



DE - Brand:

**CP72<sup>PLUS</sup>**

## Special Steel

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

C	Cr	Mo	V	W			
1,10	7,50	1,50	2,10	1,10			

### Steel properties:

Cold work tool steel of powder-metallurgical production with high contents of vanadium and tungsten, same analysis like CP72 but homogenous microstructure within whole cross-section, fine distributed carbide structure, better machinability, grindability and polishability, Excellent secondary hardening, good toughness and compressive strength, dimensionally stable.

### Applications:

Cutting tools, bending tools, pressure and profile rolls, thread rolling dies, stamping tools.

### Condition of delivery:

Soft annealed to max. 250 HB

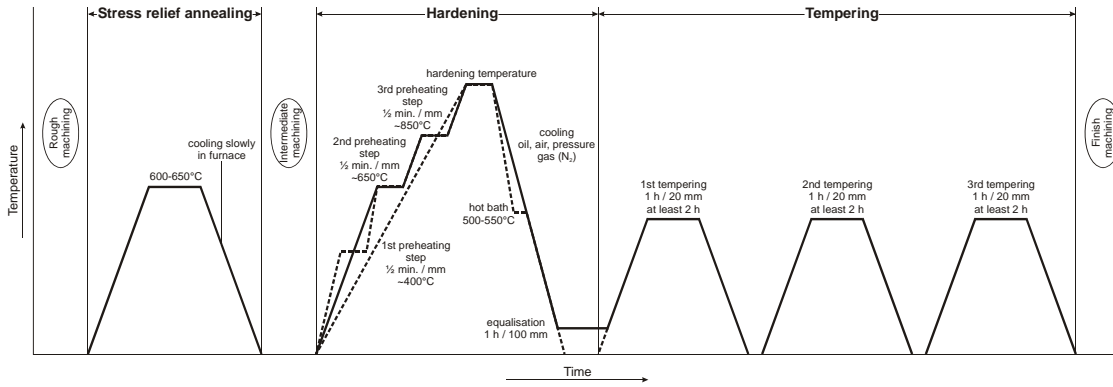
### Physical properties:

Thermal expansion coefficient	$\left[ \frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$	20-100°C	20-200°C	20-300°C	20-400°C
		11,4	11,7	12,1	12,3
Thermal conductivity	$\left[ \frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C			
		24,8			

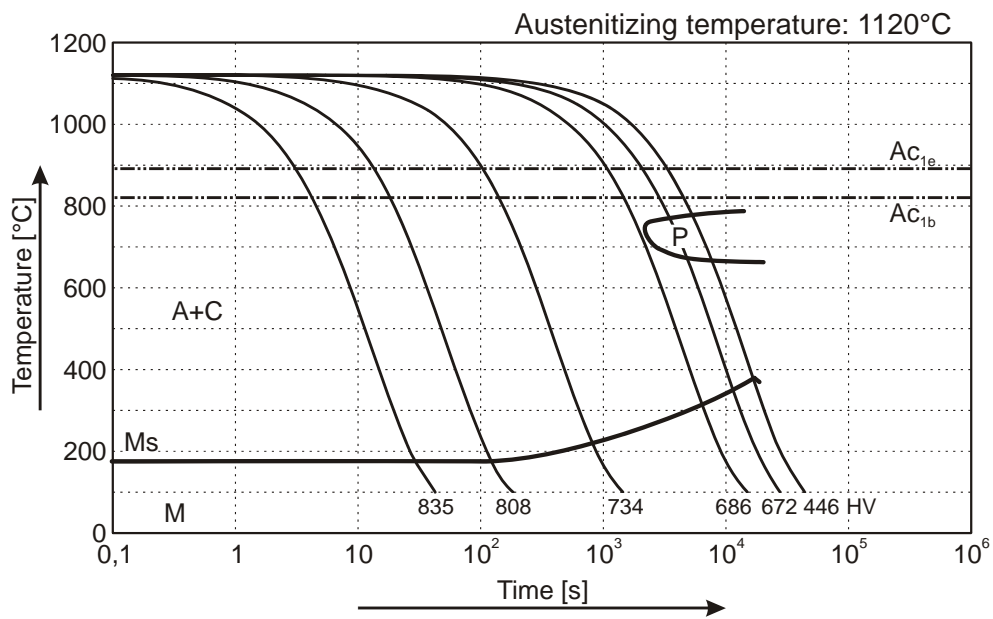
### Heat treatment:

Soft annealing	<b>Temperature</b>	<b>Cooling</b>	<b>Hardness</b>
	800 - 840°C	furnace	max. 250 HB
Stress relief annealing	<b>Temperature</b>	<b>Cooling</b>	
	600 - 650°C	furnace	
Hardening	<b>Temperature</b>	<b>Cooling</b>	<b>Tempering</b>
	1020 - 1110°C	oil, pressure gas (N <sub>2</sub> ), air or hot bath 500 - 550°C	see tempering diagram

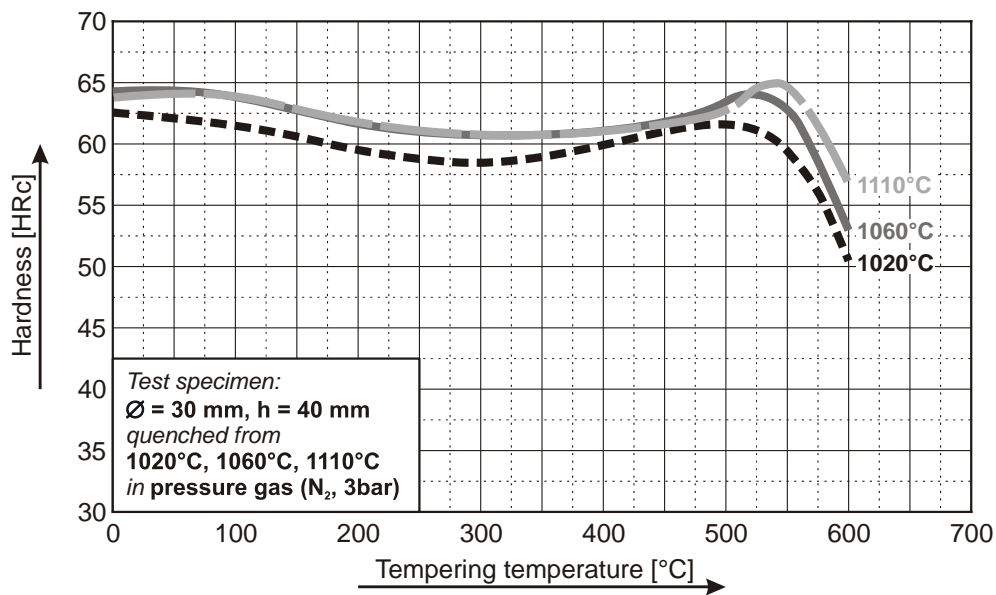
## (CP72<sup>PLUS</sup>) Thermal Cycle Diagram



## Continuous Cooling Transformation Diagram (CCT)



## Tempering Diagram



Remarks: All technical information is for reference only.