Alloy Ergste® 1.4404LA
Technical Information

Zapp is certified to ISO 9001

Ergste® 1.4404LA

Categorization
Austenitic stainless Chromium-Nickel-Molybdenum-Steel

DIN EN 10088-2: 1.4404, X2CrNiMo17-12-2
ASTM A666/AISI: Type 316L (USA)
JIS G4305: SUS 316L (Japan)

Surfaces and tensile strength
- solution annealed (soft) acc. to DIN EN 10088, procedure 2R
- or work hardened (half-hard and hard) in accordance to DIN EN 10151 procedure 2H with tensile strength upto maximum 1350 MPa.

Dimension
Thickness: 0.035 to 2.0 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

Typical applications
- Stamping and Bending Parts
- Deep Drawing Parts
- Pre-Material for welded tubes and Heat Exchanger

Approximate chemical analysis (%)

C	Si	Cr	Ni	Mo
0.02	0.5	16.7	11.4	2.1

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	7.95 [kg/dm³]
Elastic-Modulus	200 [GPa]
Thermal conductivity λ	15 [W/m · K)]
Specific heat c_p	500 [J/kg · K]
Specific electrical resistance ρ	0.75 [Ω · mm²/m]
Thermal expansion Ω: 20 – 100 °C	16.5 x 10^{-6} · K^{-1}
20 – 400 °C	18.5 x 10^{-6} · K^{-1}

Technical properties
Ergste® 1.4404LA is a corrosion resistant steel with good formability in soft condition. Due to the molybdenum content the corrosion resistance is higher than 1.4301 and comparable. The work hardening is greater than the ferritic stainless steels and less than the austenitic Chromium-Nickel-Steel 1.4301.
Ergste® 1.4404LA is well weldable and by its low carbon content for the durable use also at temperatures above 550 °C applicable. For machining high quality tooling is required, like for all stainless steels. Polishing is possible. Ergste® 1.4404LA in annealed condition shows no magnetism when is cold formed.

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