

Material No.: Code:
1.2367 X38CrMoV5-3

DE - Brand:
DM3X

Chemical composition:
 (Typical analysis in %)

C	Cr	Mo	V				
0,38	5,00	3,00	0,50				

Steel properties:

Hot work tool steel with good wear resistance at high temperatures, high hardness and tempering strength, depending on the application also available in EFS and ESR.

Applications:

Large die casting tools, tools needing high strength at elevated temperatures, forging dies, mandrels, extrusion dies.

Condition of delivery:

Soft annealed to max. 229 HB

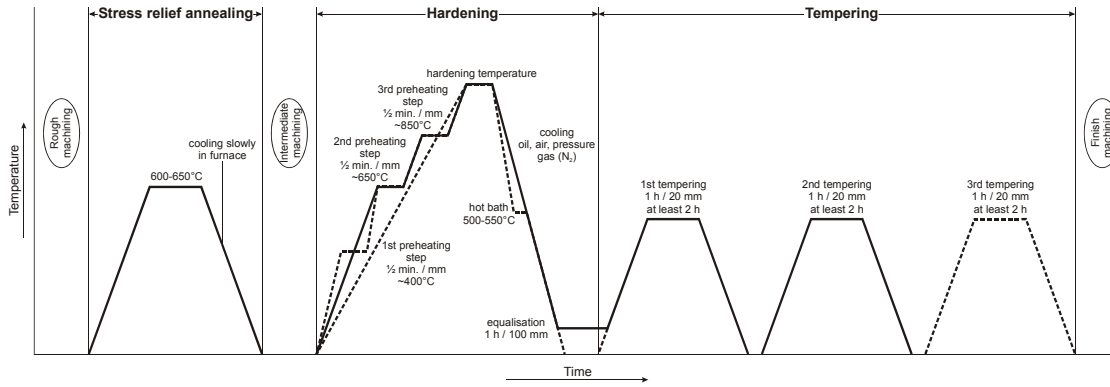
Physical properties:

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
		11,9	12,6	13,1	13,5
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C	350°C	700°C	
		30,8	33,5	35,1	

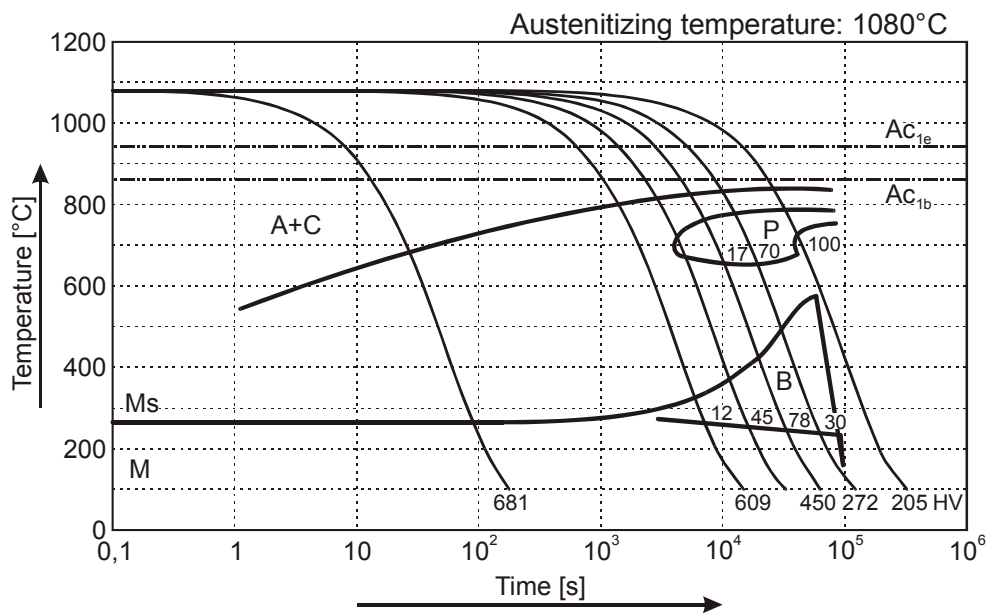
Heat treatment:

Soft annealing	Temperature	Cooling	Hardness
	730 - 780°C	furnace	max. 229 HB
Stress relief annealing	Temperature	Cooling	
	600 - 650°C	furnace	
Hardening	Temperature	Cooling	Tempering
	1030 - 1080°C	oil, pressure gas (N ₂), air or hot bath 500 - 550°C	see tempering diagram

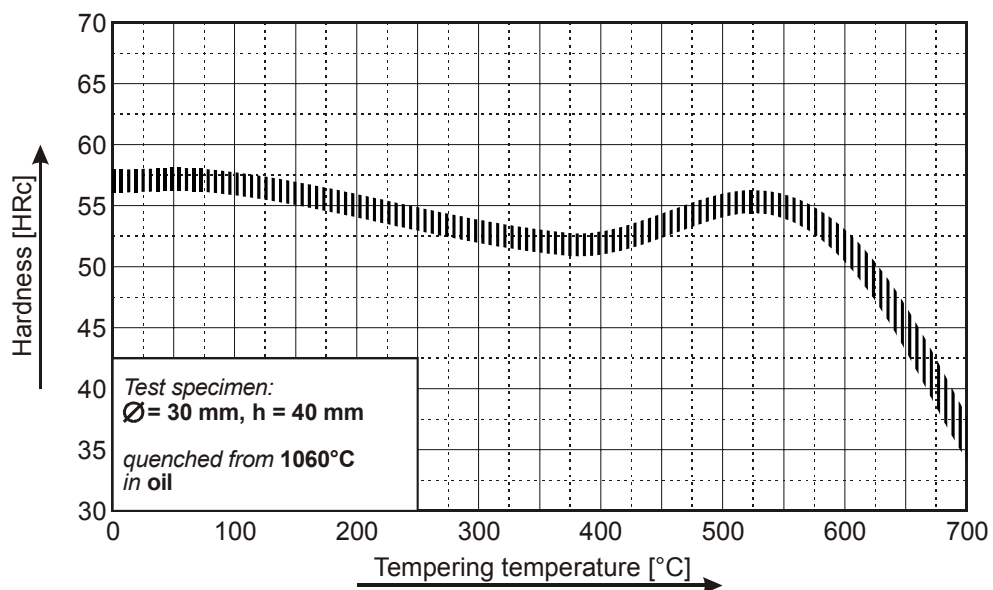
(1.2367) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.