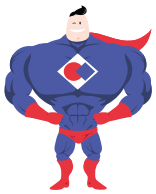
Material data sheet
1.4006 / X12Cr13
stainless steel, martensitic



HSM®
Hochleistungswerkstoffe
Stahl & Metall

Description:

The material 1.4006 is a corrosion-resistant, martensitic steel with good mechanical properties. A polished and smooth surface is necessary to achieve optimal corrosion resistance. The main area of application of the material is in mechanical engineering.

Properties:

very good weldability, good corrosion resistance, good polishability, good mechanical properties, ferromagnetic properties

CHEMICAL COMPOSITION (% by mass according to DIN EN ISO 4957)

	C	Si	Mn	P	S	Cr	Ni
min.	0,08	-	-	-	-	11,50	-
max	0,15	1,00	1,50	0,040	0,015[a)]	13,50	0,75

a) For products to be machined, S 0,015-0,030% is recommended and allowed. To ensure weldability S 0,008-0,030% is recommended and allowed. To ensure polishability, S ≤0,015% is recommended.

Material Specifications

DIN EN 10088	1.4006
	X12Cr13
AISI	410
UNS	S41000
B.S.	410S21
JIS	SUS410
AFNOR	Z10C13
SS	2302
GOST	12Ch13
UNE	F.3401

Material Specifications

- mechanical engineering
- food industry
- Energy technology (water energy)
- Chemistry, petrochemistry
- Pump industry
- environmental engineering
- Architecture and decoration

Request now >>

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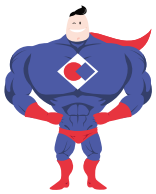

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MECHANICAL PROPERTIES at 20° C (solution annealed)

Yield Rp0,2%	Tensile strength Rm	Elongation A5,65	Constriction (Z)	Modulus of elasticity
≥ 450 N / mm²	≤ 650 - 850 N / mm²	≥ 15 %	≥ 55 %	215 kN / mm²

PHYSICAL PROPERTIES at 20° C

Density	Specific heat	Thermal conductivity	Electrical resistance	Magnetisability
7,70 kg/dm³	460 J/kg K	30 W/m K	0,60 (ohm) mm²/m	suitable

Weldability

WIG welding	suitable
MAG welding	suitable
Arc welding	suitable
UP welding	partly
Laser welding	suitable
Gas fusion welding	partly

Thermal treatment

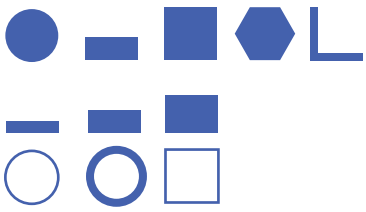
Hot forming	800 - 1100 °C
Soft annealing	745 - 825 °C
Cooling	Luft
Hardning (Öl, Luft)	950 - 1000 °C
Tempering	680 - 780 °C
Annealing	ca. 750 °C

Delivery forms:

Bars

Sheets

Profile



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