



Palatec – Replacing gold



Various contacts processed using *Palatec* with or without gold flash.

***Palatec* – as a cost-effective, high quality gold replacement – is a galvanically deposited layer system, consisting of nickel, palladium-nickel (80 weight % Pd / 20 weight % Ni) and gold (gold flash), which was specially developed for electrical engineering, particularly the functional coating of industrial plug connectors.**

The advantages of this surface are mainly the result of the physical and chemical properties, working in equilibrium, of the *Palatec* layer system.

Palatec, which has been established for many years now, is highly suitable for electrical engineering applications at lower voltages and contact forces, together with high tribological and thermal loads.

The excellent wear and corrosion resistance must be highlighted here, in combination with a very low contact and volume resistivity, even after repeated plug-in cycles. *Palatec* is also characterised by extremely good solderability, even after ageing.

Recommended layer systems

System A	System B
2,0 µm Ni	2,0 µm Ni
0,6 µm Pd-Ni	1,2 µm Pd-Ni
0,15 µm Au	0,1 µm Au

Alloy composition and layer configuration can also be adjusted according to customer requirements!

System A equivalent to MIL-G-45204 Type II Grade C Class 0 (30 µ")
System B equivalent to MIL-G-45204 Type II Grade C Class 1 (50 µ")
or
ASTM B488 Type II Grade C Class 1 (50 µ")

Characteristics

Density	11.2 g/cm ³
Hardness	500 – 600 HV
Wear resistance	Very good
Ductility	Very good
Solderability	Very good
Corrosion resistance	Very good (incl. against SO ₂ , NH ₃ , H ₂ S, salt spray mist)
Contact resistance	5 – 10 mΩ, particularly suitable for low contact forces (10 – 100 g) and low voltage

Applications

Palatec is preferentially used in electrical engineering.

We will be happy to advise you regarding further information and individual consultation on specific problem solutions using the *Palatec* layer system.