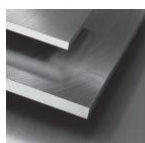


Steel grade

Material No. / Werkstoff-Nr.	PREMIUM 1.4125
Description	X105CrMo17
BS	440C
AISI/SAE	440C
Search for alternatives in the ABRAMS STEEL GUIDE®	www.steel-guide.co.uk/alternatives/440C

Specifications



€co-Präz® [€co]
L: 500 mm

Chemical composition BS 440C (reference value %)

C	Si	Mn	P	S	Cr	Mo
0,95 - 1,20	0 - 1,0	0 - 1,0	0 - 0,04	0 - 0,015	16,0 - 18,0	0,4 - 0,8

Physical properties

Hardness (delivery condition)	max. 285 HB, annealed			
Tensile strength R _m (as received condition)	ca. 965 N/mm ²			
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
	10,4	10,8	11,2	11,6
Thermal conductivity W/(m • K)	20°C			
	15,5			

Technical properties

Stainless, martensitic steel with high hardness and high wear resistance and good cutting power due to the higher carbon content. Compared to the AISI / SAE 440B this steel has a slightly higher hardenability at the expense of the corrosion resistance. The material is conditionally acid resistant.

Applications

Knives for the food industry, for example frozen food cutters, pork and beef cleaving knives and fish industry knives as well as accessories for meat grinders.

Heat treatment

	Temperature	Cooling	Hardness
Soft annealing	780 - 840°C	Furnace	max. 285 HB
Stress relief annealing	Temperature	Cooling	
	600 - 650°C	Furnace	
Tempering	Temperature	Quenching in	

ABRAMS PREMIUM STEEL

is a registered trademark of
Abrams Engineering Services GmbH & Co. KG
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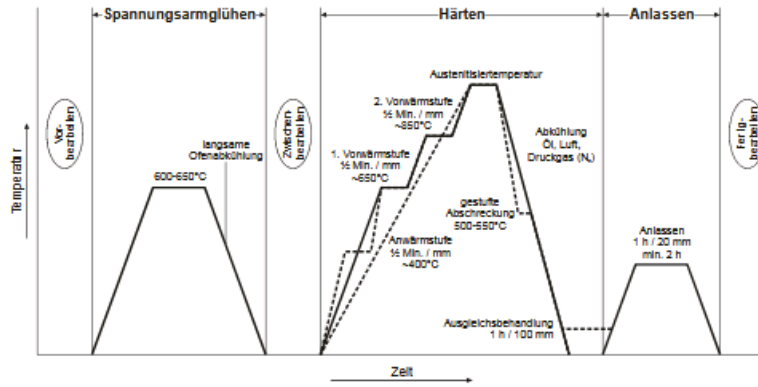
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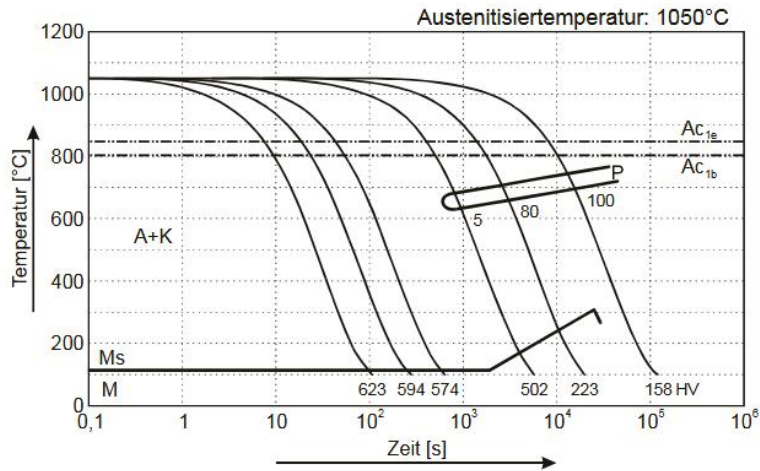
1000 - 1050°C

Air, oil, hot basin (500 - 550°C)

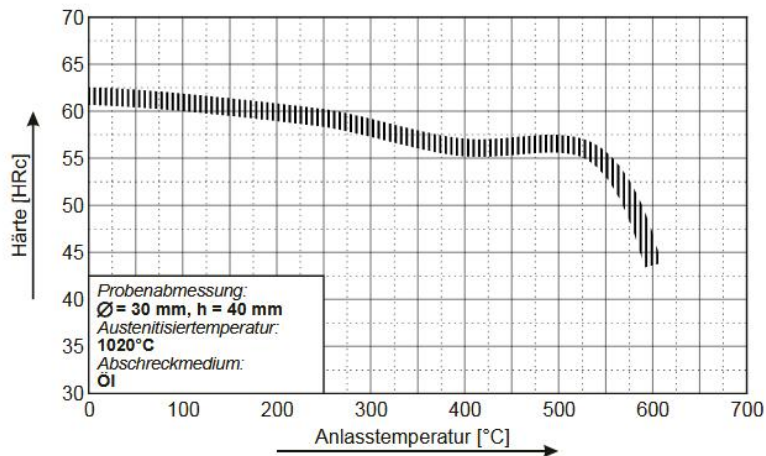
Heat treatment scheme



Continuous ZTU-diagram



Tempering diagram



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