Au Fe

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umicore Electroplating

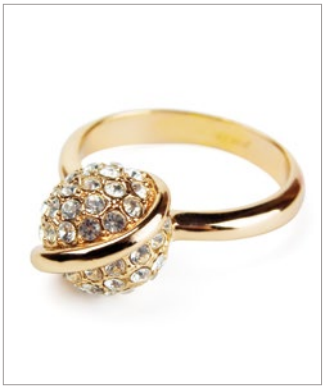
AURUNA® 5300

GOLD IRON ELECTROLYTE

Nickel-Free, Fast-Depositing Weakly Acidic Electrolyte

AURUNA® 5300 is a hard gold electrolyte free of nickel and cobalt with high plating speed for decorative and technical applications. The weakly acidic electrolyte for depositing yellow, bright hard gold coatings exhibits good corrosion and abrasion resistance. Its contact resistance is low and long-term stable. Metallic contaminants can be easily precipitated.

The hard gold electrolyte can be used for rack and barrel operation. It is especially suitable for jewellery since the coatings are free of nickel and cobalt.



Advantages

- Weakly acidic hard gold electrolyte
- Non-allergenic since free of nickel and cobalt
- High plating speed
- Yellow, bright coatings with approx. 0.3 % iron
- For decorative and technical applications
- Low, stable contact resistance
- Good corrosion and abrasion resistance
- The coatings are RoHS compliant
- Suitable for rack and barrel

Applications

- Accessories
- Jewellery
- Writing implements
- Bathroom fittings
- Lighting
- Connectors/contacts
- Printed circuit boards

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TECHNICAL SPECIFICATIONS

Electrolyte characteristics	
Electrolyte type	Weakly acidic
Metal content	8 (2 - 12) g/l Au 50 mg/l Fe
pH value	4.2 (4.0 - 4.5)
Operating temperature	45 (43 - 47) °C
Current density range	2 - 3 (1 - 4) A/dm²
Plating speed	0.2 - 1.0 µm/min
Anode material	Pt-Ti, MMO (type PLATINODE® 147)

Coating characteristics	
Coating	Gold-Iron
Alloy composition	99.7 wt.% Au 0.3 wt.% Fe
Colour of deposit	Yellow
Brightness	Bright
Hardness of deposit HV 0.015 (Vickers) approx. values	150 - 170 HV
Max. coating thickness	Crack-free up to 10 µm
Density of the coating	Approx. 17.5 g/cm³

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