

Steel grade

Material No. / Werkstoff-Nr.	PREMIUM 1.2210 (Silver Steel)
Description	115CrV3
AISI/SAE	L2; T61202
Search for alternatives in the ABRAMS STEEL GUIDE [®]	www.steel-guide.eu/alternatives/L2

Specifications



Precision round steel without machining allowance / Silversteel [PRS]
bright ground, ISO h8
L: 1.000 mm

Chemical composition AISI/SAE L2 (reference value %)

C	Si	Mn	P	S	Cr	V
1,1 - 1,25	0,15 - 0,3	0,2 - 0,4	0 - 0,03	0 - 0,03	0,5 - 0,8	0,07 - 0,12

Physical properties

Hardness (delivery condition)	max. 220 HB, annealed						
Tensile strength R _m (as received condition)	approx. 750 N/mm ²						
Working hardness	max. 62 HRC						
Thermal expansion coefficient 10 ⁻⁶ m/(m • K)	20 - 100°C	20 - 200°C	20 - 300°C	20 - 400°C	20 - 500°C	20 - 600°C	20 - 700°C
	10,0	12,7	13,7	14,2	14,9	15,8	16,8
Thermal conductivity W/(m • K)	20°C	350°C	700°C				
	34,2	32,6	31,0				

Technical properties

Cold work steel that can be used for a wide range of applications. Good machinability, high hardenability and wear resistance. Generally used for round dies.

Applications

Twist drills, screw taps, reamers, milling cutters, countersinks, centre drills, scrapers, engraving tools, punches, ejectors, guide pins, wood chisels, bushes, gauges, jigs, construction parts.

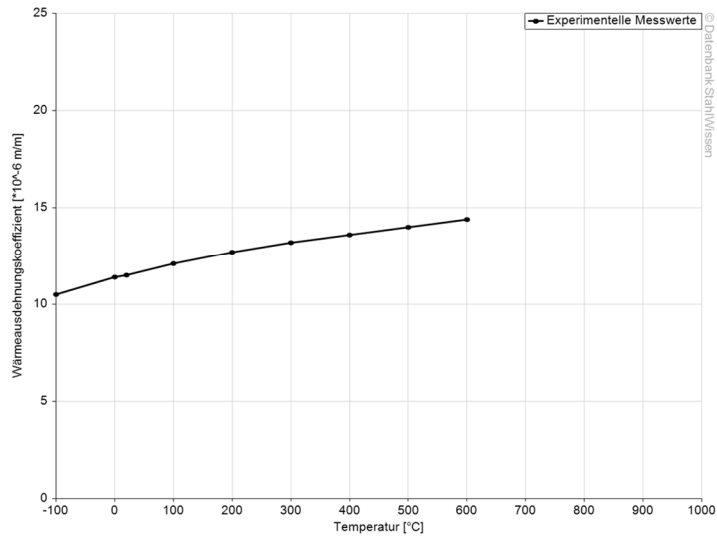
Heat treatment

Soft annealing	Temperature		Cooling		Hardness	
	710 - 750°C		Furnace		max. 220 HB	
Stress relief annealing	Temperature		Cooling			
	approx. 650 - 680°C		Furnace			
Hardening	Temperature		Quenching in		Hardness after quenching	
	810 - 840°C		Oil (< 15 mm ø)		64 HRC	
	780 - 810°C		Water (> 15 mm ø)		64 HRC	
Tempering	100°C	200°C	300°C	400°C	500°C	600°C
	64 HRC	62 HRC	57 HRC	51 HRC	44 HRC	36 HRC



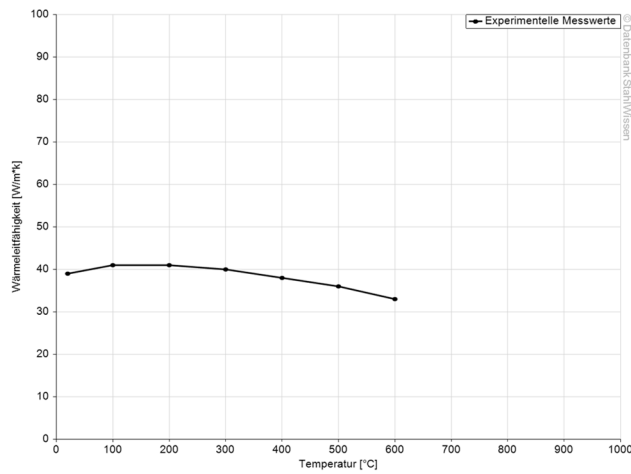
Thermal expansion coefficient diagram

Werkstoff: 115CrV3, 1.2210

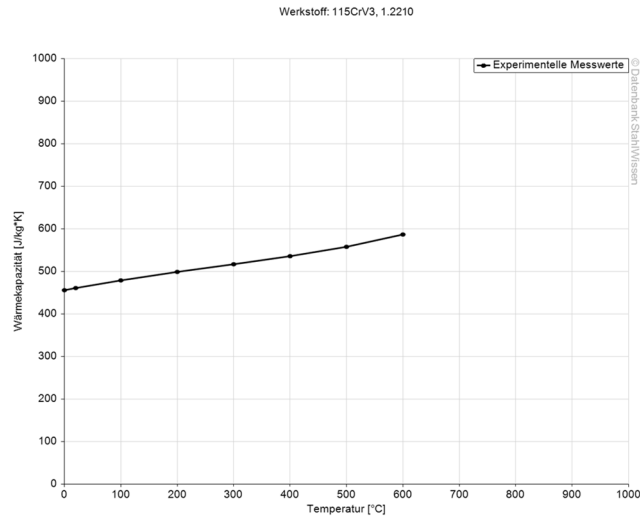


Thermal conductivity diagram

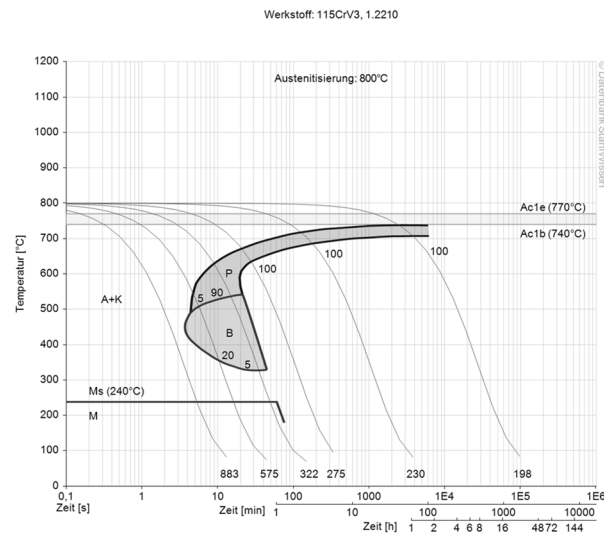
Werkstoff: 115CrV3, 1.2210



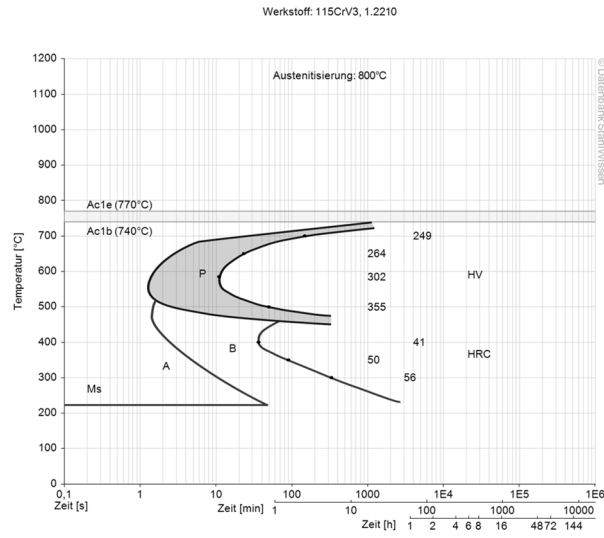
Thermal capacity diagram



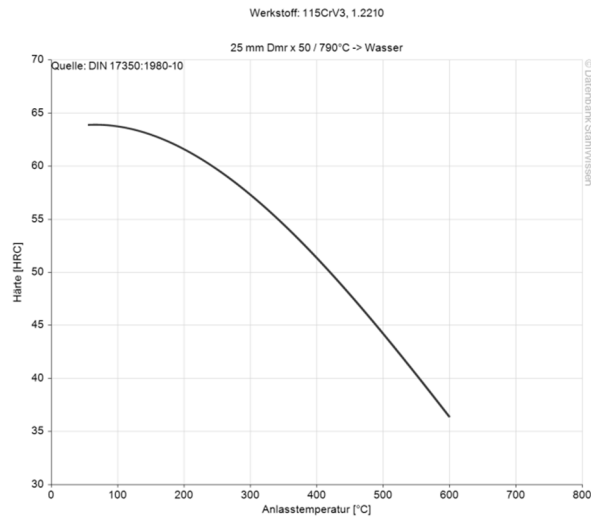
Continuous ZTU-diagram



Isothermal ZTU-diagram



Tempering diagram



The data shown here is to be used only as an indication of the statistics, thus we accept no liability.
Diagrams are taken from Datenbank StahlWissen Dr. Sommer Werkstofftechnik
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