Steel grade

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

Specifications

€co-Präz® [€co]
L: 300 mm
L: 500 mm

Chemical composition AISI/SAE 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. 1.100 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
	11,5	11,8	12,4	12,8
Thermal conductivity W/(m • 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. AISI/SAE 1.2358 can be a substitute for AISI/SAE D2, AISI/SAE D6, AISI/SAE D3 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

Soft annealing	**Temperature**	**Cooling**	**Hardness**
	820 - 860°C	Furnace	max. 325 HB
Stress relief annealing	**Temperature**	**Cooling**	
	600 - 650°C	Furnace	
Hardening	**Temperature**	**Quenching in**	
	950 - 980°C	Oil, compressed gas (N_2), Air, hot basin (500 - 550°C)	

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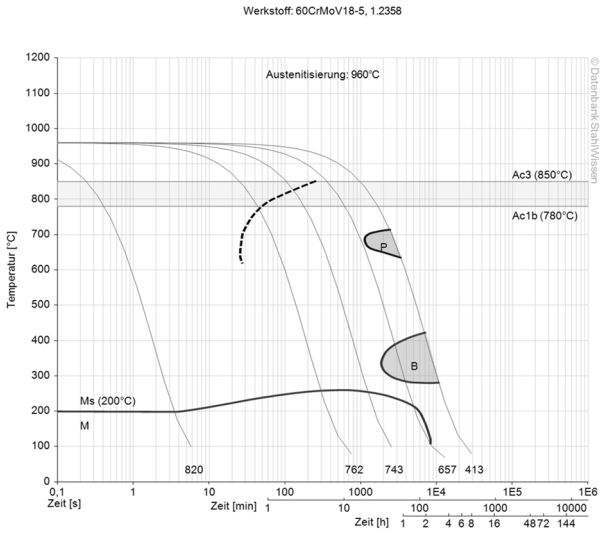
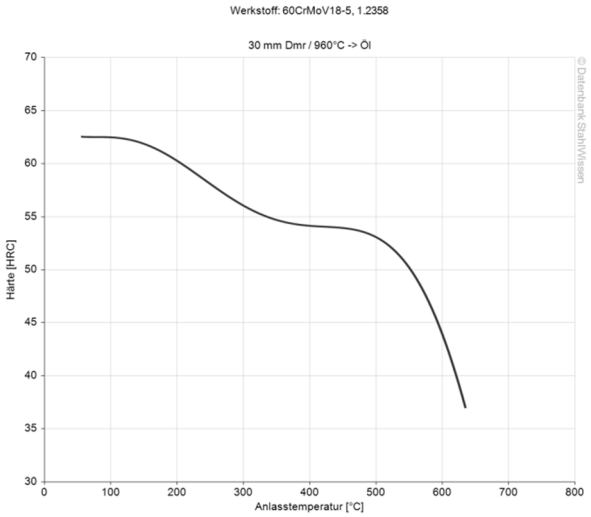
Continuous ZTU-diagram



Tempering diagram



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