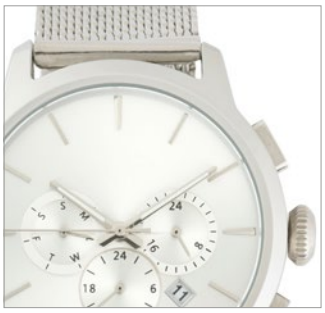
Pd Ni

Version: 15 December 2025

umicore

PALLUNA® 463 (LC)

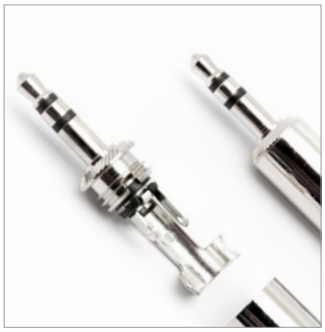
PALLADIUM NICKEL ELECTROLYTE



Bright, low-porosity coatings with flexible metal content

PALLUNA® 463 is a weakly alkaline electrolyte for technical and decorative applications for the deposition of palladium-nickel layers with 80% palladium by weight. The electrolyte is stable, easy to handle, and suitable for rack and barrel operations. For applications requiring lower coating thicknesses, an LC version with a lower palladium content and therefore lower dragout is available.

The white, low-porosity coatings are perfectly bright at coating thicknesses of up to 10 µm (5 µm for the LC version). The ductile, low-stress layers are not only characterized by high hardness and very good abrasion resistance, but also offer good corrosion and tarnish resistance.



Advantages

- White, bright and low-pore coatings
- Ductile and low-stress coatings
- Corrosion- and wear-resistant coatings with high hardness
- Stable electrolyte with simple electrolyte maintenance
- For decorative and technical applications
- For rack and barrel operation
- LC version with lower palladium content

Applications

- Jewelry
- Watches
- Electrical contacts

PALLUNA® 463 (LC)

PALLADIUM NICKEL ELECTROLYTE

TECHNICAL SPECIFICATIONS

Electrolyte characteristics	
Electrolyte type	Weakly ammoniacal
Metal content	10 g/l Pd (9 – 11 g/l) 10 g/l Ni (9 – 11 g/l)
pH-value	8.2 (7.7 – 8.7) at 25 °C
Temperature	25 °C (20 – 35 °C)
Electrolyte density	1.050 g/cm³ (1.040 – 1.090 g/cm³)
Current density	1.5 A/dm² (0.5 – 2.5 A/dm²)
Deposition speed	Approx. 0.33 µm/min at 1.5 A/dm²
Deposition rate	Approx. 24 mg/Amin at 1.5 A/dm²

Coating characteristics	
Coating	Palladium-nickel
Alloy composition	Approx. 80 wt.% Pd Approx. 20 wt.% Ni
Color	White
Hardness	Approx. 550 HV 0.025
Density of the coating	Approx. 11 g/cm³

Electrolyte characteristics LC-Version	
Metal content	5 (4,5 - 5,5) g/l Pd 6 (5,5 - 6,5) g/l Ni
Electrolyte density	1,040 (1,030 - 1,070) g/cm³
Current density (system-dependent)	1,0 (0,5 - 2,0) A/dm²
Deposition speed	Approx. 0.2 µm/min at 1.0 A/dm²
Deposition rate	Approx. 22 mg/Amin at 1.0 A/dm²

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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