

Variants

- Kanigen® electroless nickel – good corrosion resistance – hardness : 530 HV0,1
- Amagnetic electroless nickel – wt%P > 10,5
- Electroless hard nickel – hardness > 900 HV0,1 after heat treatment on 280°C – wear resistant
- Diffused electroless nickel – corrosion and wear resistance in extreme conditions: off-shore
- Electroless nickel with PTFE incorporated (NiPtef) – reduction of friction
- Mat black electroless nickel – for technical and optical applications

Frictioncoefficient

	Not lubricated	Lubricated		Not lubricated	Lubricated
Kanigen® nickel vs steel	0,38	0,21	Kanigen® nickel vs chrome	0,45	0,30
Kanigen® nickel vs cast iron	0,16	0,08	Kanigen® nickel vs nickel	grip	0,26
Kanigen® nickel vs Kanigen® nickel	0,45	0,25	NiPtef vs Kanigen® nickel	0,10	-

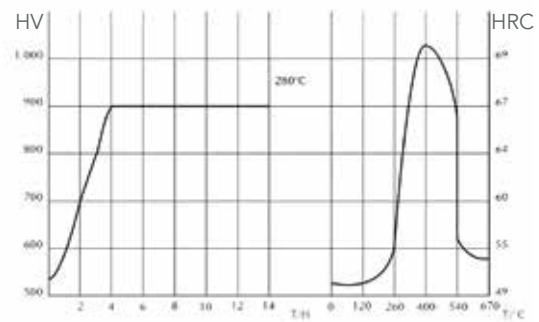
Hardness

The hardness of a Kanigen® electroless nickel deposit :

- Without heat treatment : 530 HV0,1
- After 11 hours at 280°C : 900 to 950 HV0,1
- Maximal hardness after 1 hour at 400°C : 1050 HV0,1
- After diffusion heat treatment : 650 to 750 HV0,1

The hardness of a NiPtef deposit :

- Without heat treatment: 350 HV0,1
- After 11 hours at 280°C: 550 HV0,1



Corrosion resistance

Resistance against corrosion according to "neutral salt spray test" ISO 9227 :

- Light service: 2µm – 10 µm 12 uur
- Mild service: 10 µm – 25 µm 192 uur
- Moderate service: 25 µm – 50 µm 480 uur
- Severe service: > 50 µm (75 µm) 960 uur

Standards and means of production

Our electroless (autocatalytic) nickel deposits are plated according following standards as : ISO4527, ASTM B733, AFNOR A91-105 or others The parts are plated in drums, mounted on racks, our on dedicated and customer specific mounting tools. We are equipped for:

- Single (prototypes) parts – small, middle and very large series.
- Very small till very large parts.

Technical data

- Melting point 890°C
 - Dilatation coefficient 13 x 10⁻⁶ cm / cm °C
 - Thermal conductivity (at 10,5 wt%P) = 0,016 cal.cm⁻¹s⁻¹grad⁻¹
 - Electric resistance 50 to 60 µΩcm
 - Contact resistance 30mΩ
 - Magnetism (at 9 wt%P) 4% - (at 10,5 wt%P) 0%
 - Ductility 2,2% to 6%
- www.kanigen.eu

