

Technic ISA System

The Perfect Copper Surface

Technic ISA is a combination of equipment, chemistry and process control to provide the perfect copper surface required by today's high density electronics. The components of the system are:

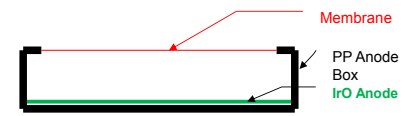
- Technic ISA Anode
- Technic ISA Copper Oxide
- Technic Acid Copper
- Technic EBA

TECHNIC ISA ANODE: Using insoluble anodes eliminates a major source of particulate in an acid copper plating bath, phosphorized Cu anodes. However, by utilizing a proprietary membrane, Technic ISA isolates the insoluble anode from the plating solution. This isolation eliminates breakdown of organic additives and provides the ability to focus current flow. This yields phenomenal thickness distribution and a consistent perfect surface.

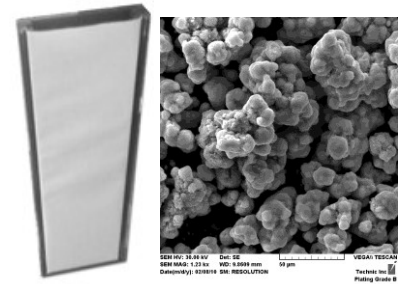
TECHNIC ISA COPPER OXIDE: The Technic ISA System utilizes copper oxide to maintain copper levels in the plating solution. Technic ISA Copper Oxide is specifically chosen for its purity and ability to quickly dissolve. In addition, Technic can provide equipment to measure & add copper oxide from full automation with controllers to manual addition based on analysis. Technic provides the complete custom package.

TECHNIC ACID COPPER: Technic has a whole range of acid copper solutions to meet all technical requirements and fit in most equipment set ups. Whether high throw, or high speed high ductility deposits for flex circuits or high thickness for stud plating, there is a Technic Acid copper that will yield a perfect surface.

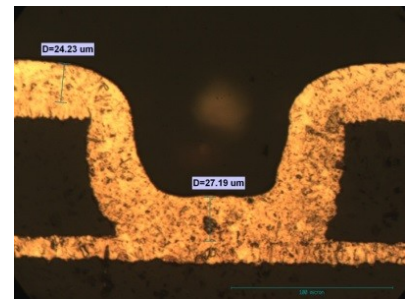
TECHNIC EBA: Technic's EBA (Electroplating Bath Analyzer) provides an uncomplicated, trouble free and accurate answer for analysis of electroplating solutions. It is the only proprietary instrument utilizing both AC and DC voltammetry. By utilizing both AC and DC a larger number of variables to identify & precisely measure both organic and inorganic levels. Precise control of the additives yields a consistent perfect surface.



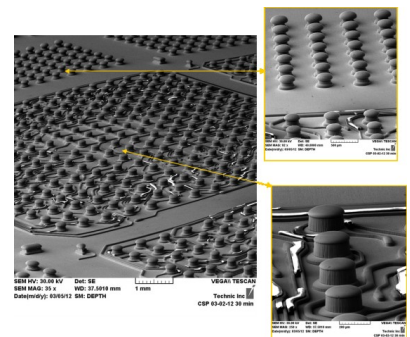
Top View Technic ISA Anode Box



Technic ISA Anode Box & Technic ISA Copper Oxide



High Throw Technic Acid Copper



High Speed Technic Acid Copper For Stud Plating



Technic EBA



| Feature | Benefit |
|---|---|
| Technic ISA Membrane isolates the insoluble anode from the plating bath | Low Additive Consumption |
| | Eliminates pitting from gas generation |
| Eliminates phosphorized Cu anodes | Eliminates nodules from Cu anode sludge |
| | Reduces down time for line maintenance |
| | Improves employee safety |
| Technic ISA Anodes direct current flow | Unsurpassed thickness distribution |
| Insoluble anodes can be shaped to match plating area | |
| Consistent anode area | |
| Technic EBA provides precise analytical control | Consistent deposit performance |
| Wide range of Technic acid copper formulas | The product and expertise for a wide range of applications & equipment sets |