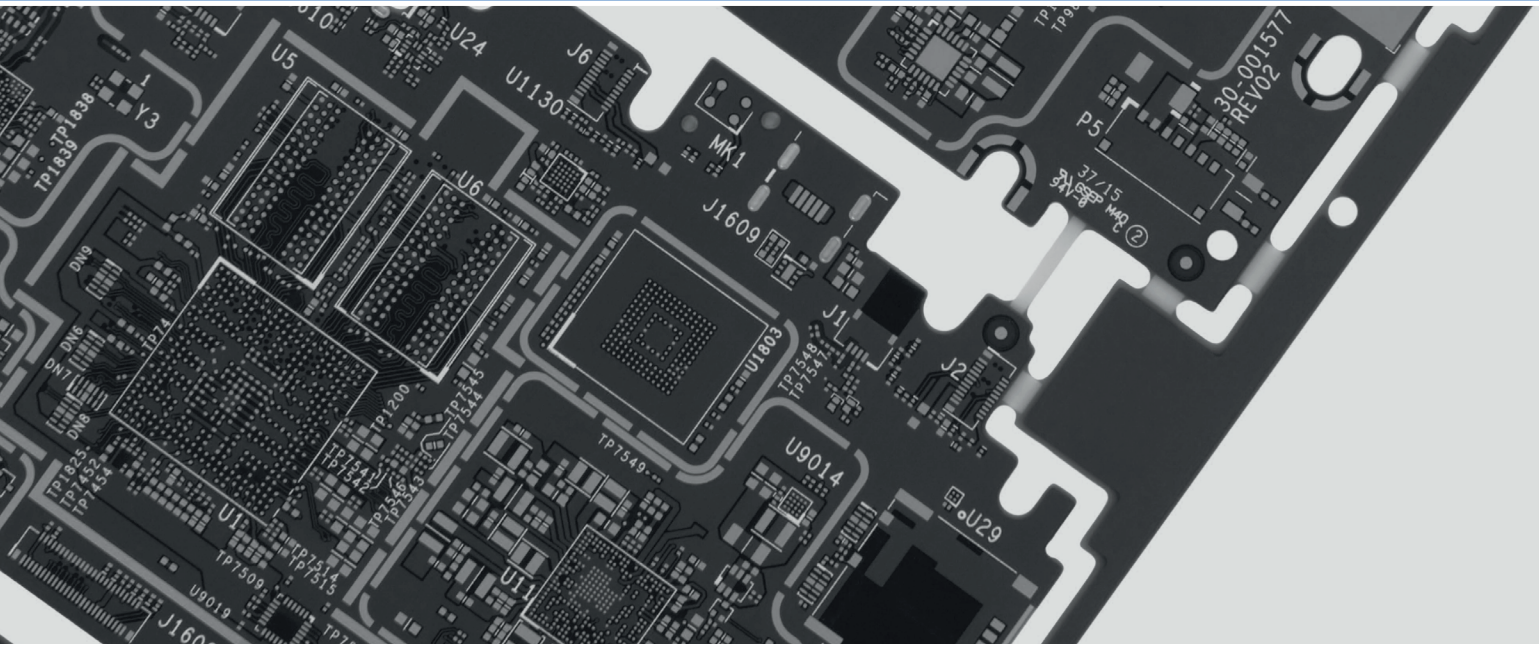
High build self accelerating electroless copper



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## No flash plate required - Ideal for full pattern plate applications

### Noviganth® AF

Based on an enhanced Pd/Sn colloidal activation system the Noviganth® AF process is uniquely designed to satisfy the electronic industries demand for higher reliability with optimized process cost of ownership.

From the dedicated cleaners through to the final high build electroless copper deposition, the Noviganth® AF process utilizes the latest generation of chemistry to ensure complete coverage in challenging via designs, be they high aspect ratio through hole, or blind micro via.

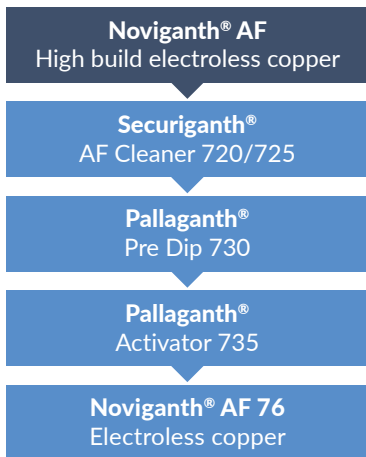
The dense high build copper layer produced with Noviganth® AF is ideally suited for full pattern plate applications as there is no need for additional reinforcement or flash plating.

### Features and benefits

- New generation of low palladium Pd/Sn activator
- Outstanding hole wall adhesion
- Superior hole wall coverage on wide range of substrate materials
- Excellent performance for high aspect ratio through holes, build up boards and blind vias
- Dedicated cleaner systems cover all applications
- Designed with process Cost of Ownership (CoO) in mind

# Noviganth® AF

## High build self accelerating electroless copper



### Securiganth® AF Cleaner 720 & 725

These dedicated cleaners are compatible with FR4, PI and other dielectrics and when used individually or in sequence, they enable excellent cleaning in the through hole and uniform conditioning of the glass fiber bundles.

This step ensures optimal activator coverage and adhesion and results in enhanced Cu-Cu adhesion.

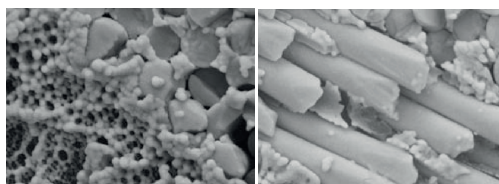


Figure 1: Uniform conditioning

### Pallaganth® Activator 735

The Pallaganth® Activator 735 is one of the key steps in the overall Noviganth® AF process.

Based on an innovative organic additive, this low Pd bearing, acid free formulation shows superior catalytic activity compared to traditional activators based on Pd-Sn colloids. It enables excellent coverage performance even at low Pd concentration down to 30 ppm.

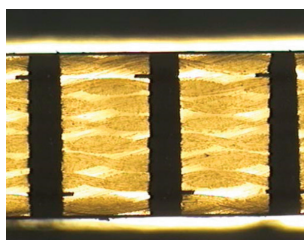


Figure 2: Excellent coverage across the complete through hole

### Noviganth® AF 76

The Noviganth® AF 76 has been specifically developed for use with the Pallaganth® Activator 735 in vertical applications and provides a very stable operation without the need for a preceding accelerator step.

The deposited copper layer has a dense, fine grained structure with excellent coverage in even the most challenging of through holes.

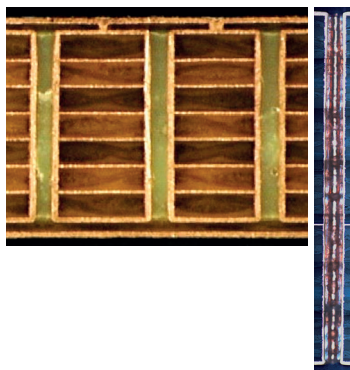


Figure 3: Ideal for through hole and BMV production

