

Material No.: Code:
1.2345 X50CrMoV5-1

DE - Brand:
DM51

Chemical composition:
 (Typical analysis in %)

C	Si	Cr	Mo	V			
0,50	1,00	5,00	1,40	1,00			

Steel properties:

Hot work tool steel, with increased carbon content, high wear resistance, creep resistant, high achievable hardness, good dimensional stability.

Applications:

Cold and hot knives, shear blades, cutting rolls, punches, dies.

Condition of delivery:

Soft annealed to max. 240 HB

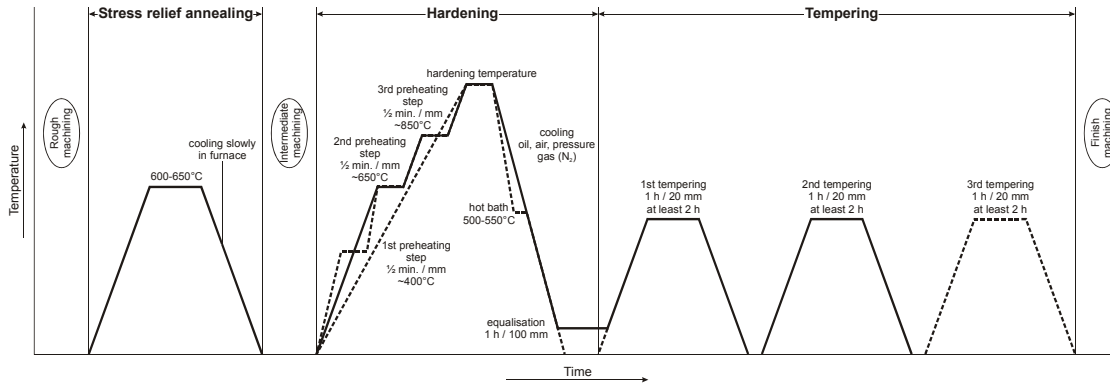
Physical properties:

Thermal expansion coefficient	$\left[\frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$	20-100°C	20-300°C	20-500°C	20-700°C
		11,7	12,7	13,4	13,8
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C	350°C	700°C	
		19,5	24,8	26,4	

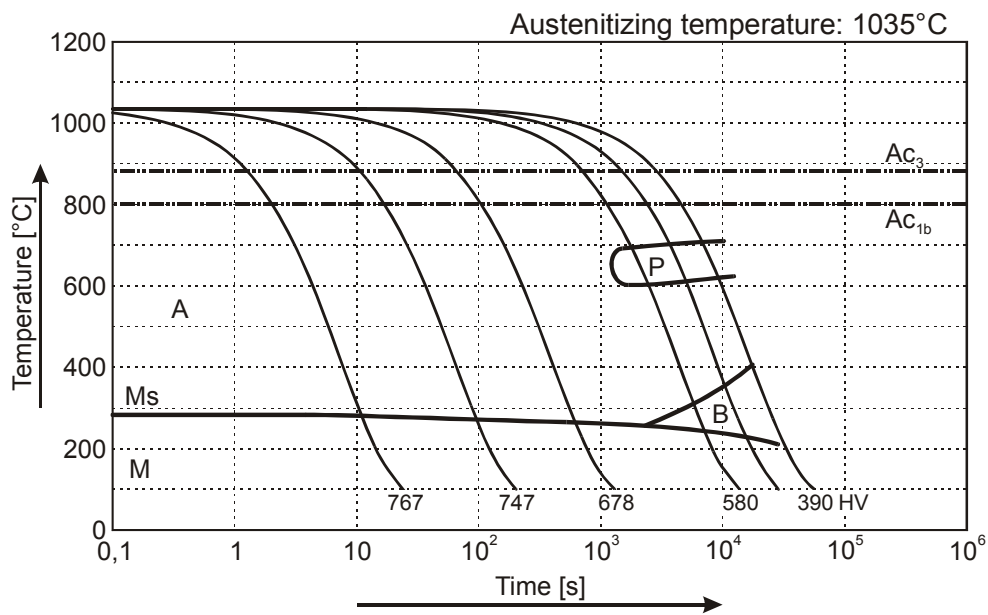
Heat treatment:

Soft annealing	Temperature	Cooling	Hardness
	760 - 810°C	furnace	max. 240 HB
Stress relief annealing	Temperature	Cooling	
	600 - 650°C	furnace	
Hardening	Temperature	Cooling	Tempering
	1000 - 1040°C	oil, pressure gas (N ₂), air or hot bath 500 - 550°C	see tempering diagram

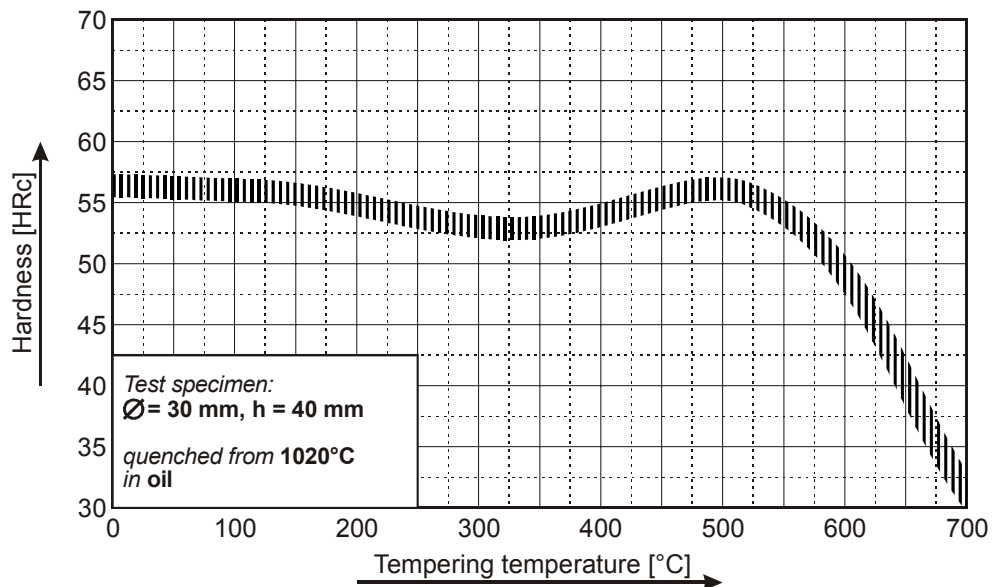
(1.2345) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.