Steel grade

Material No. / Werkstoff-Nr.	PREMIUM 1.2826
Description	60MnSiCr4
BS	1.2826
AISI/SAE	1.2826
Search for alternatives in the ABRAMS STEEL GUIDE®	**www.steel-guide.co.uk/alternatives/1.2826**

Specifications

Precision round steel
without machining allowance [PRS]
bright finely peeled, ISO h11
L: 1,000 mm

Precision round steel [PRS/BA]
peeled / rough-turned
L: 1,000 mm

Chemical composition BS 1.2826 (reference value %)

C	Si	Mn	P	S	Cr
0.58 – 0.65	0.8 – 1.0	0.8 – 1.2	0 – 0.03	0 – 0.03	0.2 – 0.4

Physical properties

Hardness (delivery condition)	max. 220 HB, annealed			
Tensile strength R_m (as received condition)	approx. 750 N/mm²			
Working hardness	max. 60 HRC			
Thermal expansion coefficient 10^{-6}m/(m • K)	20 - 100°C	20 - 200°C	20 - 300°C	20 - 400°C
	12.1	12.8	13.3	13.5
Thermal conductivity W/(m • K)	20°C	350°C	700°C	
	34.2	32.6	31.0	

Technical properties

Cold work steel with excellent wear resistance, high toughness and excellent spring properties when tempered.

Applications

Collet chucks, split chucks, dies (small quantities), hot cutting tools, trimming tools, ejectors, press plates, cold bending tools, shear knives, punches, screwdrivers, drifts, mandrels, centre punches.

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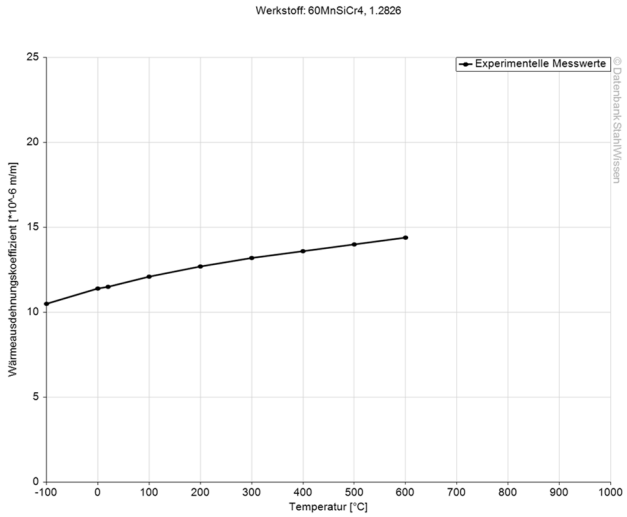
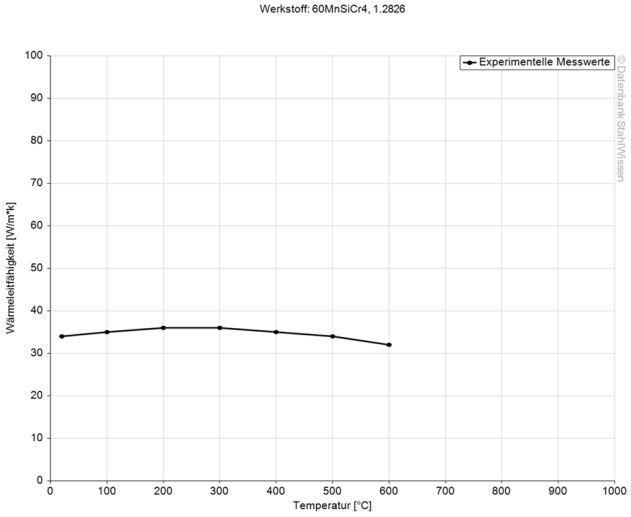
Heat treatment

Soft annealing	**Temperature**		**Cooling**		**Hardness**	
	680 - 710°C		Furnace		max. 220 HB	
Stress relief annealing	**Temperature**		**Cooling**			
	approx. 650°C		Furnace			
Hardening	**Temperature**		**Quenching in**		**Hardness after quenching**	
	820 - 860°C		Oil, hot basin (180 - 220°C)		61 HRC	
Tempering	100°C	200°C	300°C	400°C	500°C	600°C
	61 HRC	59 HRC	57 HRC	52 HRC	46 HRC	36 HRC

Thermal expansion coefficient diagram



Thermal conductivity diagram



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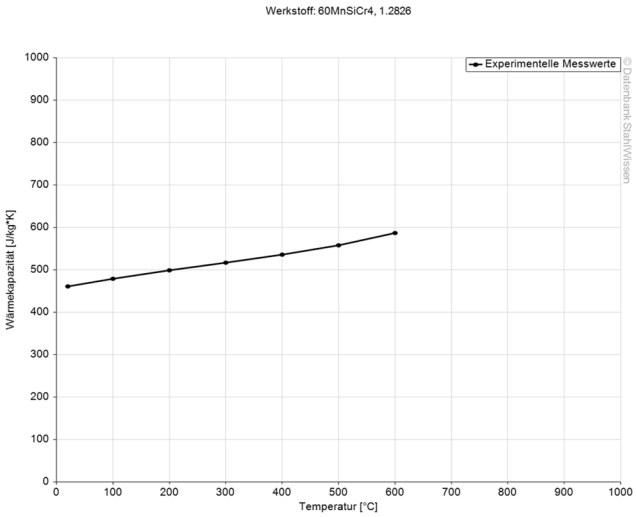
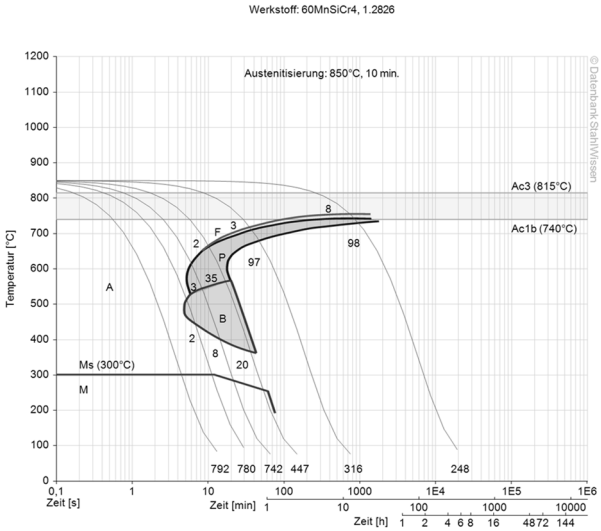
Thermal capacity diagram



Continuous ZTU-diagram



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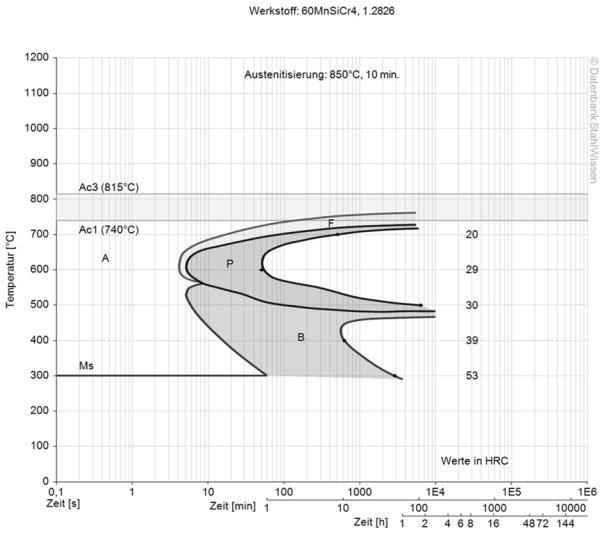
Isothermical ZTU-diagram



Tempering diagram