

Steel grade

Material No. / Werkstoff-Nr.	PREMIUM 1.4841
Description	X15CrNiSi25-21
AISI/SAE	314
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Specifications



€co-Präz* [€co]
L: 500 mm

Chemical composition AISI/SAE 314 (reference value %)

C	Si	Mn	P	S	Cr	Ni	N
0 - 0,2	1,5 - 2,5	0 - 2,0	0 - 0,045	0 - 0,015	24,0 - 26,0	19,0 - 22,0	0 - 0,11

Physical properties

Hardness (delivery condition)	max. 223 HB, annealed					
Tensile strength R _m (as received condition)	ca. 755 N/mm ²					
Working hardness	approx. < 20 HRC					
Thermal expansion coefficient 10 ⁻⁶ m/(m • K)	20 - 200°C	20 - 400°C	20 - 600°C	20 - 800°C	20 - 1000°C	
	15,5	17,0	17,5	18,0	19,0	
Thermal conductivity W/(m • K)	20°C	500°C				
	15,0	19,0				

Technical properties

Heat-resistant, austenitic chromium-nickel steel, that provides good resistance to oxidation at high temperatures. Good resistance properties as well as excellent chemical resistance at high temperatures up to 1100°C. Very good corrosion resistance.

Applications

Apparatus engineering for high temperature application, automotive industry, chemical industry, oil industry, chains for the cement and concrete industry, mechanical engineering, furnace construction, annealing muffles, enamel grates, fire baskets, heat conductors.

Heat treatment

Solution annealing	Temperature	Cooling	Hardness
	1050 - 1150°C	Air, water	max. 223 HB

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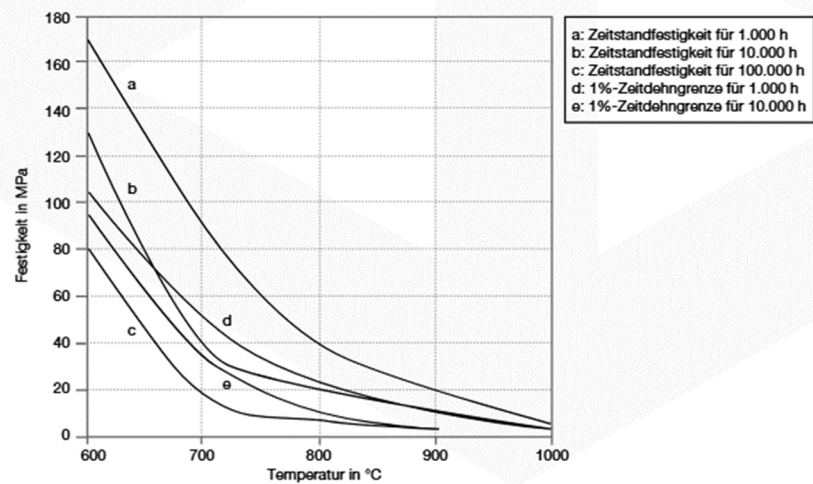
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Mechanical properties at elevated temperatures in solution annealed condition (+AT)



Hardening diagram

