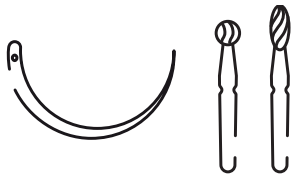


Zapp® 1.4568 GA Datasheet US

Medical Alloys



Zapp is certified to ISO 9001



Zapp® 1.4568 GA

Zapp® 1.4568 GA is a chemical resistant steel with good deformation properties, high tensile strength and finest corrosion resistance. On top of that, the heat treated materials is characterized by excellent long-term properties.

Typical Fields of Application

- Clips, clamps
- Spring parts for medical technology
Micro springs, armor wire)

Weldability

Zapp® 1.4568 GA is not weldable due to its high aluminium content.

Polishability

Zapp® 1.4568 GA is polishable.

Magnetism

Zapp® 1.4568 GA shows low magnetism in the annealed condition which increases with cold forming.

Hot Working

Temperature: 2,102 – 1,652 °F

Cooling: Air

Machining

Machining in the solution annealed condition needs to be conducted with tools made of high quality tool alloys or tungsten carbide alloys due to the tendency of the material to work hardening and the relatively low thermal conductivity.

Cold Working

In comparison to other austenitic stainless steels, like Zapp® 1.4310, cold forming is better with Zapp® 1.4568 GA.

Corresponding Standards

- DIN EN 10088-3 (X7CrNiAl17-7)
- ASTM F899 AISI 631 (UNS S17700)

Typical Chemical Composition

C	Si	Mn	P	S	Cr	Ni	Al
<0.08	<0.70	<1.00	<0.04	<0.015	16.00 – 18.00	6.50 – 7.80	0.70 – 1.50

Mechanical Properties (Solution Annealed)

Tensile strength Rm	[ksi]	101 – 123
Yield strength Rp _{0,2}	[ksi]	39 – 50
Elongation	[%]	> 35

Physical Properties

Modulus of Elasticity E at 20 °C	[ksi]	29,732
Specific Gravity ρ	[lb/in³]	0.29
Thermal Conductivity λ at 20 °C	[Btu in/hr ft² °F]	104
Coefficient of Thermal Expansion α	[µin/in °F]	
20 - 100 °C		8.6
20 - 400 °C		9.7
Specific Heat c at 20 °C	[Btu/lb °F]	0.12
Electric Resistivity ρ at 20 °C	[Ωcircularmil/ft]	481.2

Heat Treatment

Solution annealing

Temperature: 1,940 – 1,976 °F

Cooling: water, rapid gas cooling

MEDICAL ALLOYS

Zapp Precision Metals GmbH
Letmather Straße 69
58239 Schwerte
medicalalloys@zapp.com
www.zapp.com

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

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