

Alloy Ergste® 1.4541TA/TW

Technical Information



Zapp is certified to ISO 9001

Ergste® 1.4541TA/TW

Categorization

Austenitic stainless Chromium-Nickel-Steel

DIN EN 10088-2: 1.4541, X6CrNiTi 18-10

ASTM /AISI: Type T321 (USA)

JIS G4305: SUS 321 (Japan)

UNS 32100

Surfaces and tensile strength

Possible conditions for delivery are:

Solution annealed (soft) procedure 2R, or work hardened (half-hard and hard) in accordance to DIN EN 10151 procedure 2H with tensile strength up to maximum 1400 MPa.

Dimension

Thickness: 0.035 to 2.0 mm

Width: 3 to 420 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

Typical applications

- Punching-, Stamping-Parts
- Welded Tubes
- Corrugated Tubes

Approximate chemical analysis (%)

C	Si	Mn	Cr	Ni	Mo	Ti
0.04	0.4	1.2	17.5	9.5	2.1	0.35

Typical mechanical values at room temperature*

	Soft	Half hard	Hard
Tensile strength R_m [MPa]	570-700	950	1250
0.2 % Yield point $R_{p0.2}$ [MPa]	230-300	830	1150
Elongation A80 [%]	> 35	4	1

* typical values, intermediate values possible

Physical properties at room temperature

	Physical properties at 20 °C
Density ρ	7.9 [kg/dm ³]
Elastic-Modulus	200 [GPa]
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 x 10 ⁻⁶ · K ⁻¹
20 - 400 °C	18.0 x 10 ⁻⁶ · K ⁻¹

Technical properties

Ergste® 1.4541TA/TW is a corrosion resistant steel with good formability in soft condition. The work hardening is similar to 1.4301 (T304) austenitic stainless steel.

Ergste® 1.4541TA/TW has a good weldability.

For machining high quality tooling is required, like for all stainless steels. Polishing is possible.

Ergste® 1.4541TA/TW in annealed condition shows no magnetism and becomes slightly magnetic when is cold formed.

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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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