



Material No.: Code:
1.2510 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

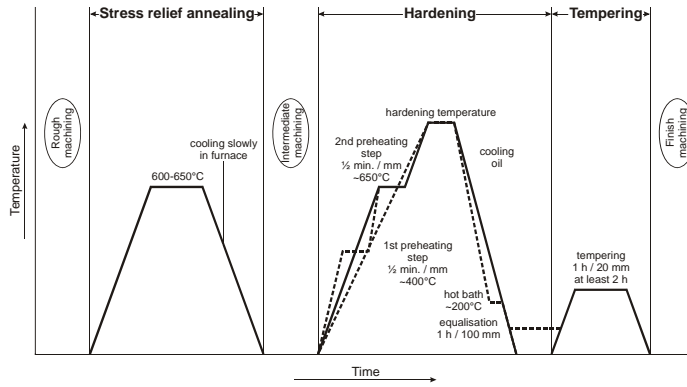
Physical properties:

Thermal expansion coefficient	$\left[\frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$	$\frac{20-100^{\circ}\text{C}}{12,0}$	$\frac{20-200^{\circ}\text{C}}{12,6}$	$\frac{20-300^{\circ}\text{C}}{13,1}$	$\frac{20-400^{\circ}\text{C}}{13,5}$
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	$\frac{20^{\circ}\text{C}}{33,4}$	$\frac{350^{\circ}\text{C}}{32,1}$		

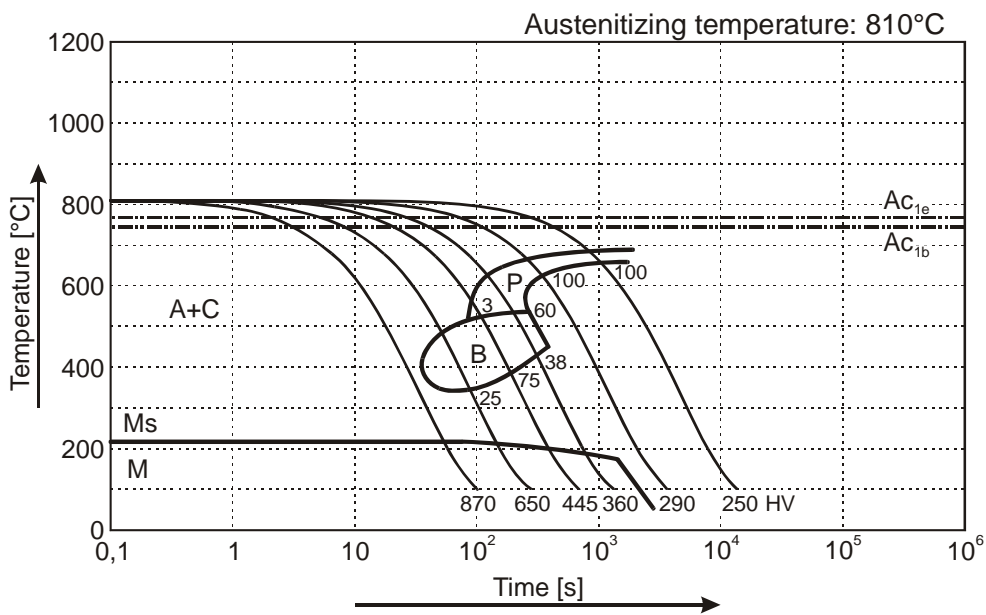
Heat treatment:

Soft annealing	<table border="1"><thead><tr><th>Temperature</th><th>Cooling</th><th>Hardness</th></tr></thead><tbody><tr><td>740 - 770°C</td><td>furnace</td><td>max. 230 HB</td></tr></tbody></table>	Temperature	Cooling	Hardness	740 - 770°C	furnace	max. 230 HB
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Stress relief annealing	<table border="1"><thead><tr><th>Temperature</th><th>Cooling</th><th></th></tr></thead><tbody><tr><td>600 - 650°C</td><td>furnace</td><td></td></tr></tbody></table>	Temperature	Cooling		600 - 650°C	furnace	
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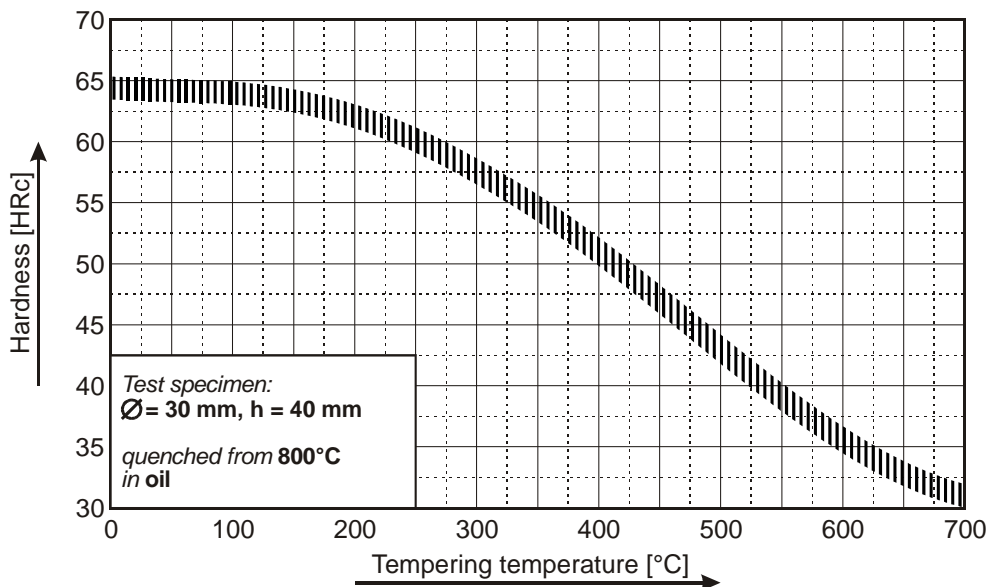
(1.2510) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.