

DE - Brand:

Special Steel

CPOH^{PLUS}

Chemical composition:

(Typical analysis in %)

C	Cr	Mo	V	others		
1,00	8,00	2,50	0,30	+		

Steel properties:

Cold work tool steel of powder-metallurgical production, same analysis like CPOH, but homogenous micro-structure within whole cross-section; fine distributed carbide structure, better machineability, polishability, grindability. High molybdenum content, very good secondary hardening, good toughness, high compressive strength, dimensionally stable.

Applications:

Thread rolling dies and rolls, cutting tools, forming rolls, shear knives, coining punches, deep-drawing dies.

Condition of delivery:

Soft annealed to max. 250 HB

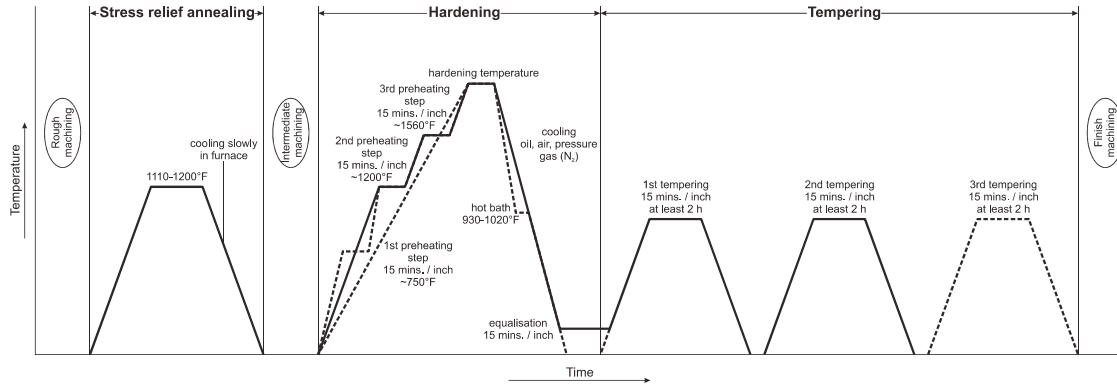
Physical properties:

Thermal expansion coefficient	$\left[\frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$	$\frac{68-212^{\circ}\text{F}}{11,0}$	$\frac{68-392^{\circ}\text{F}}{11,3}$	$\frac{68-572^{\circ}\text{F}}{11,9}$	$\frac{68-752^{\circ}\text{F}}{12,2}$
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	$\frac{68^{\circ}\text{F}}{24,9}$			

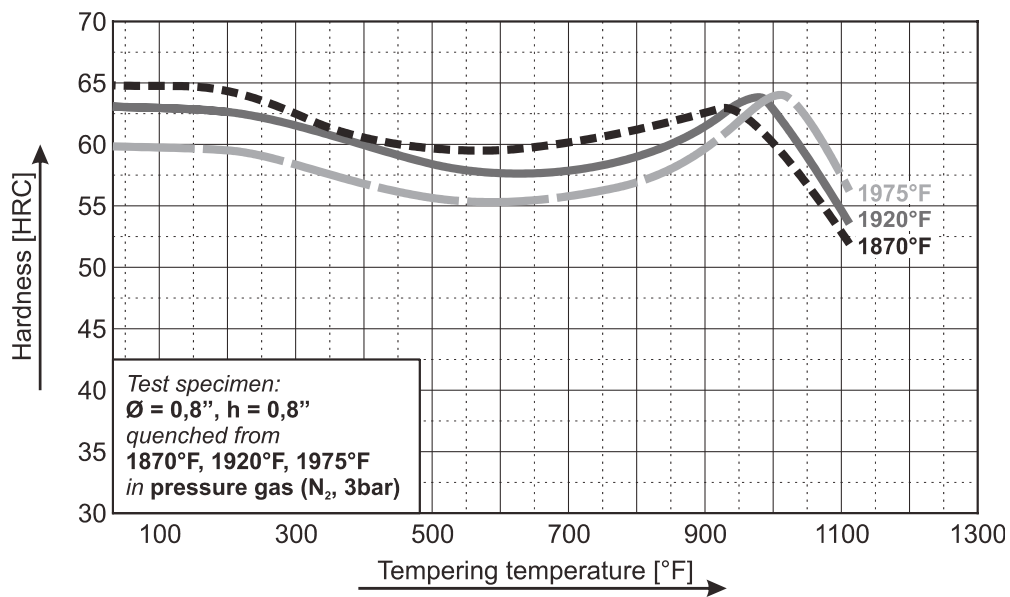
Heat treatment:

Soft annealing	Temperature	Cooling	Hardness
	1510 - 1580°F	furnace	max. 250 HB
Stress relief annealing	Temperature	Cooling	
	1110 - 1200°F	furnace	
Hardening	Temperature	Cooling	Tempering
	1870 - 1975°F	oil, pressure gas (N ₂), air or hot bath 930 - 1020°F	see tempering diagram

(CPOH^{PLUS}) Thermal Cycle Diagram



Tempering Diagram



Remarks: All technical information is for reference only.