

Material No.: Code:
1.1730 C45U

DE - Brand:
Extra Nr.45

Chemical composition:
 (Typical analysis in %)

C	Si	Mn					
0,45	0,30	0,70					

Steel properties:

Surface hardenable tool steel with hard surface and tough core.

Applications:

Cold heading dies, top and bottom plates for plastic die casting, die casting tools, hand tools, tongs, agricultural tools, blanking tools, leather knives.

Condition of delivery:

Soft annealed to max. 207 HB

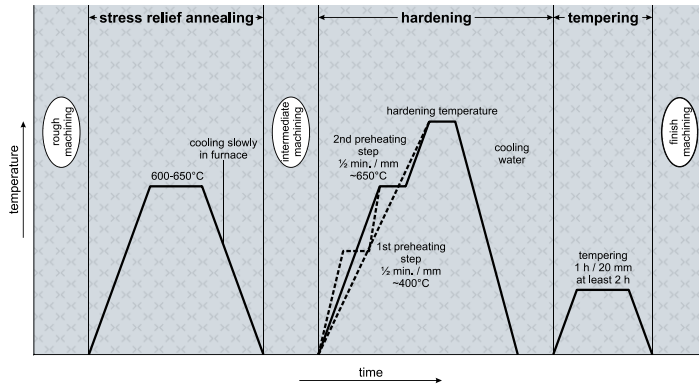
Physical properties:

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
		12,5	13,0	13,6	14,1
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C	350°C		
		44,9	41,6		

Heat treatment:

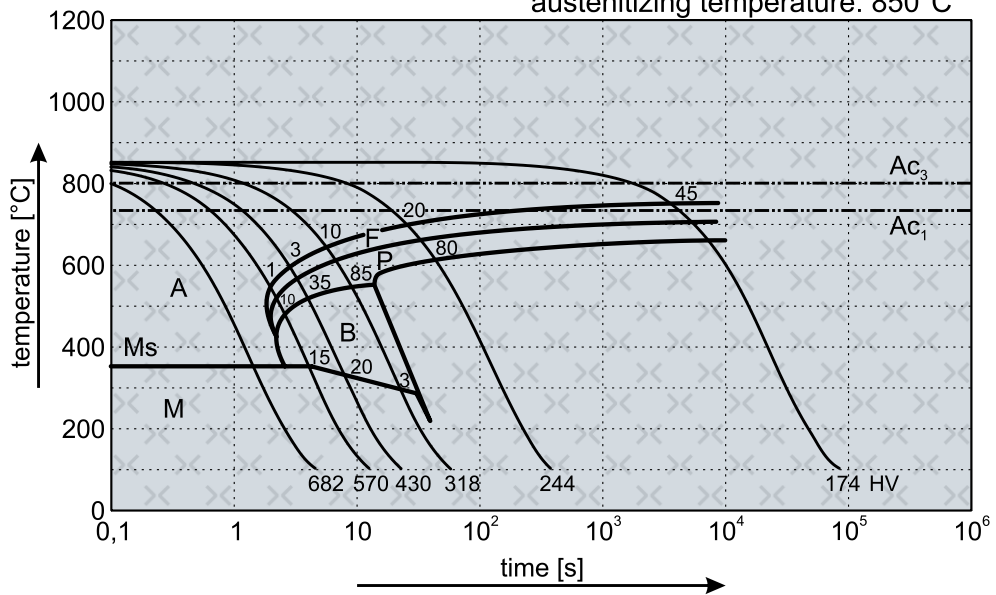
Soft annealing	Temperature	Cooling	Hardness
	680 - 710°C	furnace	max. 207 HB
Stress relief annealing	Temperature	Cooling	
	600 - 650°C	furnace	
Hardening	Temperature	Cooling	Tempering
	800 - 850°C	water	see tempering diagram

(1.1730) Thermal Cycle Diagram

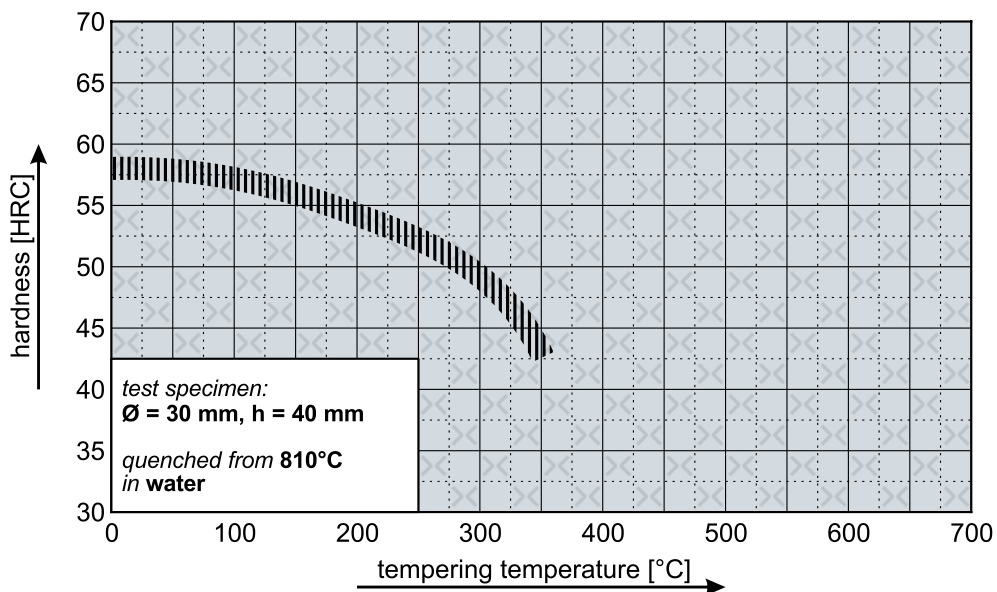


Continuous Cooling Transformation Diagram (CCT)

austenitizing temperature: 850°C



Tempering Diagram



Remarks: All technical information is for reference only.