

Steel grade

Material No. / Werkstoff-Nr.	PREMIUM 1.4104
Description	X14CrMoS17
BS	1.4104
AISI/SAE	430F
Search for alternatives in the ABRAMS STEEL GUIDE®	www.steel-guide.co.uk/alternatives/1.4104

Specifications



€co-Präz* [€co]
L: 500 mm



Precision round steel
without machining allowance [PRS]
bright drawn / ground, ISO h9
L: 1,000 mm

Chemical composition AISBS 1.4104 (reference value %)

C	Si	Mn	P	S	Cr	Mo
0.10 – 0.17	0 – 1.0	0 – 1.5	0 – 0.04	0.15 – 0.35	15.5 – 17.5	0.2 – 0.6

Physical properties

Hardness (delivery condition)	max. 270 HB, tempered			
Tensile strength R _m (as received condition)	approx. 860 N/mm ²			
Working hardness	max. 26 HRC			
Thermal expansion coefficient 10 ⁻⁶ m/(m • K)	20 - 100°C	20 - 200°C	20 - 300°C	20 - 400°C
	10.0	10.5	10.5	10.5
Thermal conductivity W/(m • K)	20°C			
	25.0			

Technical properties

Martensitic chromium steel with good mechanical properties (tempered condition). The addition of sulphur makes it ideal for machining. It can also be polished very well and is conditionally acid resistant but difficult to weld.

Applications

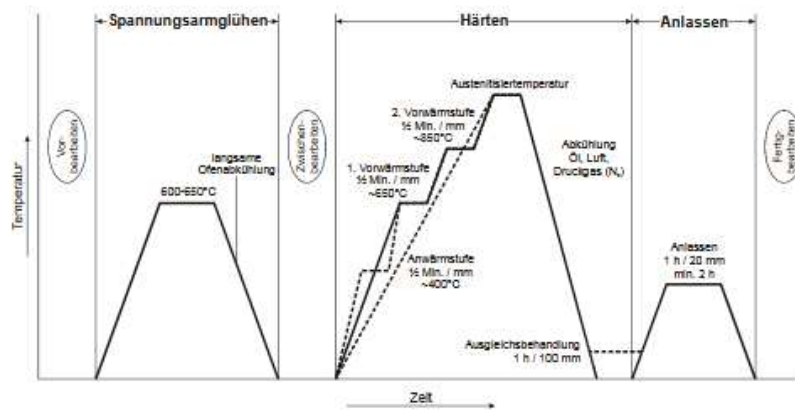
Automotive industry, electronic equipment, power engineering, mechanical engineering, connecting elements, architecture and decoration, construction parts for automatic machining in water and steam such as screws, spindles, axes, bushes, etc.

Heat treatment

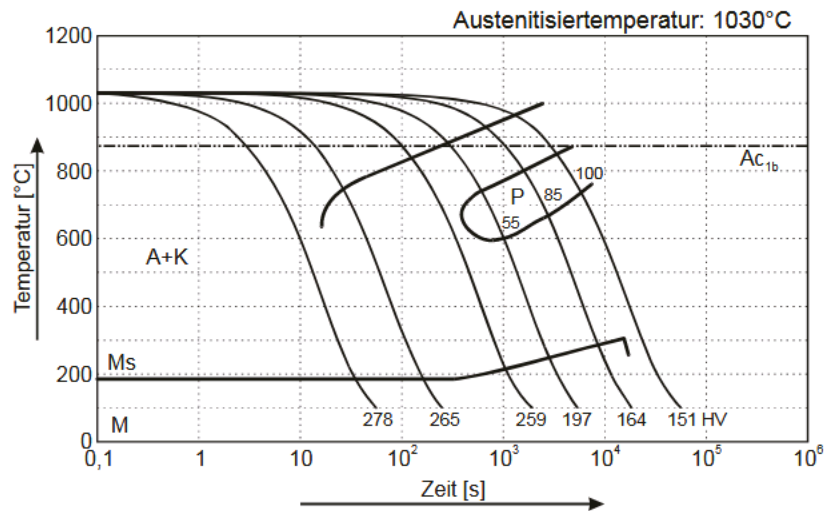
Soft annealing	Temperature	Cooling	Hardness
	750 - 850°C	Air	max. 220 HB
Hardening	Temperature	Quenching in	
	950 - 1070°C	Air, oil, compressed gas (N ₂)	



Heat treatment scheme



Continuous ZTU-diagram



Tempering diagram

