

# Special Steel

DE - Brand:

## CPOH

**Chemical composition:**  
(Typical analysis in %)

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

**Steel properties:**

Cold work tool steel with 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.

**Condition of delivery:**

Soft annealed to max. 250 HB

**Physical properties:**

Thermal expansion coefficient	$\left[ \frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$	20-100°C 11,0	20-200°C 11,3	20-300°C 11,9	20-400°C 12,2
Thermal conductivity	$\left[ \frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C 24,9			

**Heat treatment:**

Soft annealing

Temperature	Cooling	Hardness
820 - 860°C	furnace	max. 250 HB

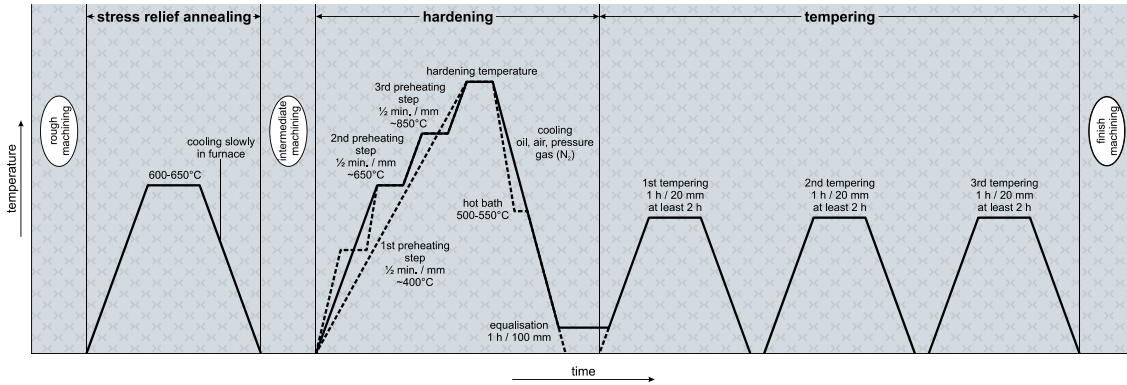
Stress relief annealing

Temperature	Cooling	
600 - 650°C	furnace	

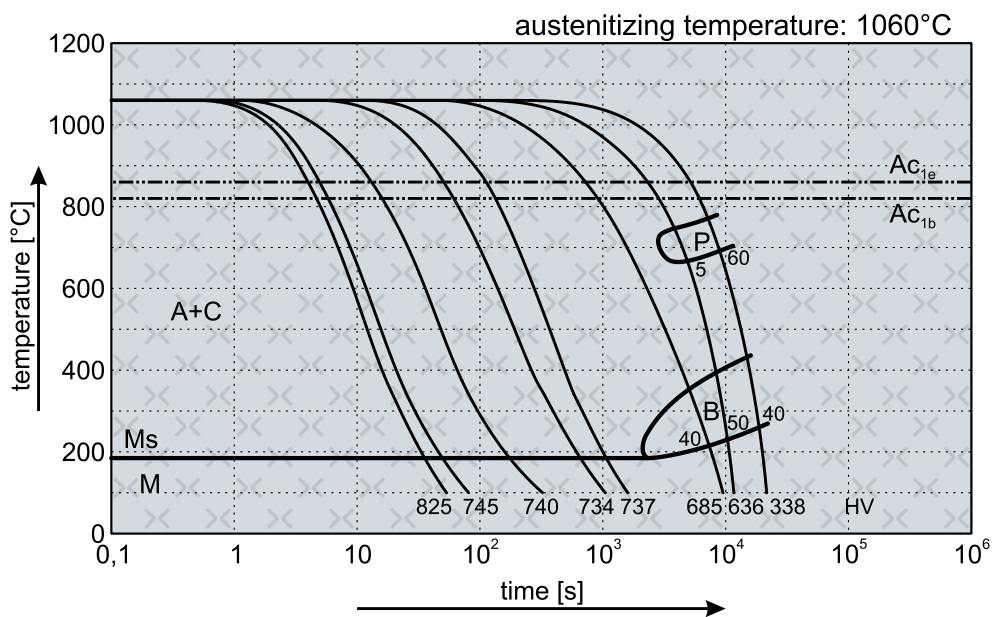
Hardening

Temperature	Cooling	Tempering
1040 - 1100°C	oil, pressure gas (N <sub>2</sub> ), air or hot bath 500 - 550°C	see tempering diagram

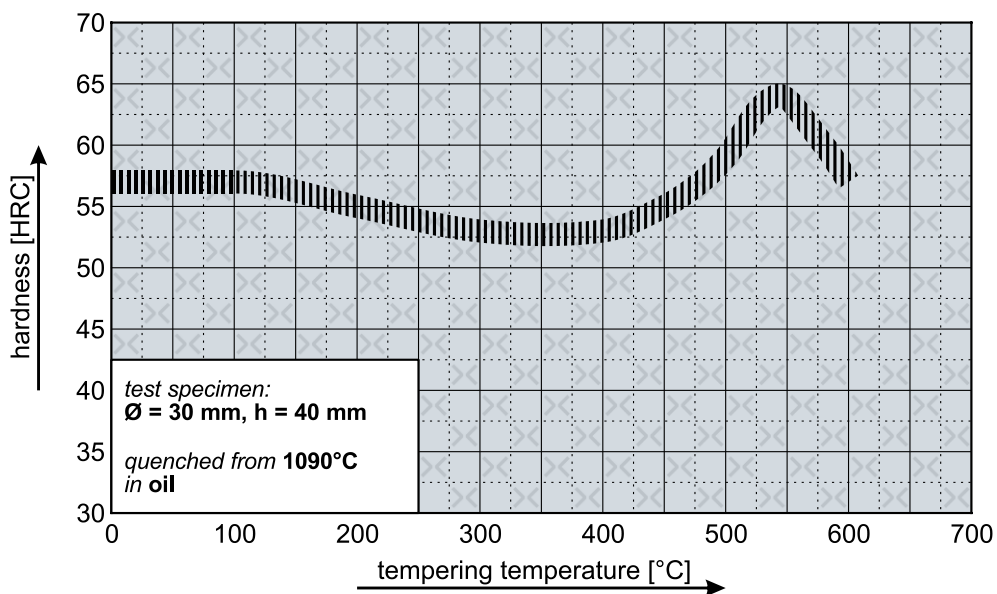
## (CPOH) Thermal Cycle Diagram



## Continuous Cooling Transformation Diagram (CCT)



## Tempering Diagram



Remarks: All technical information is for reference only.