

Material No.: Code:
1.2083 X40Cr14

DE - Brand:
HC50

Chemical composition:
 (Typical analysis in %)

C	Cr						
0,40	13,50						

Steel properties:

Tool steel with high dissolved Cr-content in the steel matrix, corrosion resistant in hardened condition, good polishability.

Applications:

Mould and pressure tools, tooling and inserts for corrosive plastics and polymers.

Condition of delivery:

Soft annealed to max. 241 HB

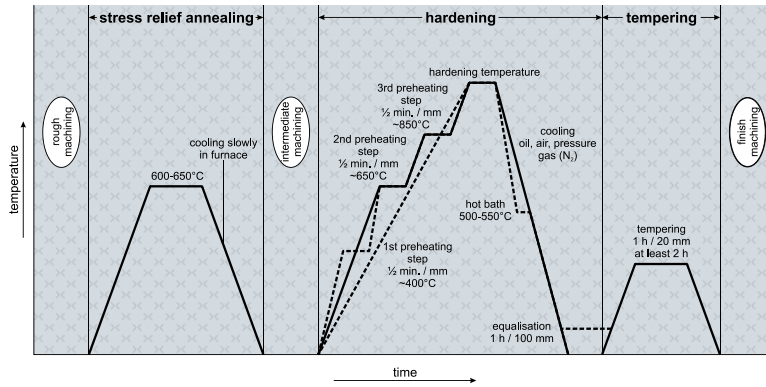
Physical properties:

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	10,9	11,3	11,6
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C	350°C	700°C	
		24,6	25,3	26,2	

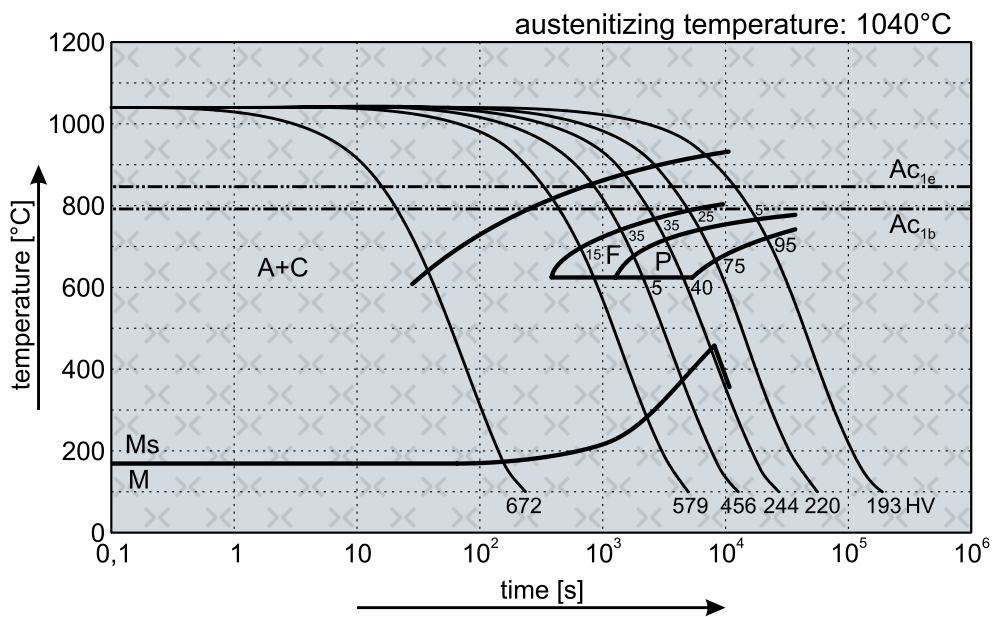
Heat treatment:

Soft annealing	Temperature	Cooling	Hardness
	760 - 800°C	furnace	max. 241 HB
Stress relief annealing	Temperature	Cooling	
	600 - 650°C	furnace	
Hardening	Temperature	Cooling	Tempering
	1000 - 1050°C	oil, pressure gas (N ₂), air or hot bath 500 - 550°C	see tempering diagram

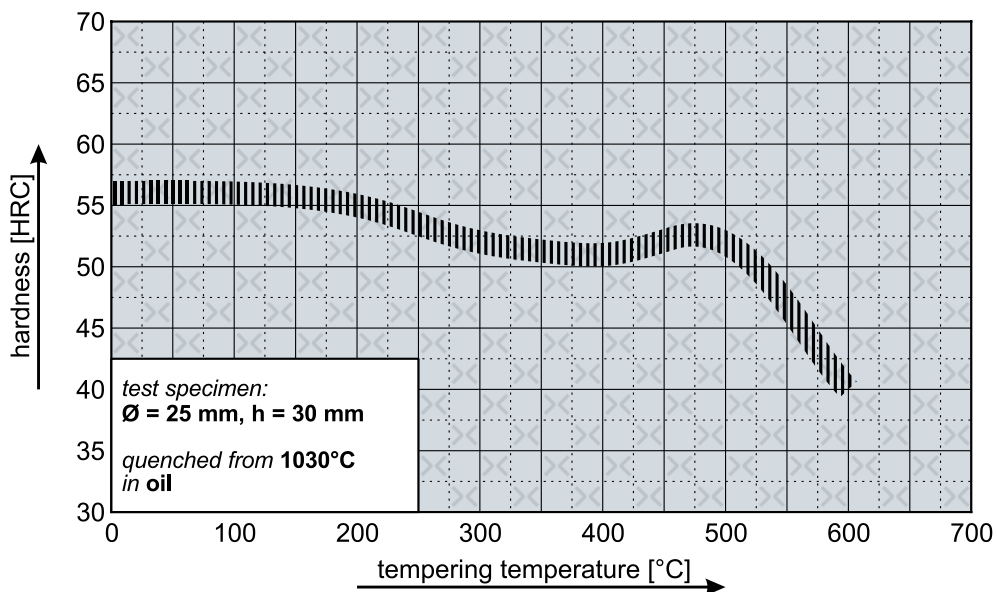
(1.2083) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.