

Alloy Ergste® 1.4301PA

Technical Information

ZAPP

Zapp is certified to ISO 9001

Ergste® 1.4301pa

Categorization

Austenitic stainless Chromium-Nickel-Steel

DIN EN 10088-2: 1.4301, X5CrNi 18-10

ASTM /AISI: Type 304 (USA)

JIS G4305: SUS 304 (Japan)

Technical properties

Corrosion resistance:	good
Cold formability:	very good
Deep-drawing capability:	good
Weldability (TIG):	acceptable
Weldability (Laser):	good
Machinability:	middle
Polishing:	good

Surfaces and tensile strength

Possible conditions for delivery are:

Solution annealed (soft) procedure 2R, or work hardened (hard) in accordance to DIN EN 10151 procedure 2H with tensile strength up to maximum 1450 MPa.

Dimension

Thickness: 0.02 to 1.5 mm

Width: 3 to 1066 mm

Tolerances are acc. to DIN EN 9445 P

Closer tolerances on request.

Edges

- mill edges
- slit
- deburred
- rounded

Form of delivery

- coils
- multicoils
- spools
- bars

Approximate chemical analysis (%)

C	Si	Mn	P	S	Cr	Ni
0.04	0.4	1.2	0.027	0.003	18.2	9.0

Typical mechanical values at room temperature*

	Soft	Hard
Tensile strength R_m [MPa]	540-750	900-1100
0.2 % Yield point $R_{p0.2}$ [MPa]	> 230	> 800
Elongation A80 [%]	> 40	< 10

* typical values, intermediate values possible

Physical properties at room temperature

	Physical properties at 20 °C
Density ρ	7.9 [kg/dm ³]
Thermal conductivity λ	15 [W/m · K]
Specific heat c_p	500 [J/kg · K]
Specific electrical resistance ρ	0.73 [$\Omega \cdot \text{mm}^2/\text{m}$]
Thermal expansion Ω : 20 - 100 °C	$16.0 \times 10^{-6} \cdot \text{K}^{-1}$
20 - 400 °C	$18.0 \times 10^{-6} \cdot \text{K}^{-1}$

Typical applications

In soft condition:

- Deep-Drawing Parts
- Prematerial for Welded Tubes

In hard condition:

- Stamping and Bending Parts
- Springs
- Membranes

Zapp Precision Metals GmbH

PRECISION STRIP

Hochstraße 32

59425 Unna

P.O. Box 21 29

59411 Unna

Phone +49 2304 79-508

Fax +49 2304 79-7979

precisionstrip@zapp.com

www.zapp.com

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

The illustrations, drawings, dimensional and weight data and other information included in this data sheet are intended only for the purposes of describing our products and represent non-binding average values. They do not constitute quality data, nor can they be used as the basis for any guarantee of quality or durability. The applications presented serve only as illustrations and can be construed neither as quality data nor as a guarantee in relation to the suitability of the material. This cannot substitute for comprehensive consultation on the selection of our products and on their use in a specific application. The brochure is not subject to change control.

Last revision: December 2019