

## BUDERUS CORROSION-RESISTANT KNIFE STEEL 4021 X20Cr13

	C	Si	Mn	P	S	Cr
Typical analysis	0.20	0.30	0.35	0,020	0.001	13.30
Chemical composition as per DIN EN 10088	0.16 - 0.25	≤ 1.00	≤ 1.50	≤ 0.040	≤ 0.015	12.00 - 14.00

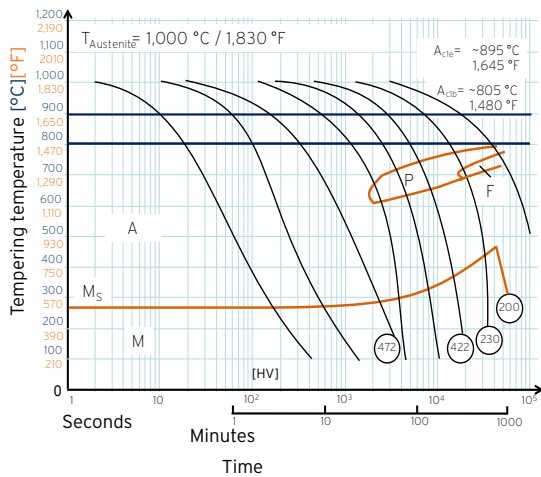
Values in weight %

### HEAT TREATMENT

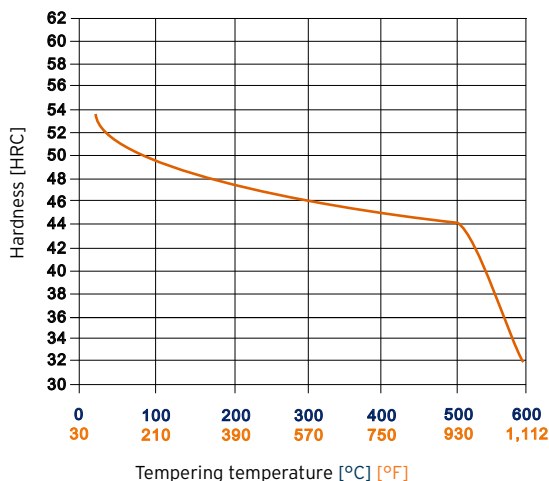
Soft annealing	730 °C - 780 °C (furnace, oil)	1,345 °F - 1,435 °F (furnance, air)
Hardening	980 °C - 1,030 °C (oil, air)	1,796 °F - 1,885 °F (oil, air)
Tempering	see tempering curve	

### PHYSICAL PROPERTIES (REFERENCE VALUES FOR 20 °C / 68 °F)

Density [g/cm <sup>3</sup> ]	7.7
Young's modulus [GPa]	220
Thermal expansion [10 <sup>-6</sup> /K]	10.2
Thermal conductivity [W/m*K]	24.6
Electrical resistance [Ω * mm <sup>2</sup> /m]	0.58



TTT CURVE (CONTINUOUS)



TEMPERING CURVE

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