umicore
Electroplating

AURUNA® 530

GOLD COBALT ELECTROLYTE

Electrolyte for Abrasion-Resistant, Low-Corrosion Hard Gold Layers

AURUNA® 530 is a weakly acidic hard gold electrolyte with high current efficiency. Its essential property is its high resistance to abrasion and corrosion.

By choosing advantageous operating conditions (pH-value and temperature), printed circuit boards can be treated in a way which is particularly friendly to resists and lacquers, thus avoiding the lifting of masking materials.

With a gold content of at least 3 g/l, the desired high current efficiency can be reached even with sensitive resists. The plating speed is approx. 0.29 µm/min at 1 A/dm² and 35 °C.

Advantages

- Weakly acidic hard gold electrolyte based on gold-cobalt with high current efficiency
- Good compatibility with resists, like dry film and soldermask
- Low contact resistance
- High abrasion resistance
- Good thickness distribution
- Easy maintenance and high stability of the electrolyte
- Low-pore layers with good corrosion resistance

Applications

- Contacts on plug-in cards
- Printed circuit boards

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TECHNICAL SPECIFICATIONS

| Electrolyte characteristics	
Electrolyte type	Weakly acidic
Metal content	4 (3 - 6) g/l Au
pH value	4.0 (4.0 - 4.4)
Operating temperature	35 °C
Current density range	0.8 A/dm²
Plating speed	0.1 - 0.5 µm/min
Anode material	Pt-Ti (type PLATINODE® Pt/Ti)

Coating characteristics	
Coating	Gold-cobalt
Alloy composition	99.7 wt.% Au 0.3 wt.% Co
Colour of deposit	Yellow
Brightness	Semi-bright
Layer hardness HV 0.015 (Vickers)	approx. 170 HV
Density of the coating	Approx. 18 g/cm³

Corrosion Resistance Test AURUNA® 530

Before test
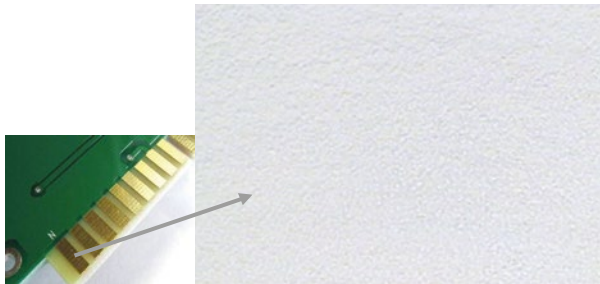
After test
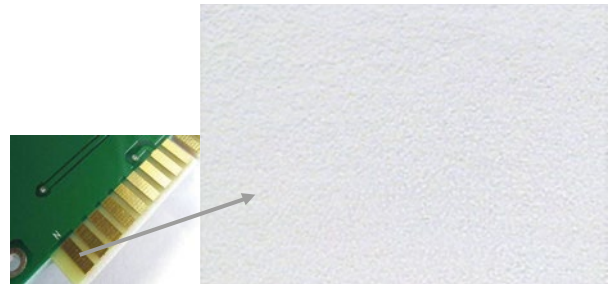
NAV-Test, 1 h, 25 °C on production board. No pin holes found.

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