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# PALLUNA<sup>®</sup> ACF-100

## PALLADIUM-NICKEL ELECTROLYTE



### High-Speed Deposition for Reel-to-reel Plating

The new palladium nickel electrolyte PALLUNA<sup>®</sup> ACF-100 has all the technical advantages of other electrolytes - but without the smell of ammonia. The deposited layers are ductile, crack-free and resistant to abrasion. Furthermore, PALLUNA<sup>®</sup> ACF-100 has the cost benefit on its side: With comparable contact properties to those of hard gold, the palladium-nickel layer is by far the less expensive alternative.

PALLUNA<sup>®</sup> ACF-100 is a high-speed electrolyte, free of ammonia and chloride, for depositing a bright palladium-nickel-alloy in reel-to-reel lines (selective dipping, jet plating, brush plating) and in tabplaters.

Depending on the operation conditions, the electrolyte deposits alloy coatings with approx. 80 % of Pd. The alloy composition is largely independent of the current density. Electrolyte maintenance without ammonia and chloride. Breakdown products could be removed by carbon treatment easily. Continuous carbon treatment is feasible.



### Advantages

- Free from ammonia and chloride
- No smell nuisance by ammonia gas
- Reduced corrosion of equipment
- Long lifetime of anodes
- Ductile coatings
- Constant alloy composition

### Applications

- Electrical contacts for Connector Industry
- Hardgold replacement

# PALLUNA® ACF-100

## PALLADIUM-NICKEL ELECTROLYTE

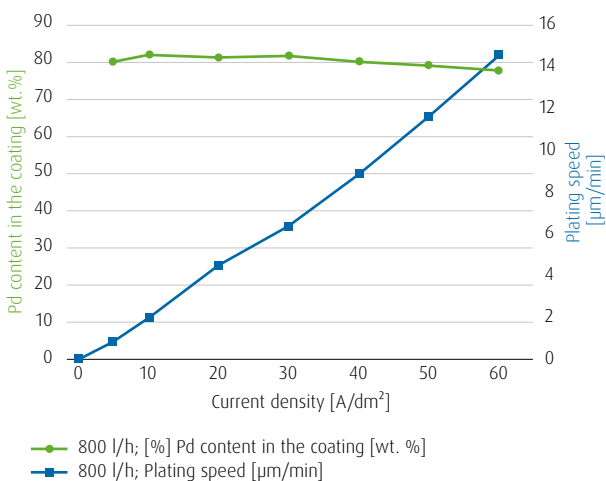


### TECHNICAL SPECIFICATIONS

| Electrolyte characteristics |                                |
|-----------------------------|--------------------------------|
| Electrolyte type            | Free from ammonia and chloride |
| Metal content               | 15 g/l Pd, 16 g/l Ni           |
| pH value                    | 5.5 at 60 °C                   |
| Operating temperature       | 60 °C                          |
| Current density range       | Up to 70 A/dm <sup>2</sup>     |
| Plating speed               | Up to 15 µm/min                |
| Anode material              | MMO (type PLATINODE® 187 SO)   |

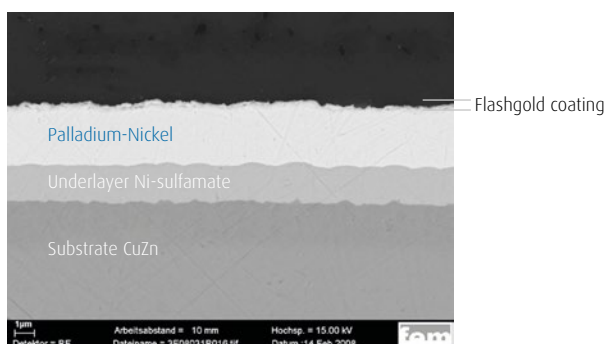
| Coating characteristics                                  |                          |
|--|--------------------------|
| Coating  | Palladium-Nickel         |
| Alloy composition  | 80 wt.% Pd<br>20 wt.% Ni |
| Colour of deposit  | White                    |
| Brightness   | Bright                   |
| Hardness of deposit<br>HV 0.015 (Vickers) approx. values | 500 - 550 HV             |
| Max. coating thickness                                   | 10 µm                    |
| Density  | 10.8 g/cm <sup>3</sup>   |
| Elongation   | Approx. 5 %              |
| Bendability<br>(10 mm mandrel)                           | 2 µm crack-free          |

#### Deposition Speed, Alloy Composition vs. Current Density



PALLUNA® ACF-100  
JetLab4: 15 g/l, 16 g/l Ni; pH 5.5; 60°C; 1.11 g/cm<sup>3</sup>; 800 l/h

#### Crack- and Void-Free Coating



### 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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