

Technic ISA CuO

Insoluble Anode System for Acid Copper



The Perfect Copper System

Technic ISA (Insoluble Anode System) 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 CuO (Copper Oxide)
- Technic Acid Copper
- Technic EBA (Additive analyzer)
- Technic Plating Equipment

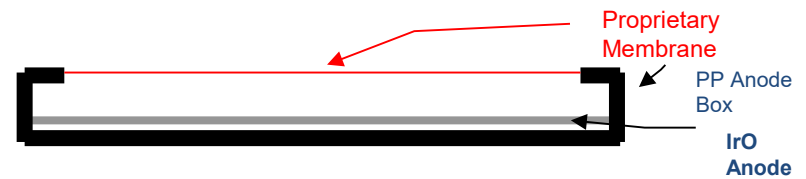
Features

- ISA Membrane isolates insoluble anode from plating solution
- Eliminates Phosphorized Copper anodes
- Direct current flow
- Can be shaped to match plating area
- Consistent anode area (no dissolution)
- Pure Copper Oxide, for best results
- Precise analytical control with Technic EBA
- Wide-range of Technic acid copper formulations for your needs

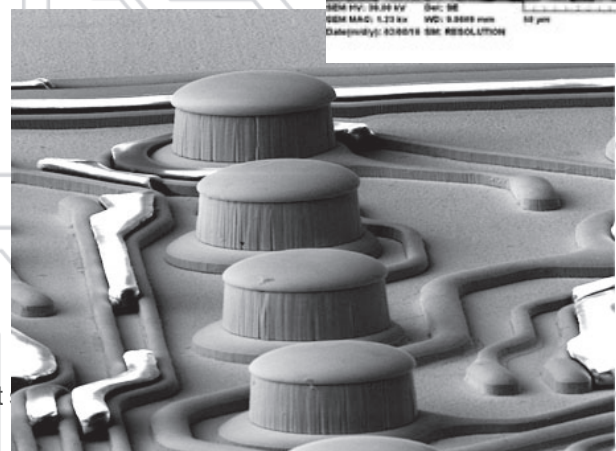
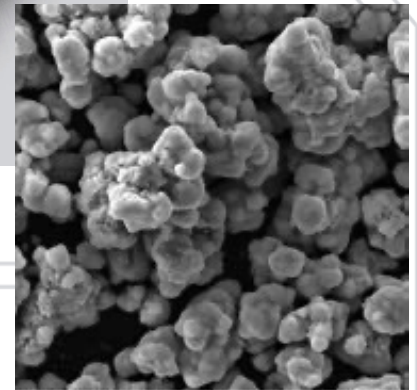
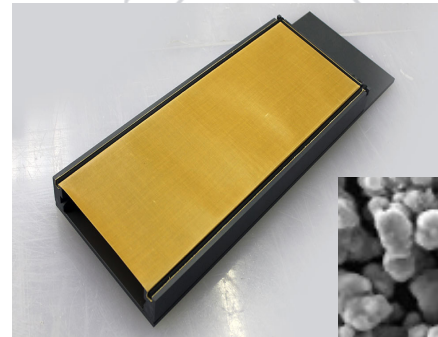
Benefits

- Low and predictable Additive Consumption.
- Eliminate Pitting from Gas generation.
- Eliminate nodules from Copper anode sludge.
- Reduced down time for line maintenance.
- Improve employee safety, less handling.
- Unsurpassed thickness distribution.
- Consistent deposit performance.
- Ideal for a wide range of applications and equipment

Top View
Technic ISA Anode Box



Technic ISA Anode Box &
Technic ISA Copper Oxide



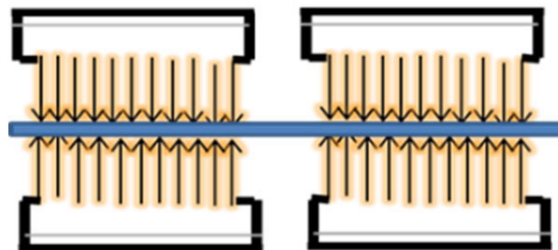
Technic ISA & CuO

The Perfect Copper System

Technic ISA Focused Current Flow

Technic ISA Anode

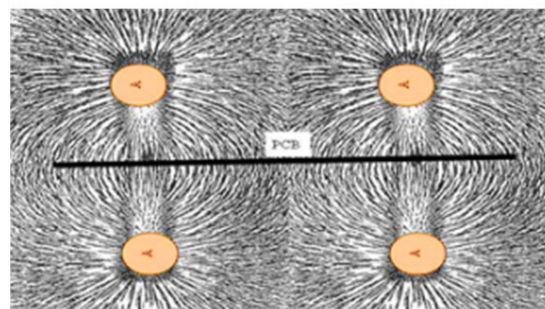
Using insoluble anodes eliminates a major source of particulate in an acid copper plating bath. By utilizing our proprietary membrane, Technic ISA isolates the insoluble anode from the plating solution. This isolation eliminates breakdown of organic additives and provides the ability to focus current 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 specially chosen for its purity and ability to quickly dissolve. In addition, Technic can also provide equipment to measure and add Copper Oxide, from full automation with controllers to manual addition based on analysis.

Typical Current Flow with Baskets



Technic Acid Copper

Technic has a wide range of Acid Copper solutions to meet all technical requirements and fit 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 Copper Oxide Purity

| | Technic ISA & CuO | Competitive CuO |
|---|--------------------------------|--------------------------------|
| CuO purity, % | 99.7 | 98.7 |
| Na(I), % | 0.17 | 0.12 |
| Chloride, % | 0.014 | - |
| Al(III), ppm | 13 | 25 |
| Ca(II), ppm | 51 | 160 |
| Fe(III), ppm | 20 | 0 |
| Pb(II), ppm | 3 | 14 |
| Sn(IV), ppm | 23 | 30 |
| Zn(II), ppm | 9 | 25 |
| Density | 1.18 | 3.14 |
| Dissolving time in 10% H ₂ SO ₄ , min | 0.8 | 21 (still residues in 35 min.) |
| Grain size, μm | 10 ~ 60 | 5 ~ 55 |
| Particles | Lump shape | Round shape |
| Type of CuO formation | Pyrolysis of CuCO ₃ | Pyrolysis |

Technic EBA

Technic's EBA (Electroplating Bath Analyser) provides a simple, trouble free and accurate answer for analysis of electroplating solutions. It is the only proprietary instrument utilizing both AC and DC voltammetry. By doing that, a large number of variables are used to identify and precisely measure both organic and inorganic levels. Precise control of the additive yields a consistent, perfect surface.

NOTE: Standard Copper Plating Equipment, or Vertical Platers such as MP200 are available through our equipment divisions.

Technic EBA

Technic MP200

