

Material No.: Code:
1.2767 45NiCrMo16

DE - Brand:
VNC4

Chemical composition:
 (Typical analysis in %)

C	Cr	Mo	Ni				
0,45	1,40	0,25	4,00				

Steel properties:

Nickel alloyed cold work tool steel, good through-hardening, good polishability, excellent toughness.

Applications:

shredder knives, cutting tools for thick materials, casing, plastic moulds, cutting and bending tools, shear knives for cutting scrap and billets.

Condition of delivery:

Soft annealed to max. 285 HB

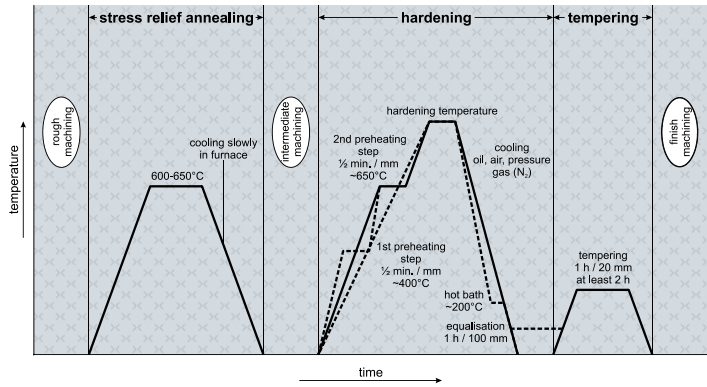
Physical properties:

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
		11,5	12,3	12,8	13,1
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C	150°C	300°C	
		32,9	34,6	35,1	

Heat treatment:

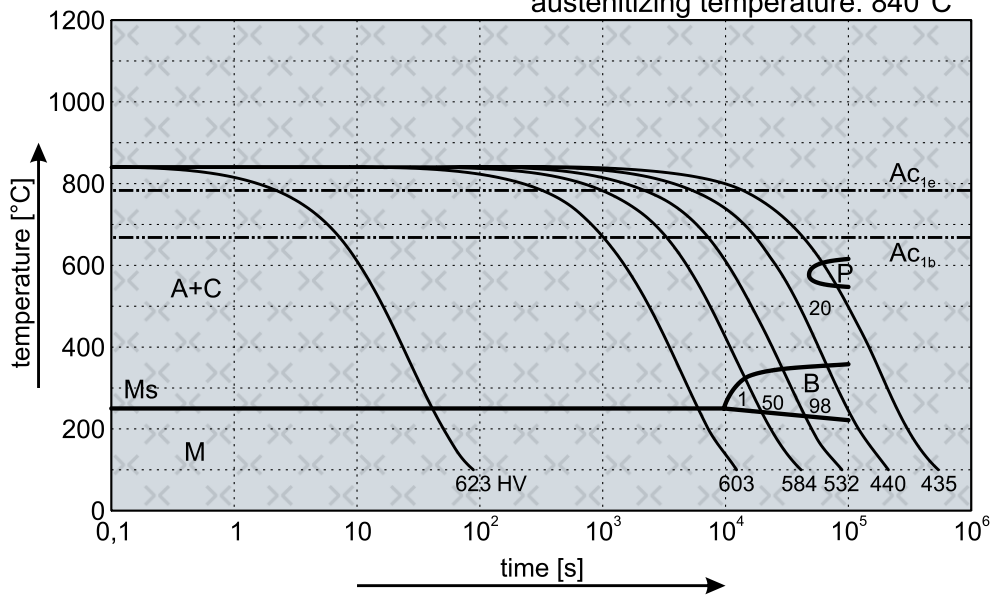
Soft annealing	Temperature	Cooling	Hardness
	610 - 650°C	furnace	max. 285 HB
Stress relief annealing	Temperature	Cooling	
	600 - 650°C	furnace	
Hardening	Temperature	Cooling	Tempering
	840 - 870°C	oil, pressure gas (N ₂), air or hot bath 180 - 220°C	see tempering diagram

(1.2767) Thermal Cycle Diagram

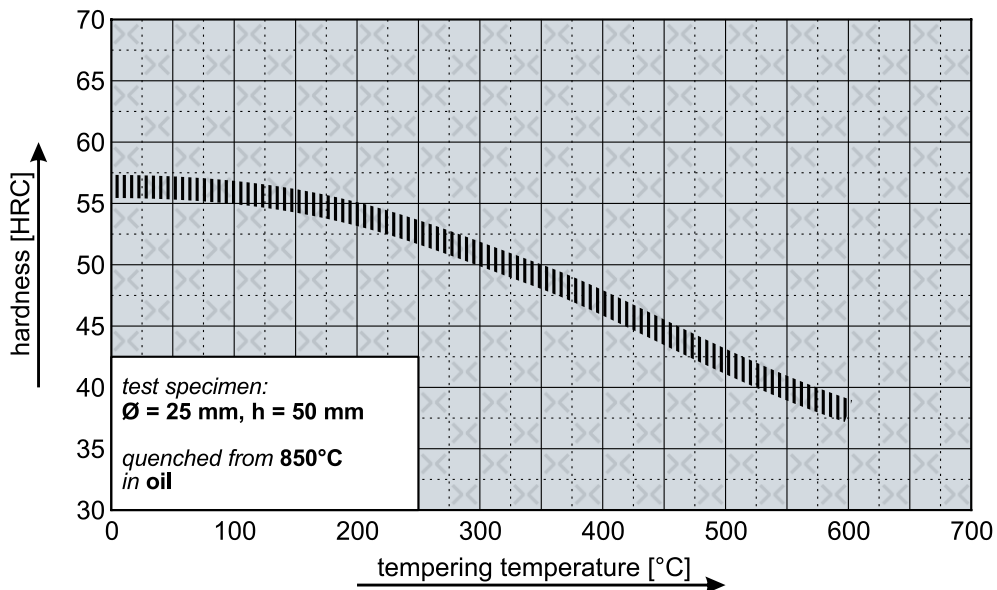


Continuous Cooling Transformation Diagram (CCT)

austenitizing temperature: 840°C



Tempering Diagram



Remarks: All technical information is for reference only.