

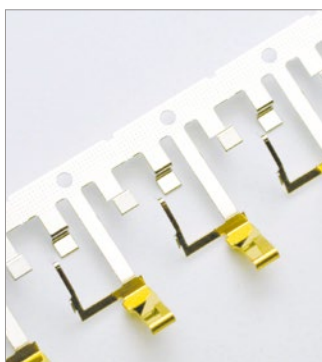


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# AURUNA<sup>®</sup> 311

## FOR TECHNICAL APPLICATIONS - GOLD COBALT ELECTROLYTE



### For the Adhesive Direct Gold-Plating of Stainless Steel and Nickel

AURUNA<sup>®</sup> 311 For Technical Applications is a strongly acidic alloy electrolyte for the adhesive direct gold-plating of stainless steel. It is preferably used for chromium-nickel steels, molybdenum steels and nickelbased alloys difficult to activate. Due to its strong activation effect, the electrolyte can be often used successfully as well for other passive materials difficult to plate.

The gold electrolyte is suitable for both strike gold layers and thick coatings in the technical field. The coatings are ductile, low in pores and protect against corrosion.

AURUNA<sup>®</sup> 311 For Technical Applications can be used for rack and barrel operation as well as in reel-to-reel plating (e.g. spray and dip cells and brush).



### Advantages

- Strongly acidic gold alloy electrolyte for the direct gold-plating of stainless steel and nickel
- Very good activation effect – without halogenides
- Low-pore, ductile and crack-free coatings
- Suitable for strike gold layers as well as for thick coatings
- Good throwing power
- The coatings are RoHS compliant
- Also available as a cobalt-free special version
- Suitable for rack, barrel and reel-to-reel plating

### Applications

- Electrical contacts
- Stainless steel contacts
- Stainless steel springs

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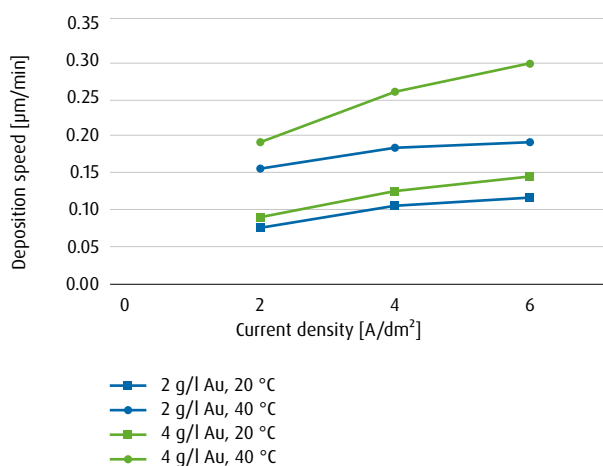


### TECHNICAL SPECIFICATIONS

Electrolyte characteristics	
Electrolyte type	Strongly acidic
Metal content	2 (1 - 10) g/l Au
pH value	0.6 (0.1 - 0.8)
Operating temperature	25 (20 - 40) °C
Current density range	2 - 6 A/dm <sup>2</sup>
Plating speed	0.08 µm/min at 2 g/l Au, 2 A/dm <sup>2</sup>
Anode material	Pt-Ti, MMO (type PLATINODE® 177)

Coating characteristics	
Coating	Gold-cobalt
Alloy composition (according to ASTM B 488-01, Typ I-II, Code C-D)	Approx. 99.7 weight % Au 0.3 weight % Co
Colour of deposit	Deep yellow
Brightness	Bright
Hardness of deposit HV 0.015 (Vickers) approx. values	160 HV
Max. coating thickness	10 µm

### Deposition Speed Depending on Gold Content, Temperature and Current Density



### YOUR CONTACT

Do you have a specific question or would you like a no-obligation quote calculation?  
Our specialist will be happy to help you with any technical questions you might have.



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