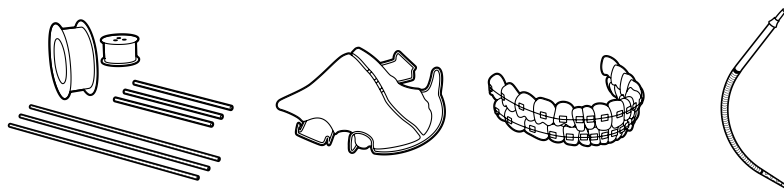


Zapp is Certified to ISO 9001



Material Ergste® 9.9035

Ergste® 9.9035 is a vacuum melted nickel-cobalt-alloy with a high content of chromium and molybdenum. Therefore, an excellent ratio between high strength, ductility and outstanding corrosion resistance is achieved. The capability of precipitation depends to a great extent on the contributed distortion.

Typical Fields of Application

- Dental applications
- Vascular intervention

Weldability

Ergste® 9.9035 is well weldable (e.g. laser welding).

Magnetism

Ergste® 9.9035 is not magnetizable.

Corrosion Resistance

Ergste® 9.9035 is highly resistant to pitting and crevice corrosion, regardless of strength level. The corrosion resistance against sulfidation, high temperature oxidation and hydrogen embrittlement is excellent.

Polishability

Ergste® 9.9035 is polishable.

Corresponding Standards

ASTM F562, DIN ISO 5832-6

Mechanical Properties

Condition	Rm [MPa]	Rp0,2 [MPa]	A5 [%]
Solution annealed	Min. 793	Min. 241	Min. 40
Cold-worked medium hard	Min. 1,000	Min. 655	Min. 20
Cold-worked hard	Min. 1,200	Min. 1,000	Min. 10
Cold worked and aged	Min. 1,793	Min. 1,586	Min. 8

Physical Properties

Young's Modulus E at 20 °C [GPa]	234
Density ρ [kg/ dm³]	8.4
Thermal Conductivity λ at 20°C [W/ m*K]	11.2
Coefficient of Thermal Expansion α [10 ⁻⁶ * K ⁻¹] 20 - 100 °C	13.0
Specific Heat c at 20°C [J/ kg*K]	500
Specific Electrical Resistance ρ at 20°C [Ω*mm ² / m]	1.03

Heat Treatment

Solution annealing
 Temperature: 1,050 ± 15 °C
 Holding time: 1 to 2 h
 Cooling: air, water

Machinability

Machining after heat treatment is difficult.

Hot Working

Forging at 1,170 – 870 °C

Typical Chemical Analysis (Mass-%)

	C	Si	Mn	P	S	Cr	Ni	Mo	Fe	Ti	Co
Min.	-	-	-	-	-	19.0	33.0	9.0	-	-	Bal.
Max.	0.025	0.15	0.15	0.015	0.010	21.0	37.00	10.50	1.00	1.00	

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Further information regarding our products and locations are available in our image brochure and under www.zapp.com

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Last revision: July 2020