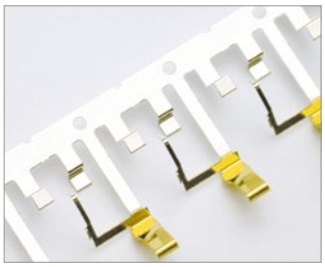
Pd Ni

Version: 24 March 2025

PALLUNA® 468

PALLADIUM-NICKEL ELECTROLYTE



For High-Speed Deposition in Reel-To-Reel Equipment

PALLUNA® 468 is a weakly ammoniacal high-speed electrolyte for depositing palladium-nickel alloys in reel-to-reel equipment (selective dipping, jet plating, brush plating) and in reel-to-reel tab-plater.

Normally, coatings containing at least 80 % of palladium are deposited, the alloy composition can be adjusted by simply changing the palladium concentration in the electrolyte, however. The ductile layers are white, bright and they exhibit a good resistance to tarnishing and corrosion.

Advantages

- Improved abrasion resistance
- High number of mating cycles
- Low porosity and crack-free
- Low internal stress
- High plating speed
- Constant alloy composition
- Long bath life

Applications

- Reel-to-reel equipment (selective dipping, jet plating, brush plating)

PALLUNA® 468

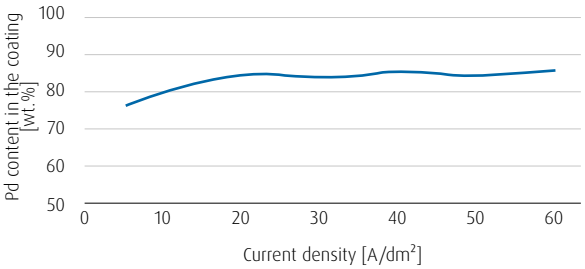
PALLADIUM-NICKEL ELECTROLYTE

TECHNICAL SPECIFICATIONS

Electrolyte characteristics	
Electrolyte type	Weakly ammoniacal
Metal content	20 (18 - 22) g/l Pd
pH value	7.5 (7.4 - 8.0)
Operating temperature	45 (43 - 47) °C
Current density range	up to 60 A/dm²
Plating speed	up to 16 µm/min
Anode material	Pt-Ti (type PLATINODE® Pt/Ti)

Coating characteristics	
Coating	Palladium-nickel
Alloy composition	80 wt.% Pd 20 wt.% Ni
Colour of deposit	White
Brightness	Bright
Hardness of deposit HV 0.015 (Vickers) approx. values	580 - 620 HV
Max. coating thickness	10 µm
Density	10.8 g/cm³
Elongation	Approx. 3 %
Bendability (10 mm mandrel)	2 µm crack-free
Bondability with fine gold flash (ultrasonic with AlSi wire)	Good
Solderability (100 % wetting in dip-and-look-test)	Good

Alloy Composition vs. Current Density



PALLUNA® 468:
Alloy composition in dependence on the current density. 20 g/l palladium, 15 g/l nickel, 45 °C, pH 7.5, dip and spray cell.

Demand: min. 80 % palladium in the coating.
The alloy composition is only minimally influenced by the current density applied.

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.

Markus Legeler
Manager Sales International

Mail: markus.legeler@eu.umicore.com
Phone: +49 (0) 7171 607 - 204

umicore