

Steel grade

Material No. / Werkstoff-Nr.	PREMIUM 1.2358
Description	60CrMoV18-5
BS	1.2358
AISI/SAE	1.2358
Search for alternatives in the ABRAMS STEEL GUIDE®	www.steel-guide.co.uk/alternatives/1.2358

Specifications



€co-Präz® [€co]
L: 300 mm
L: 500 mm

Chemical composition BS 1.2358 (reference value %)

C	Si	Mn	P	S	Cr	Mo	V
0.58 – 0.62	0.2 – 0.5	0.7 – 0.9	0 – 0.03	0 – 0.03	4.3 – 4.7	0.4 – 0.6	0.2 – 0.3

Physical properties

Hardness (delivery condition)	max. 325 HB, pre-tempered			
Tensile strength R_m (as received condition)	approx. 1100 N/mm ²			
Working hardness	max. 60 HRC			
Thermal expansion coefficient $10^{-6}m/(m \cdot K)$	20 - 100°C	20 - 200°C	20 - 300°C	20 - 400°C
	11.5	11.8	12.4	12.8
Thermal conductivity $W/(m \cdot K)$	20°C	350°C	700°C	
	19.4	24.6	26.3	

Technical properties

Tempered tool steel (with focus on cold work). High impact toughness and wear resistance, excellent surface hardenability and through-hardenability. High degree of dimensional stability, good polishability and weldability. BS 1.2358 can be a substitute for BS BD 2, BS BD 6, BS BD 3 mod.

Applications

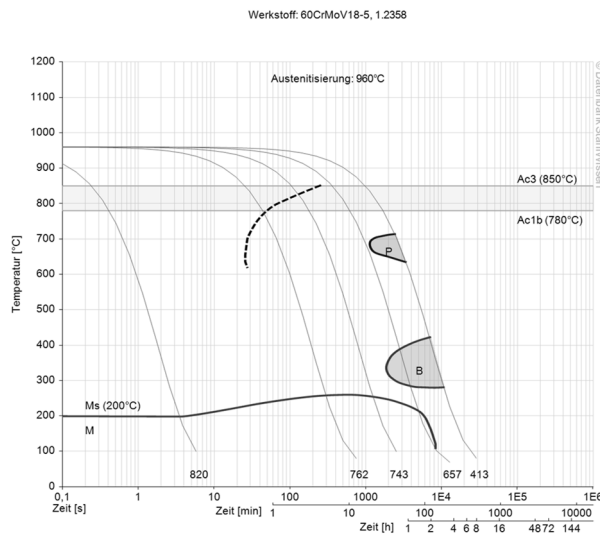
Segmented cutting tools, shear knives, forming dies, cold forming tools, deep drawing dies, cold extrusion tools, bending tools, rollers, embossing tools, mould tools, plastic moulds, hot working tools at low temperature stress.



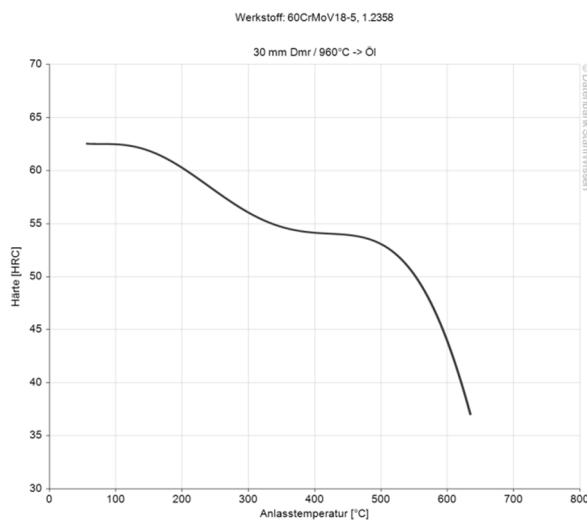
Heat treatment

	Temperature	Cooling	Hardness
Soft annealing	820 - 860°C	Furnace	max. 325 HB
Stress relief annealing	600 - 650°C	Furnace	
Hardening	950 - 980°C	Quenching in	
		Oil, compressed gas (N ₂), Air, hot basin (500 - 550°C)	

Continuous 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
Issued: 2012

