

Material No.: Code:

1.2631 X50CrMoW9-1-1

DE - Brand:

WR Spezial

Chemical composition:
(Typical analysis in %)

C	Cr	Mo	W				
0,50	8,50	1,20	1,20				

Steel properties:

Medium alloyed cold work steel, good through-hardening, high wear resistance, very good toughness.

Applications:

Wood cutting knives, flat and round shear knives, knives for the paper industry.

Condition of delivery:

Soft annealed to max. 240 HB

Physical properties:

Thermal expansion coefficient	$\left[\frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$	20-100°C	20-200°C	20-300°C	20-400°C
		10,5	10,8	11,4	11,8
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C	350°C		
		24,3	26,9		

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
820 - 870°C	furnace	max. 240 HB

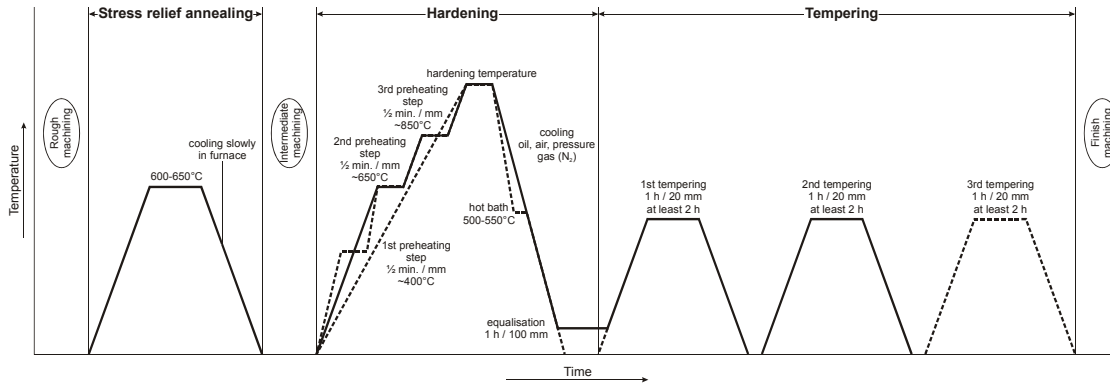
Stress relief annealing

Temperature	Cooling	
600 - 650°C	furnace	

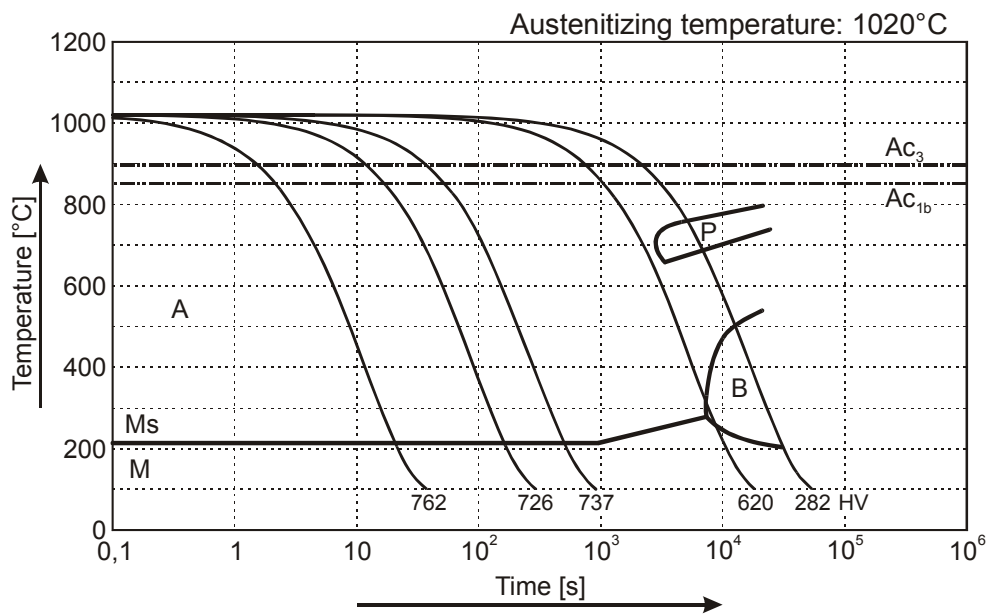
Hardening

Temperature	Cooling	Tempering
1020 - 1050°C	oil, pressure gas (N ₂), air or hot bath 500 - 550°C	see tempering diagram

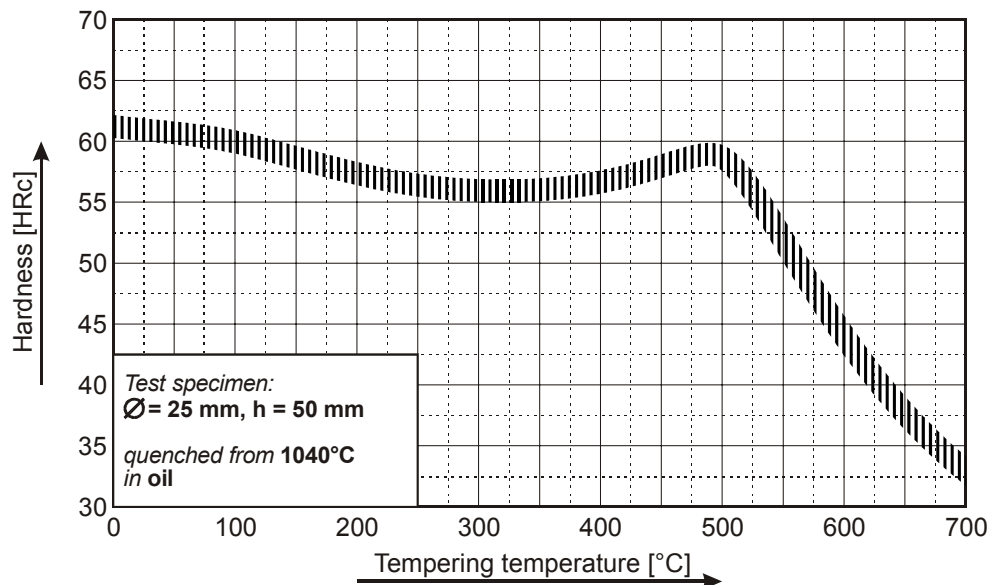
(1.2631) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.