

Alloy Ergste® 1.4016IM

Technical Information

ZAPP

Zapp is certified to ISO 9001

Ergste® 1.4016IM

Categorization

Ferritic stainless Chromium-Steel

DIN EN 10088-2: 1.4016, X6Cr17

ASTM A666/AISI: Type 430(USA)

JIS G4305: SUS 430 (Japan)

Technical properties

Corrosion resistance:	middle
Mechanical conditions:	middle
Cold formability:	good
Weldability (TIG):	acceptable
Weldability (Laser):	good
Machinability:	middle
Polishing:	middle

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 1000 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	Cr
0.05	0.5	16.00

Typical mechanical values at room temperature*

	Soft	Hard
Tensile strength R_m [MPa]	400-630	650-1000
0.2 % Yield point $R_{p0.2}$ [MPa]	> 240	> 300
Elongation A80 [%]	> 20	< 5

* typical values, intermediate values possible

Physical properties at room temperature

	Physical properties at 20 °C
Density ρ	7.7 [kg/dm ³]
Elastic-Modulus λ	25 [W/m · K]
Thermal conductivity c_p	460 [J/kg · K]
Specific electrical resistance ρ	0.6 [$\Omega \cdot \text{mm}^2/\text{m}$]
Thermal expansion Ω : 20 – 100 °C	$10.0 \times 10^{-6} \cdot \text{K}^{-1}$
20 – 400 °C	$11.0 \times 10^{-6} \cdot \text{K}^{-1}$

Typical applications

In soft condition:

- Stamping and Bending Parts with low corrosive conditions

In hard condition:

- Stamping and Bending Parts
- Springs
- Fins
- Membranes

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