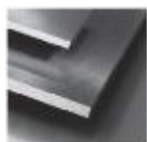


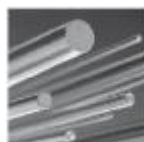
Steel grade

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



Precision round steel
with machining allowance [PRS/BA]
peeled / rough-turned
L: 1.000 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/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. AISI/SAE 1.2358 can be a substitute for AISI/SAE D2, AISI/SAE D6, AISI/SAE D3.

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	Temperature	Cooling	
	600 - 650°C	Furnace	
Hardening	Temperature	Quenching in	
	950 - 980°C	Oil, compressed gas (N ₂), Air, hot basin (500 - 550°C)	

ABRAMS PREMIUM STEEL

is a registered trademark of
Abrams Engineering Services GmbH & Co. KG
Hannoversche Str. 38 · 49084 Osnabrueck / Germany
Managing Director: Dipl.-Wi.-Ing. Dr. Juergen Abrams

Amtsgericht Osnabrueck / Germany, HRA 6865
VAT-No.: DE 221940667
General Partner: Abrams Engineering Verwaltungs GmbH
Amtsgericht Osnabrueck / Germany, HRB 20019

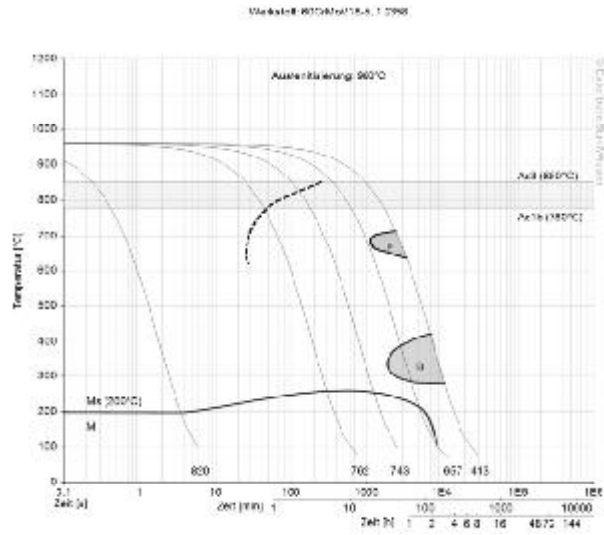
T: +49 (0) 5 41/3 57 39-0
F: +49 (0) 5 41/3 57 39-39

sales@premium-steel.eu
www.premium-steel.eu
www.shop.premium-steel.eu
www.steel-guide.eu

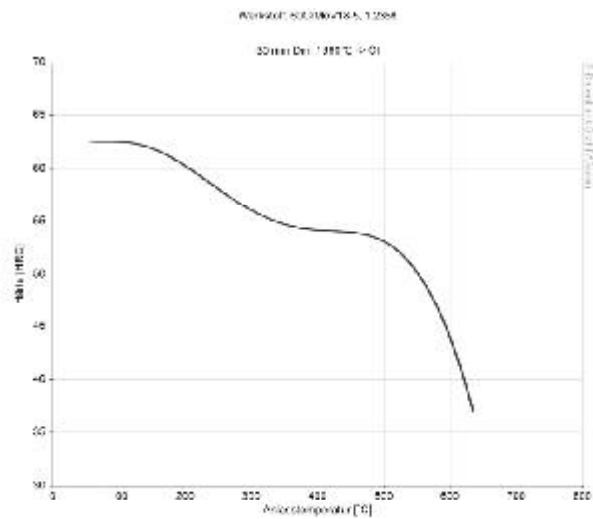
www.premium-steel.eu/news



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

