Doerrenberg

Material No.: 1.2510 Code: 100MnCrW4 DE - Brand: Z3C

Chemical composition:
(Typical analysis in %)

C	Mn	Cr	W	V			
0,95	1,10	0,60	0,60	0,10			

Steel properties:

Medium alloyed cold work steel with good hardening capacity, high wear resistances, dimensionally stable during heat treatment. Similar to AISI O1.

Applications:

Cutting and punching tools, shear knives, thread rolling tools, measuring instruments.

Condition of delivery:

Soft annealed to max. 230 HB

Physical properties:

Thermal expansion coefficient	$\left[\frac{10^{-6} \cdot m}{m \cdot K}\right]$	20-100°C	20-200°C	20-300°C	20-400°C
		12,0	12,6	13,1	13,5

Thermal conductivity	$\left[\frac{W}{m \cdot K}\right]$	20°C	350°C
		33,4	32,1

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
740 - 770°C	furnace	max. 230 HB

Stress relief annealing

Temperature	Cooling	
600 - 650°C	furnace	

Hardening

Temperature	Cooling	Tempering
790 - 820°C	oil or hot bath 180 - 220°C	see tempering diagram

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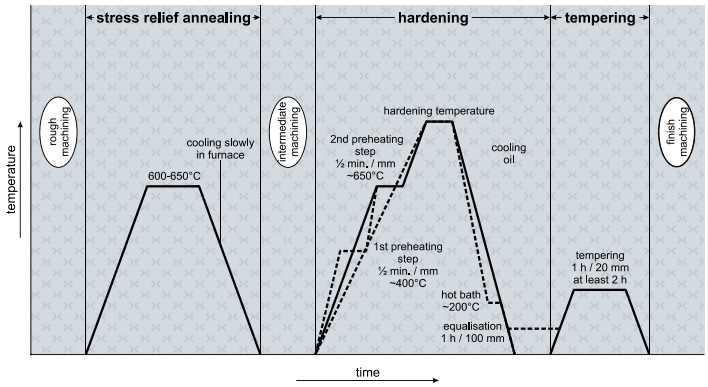
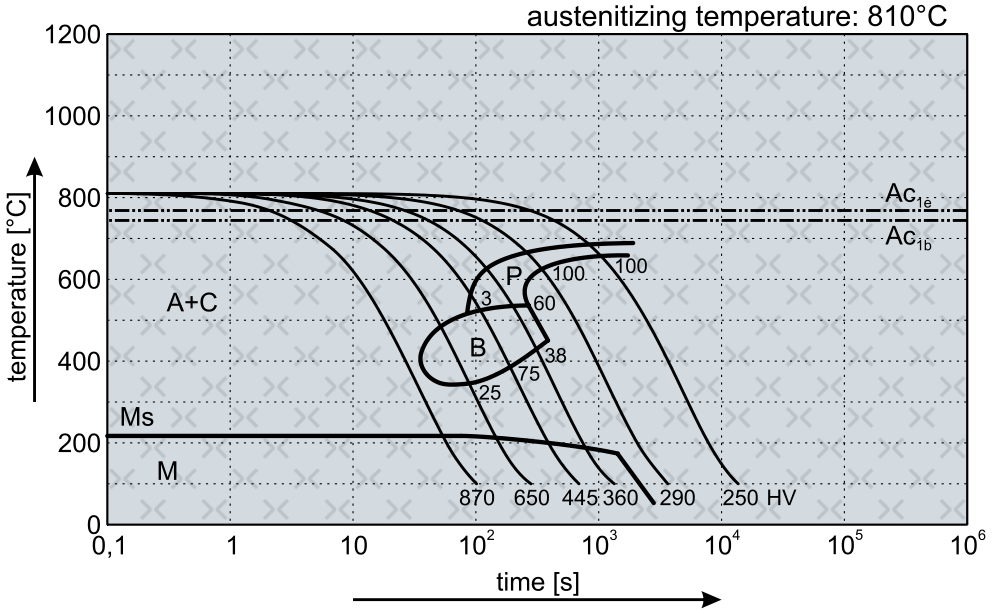
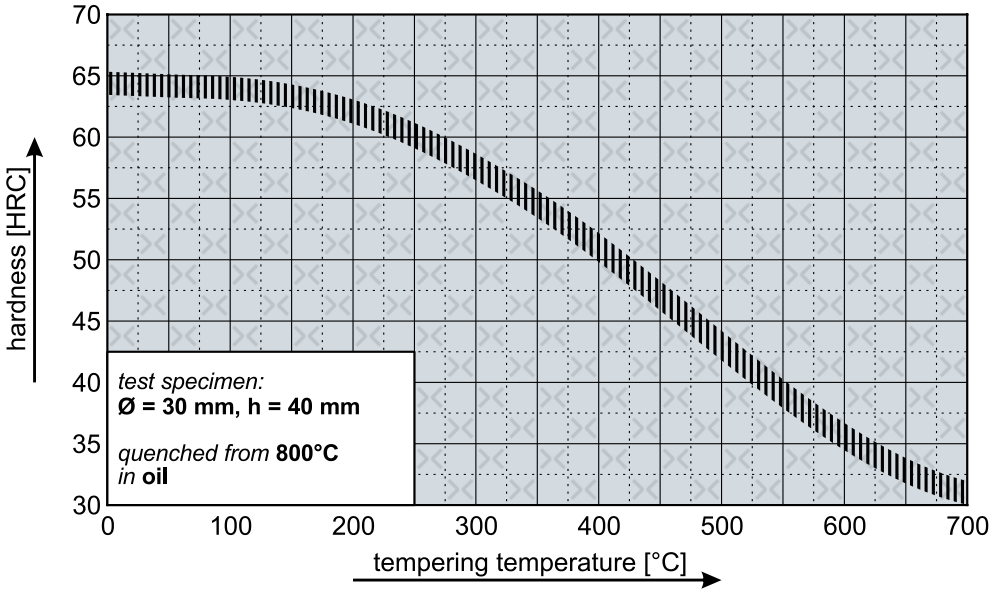
(1.2510) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.