TECHNICAL DATASHEET

420B – 1.4028 –X30Cr13
FT 012 – Version 0

Martensitic stainless steel with 13% chromium. Quenching at 1045°C and tempering to 200°C results in an optimal hardness of 52 HRc. To obtain good resistance to corrosion, do not exceed 420°C when tempering. This means coatings must be avoided. Surface polishing greatly increases this steel's corrosion resistance.

APPLICATIONS	ADVANTAGES
Orthopaedic instruments: drill bits, cutters, taps, reamers, etc. Food industry	Good balance between hardness and corrosion resistance
STANDARDS	**SHAPES**
WERKSTOFF NR. 1.4028 ASTM F899 NF S94-090 EN 10088-3	**BAR** Diameter 4-220 mm Length 3000-3500 mm Tolerance Ø≤20 mm: h9 – Ø>20 mm: h11

➢ CHEMICAL COMPOSITION

%	C	Mn	P	S	Si	Cr	Ni	Fe
min	0.26					13.0		residue
max	0.35	1.0	0.040	0.030	1.00	14.0	1.00	

TECHNICAL DATASHEET

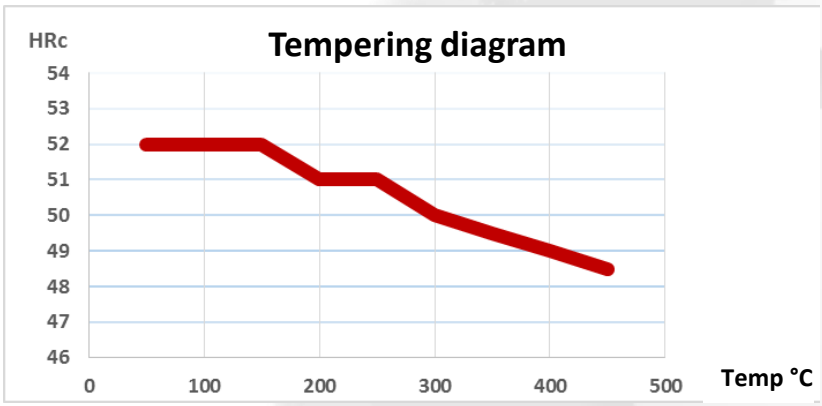
420B – 1.4028 –X30Cr13
FT 012 – Version 0

➢ MECHANICAL PROPERTIES

Condition				Hardness
Annealed state	Heated to 850°C followed by slow cooling			195 HB
After quench				≥ 50 HRc

➢ HEAT TREATMENT

Annealed	745-825°C for 2-4 hours then very slow cooling
Quenching	Quenching in oil or air: 950-1050°C
Tempering	The 400-850°C temperature range is not advised as this could leave the steel fragile and with lower corrosion resistance



➢ PHYSICAL PROPERTIES

Density (g/cm³)	7.7
Typical hardness (HRc)	48 - 52
Modulus of elasticity at 20°C (N/mm²)	215 x10³
Thermal conductivity at 20°C (W/m °C)	30
Specific heat (J/Kg °C)	450
Magnetic	YES

The information and technical data contained in this sheet are for information purposes only. Only the information written on our material analysis certificates will be official.