

Material No.: Code:
1.2601 X165CrMoV12

DE - Brand:
CPPK

Chemical composition:
 (Typical analysis in %)

C	Cr	Mo	V	W			
1,65	12,00	0,60	0,30	0,50			

Steel properties:

Ledeburitic 12% chrome steel, very high resistance against abrasive and adhesive wear, good toughness, good dimensional stability, high compressive strength, secondary hardenable, PVD/CVD coating as well as nitriding is possible.

Applications:

Hobs and deep drawing tools, cold extrusion dies, forming rolls, cold shear blades, cutting and punching 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
		10,7	11,3	11,8	12,2
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C	350°C		
		31,8	29,4		

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
820 - 850°C	furnace	max. 250 HB

Stress relief annealing

Temperature	Cooling	
600 - 650°C	furnace	

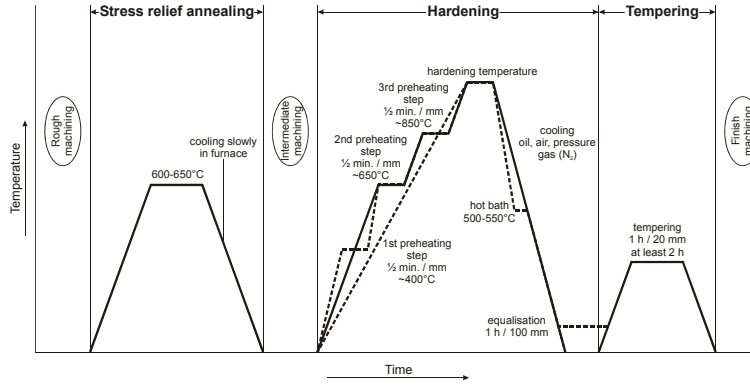
Hardening

The steel 1.2601 is secondary hardenable with a higher hardening temperature (1050°C - 1080°C) to nearly 60 HRc.

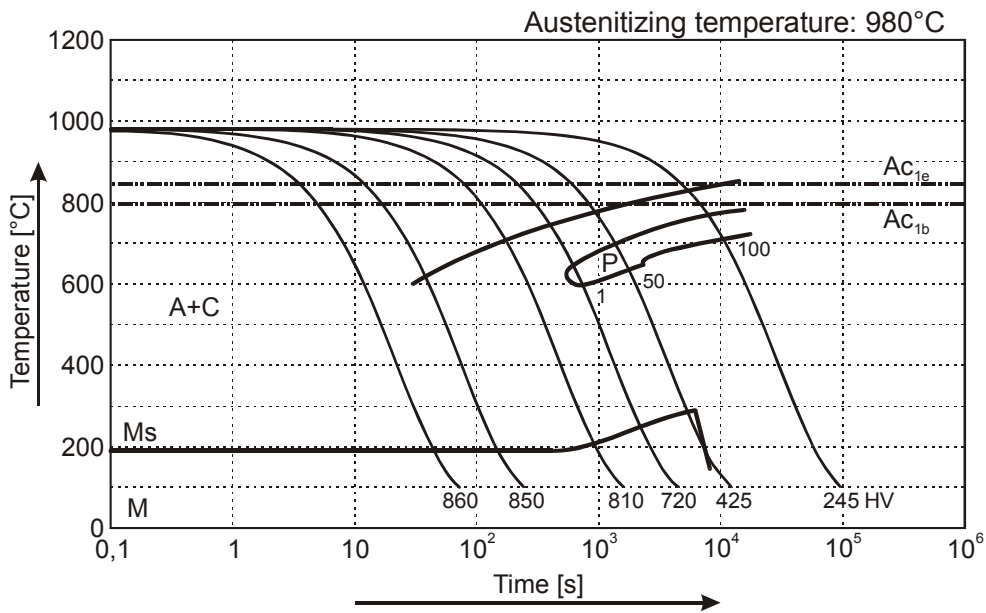
(see tempering diagram ②)

Temperature	Cooling	Tempering
980 - 1020°C	oil, pressure gas (N ₂), air or hot bath 500 - 550°C	see tempering diagram ①

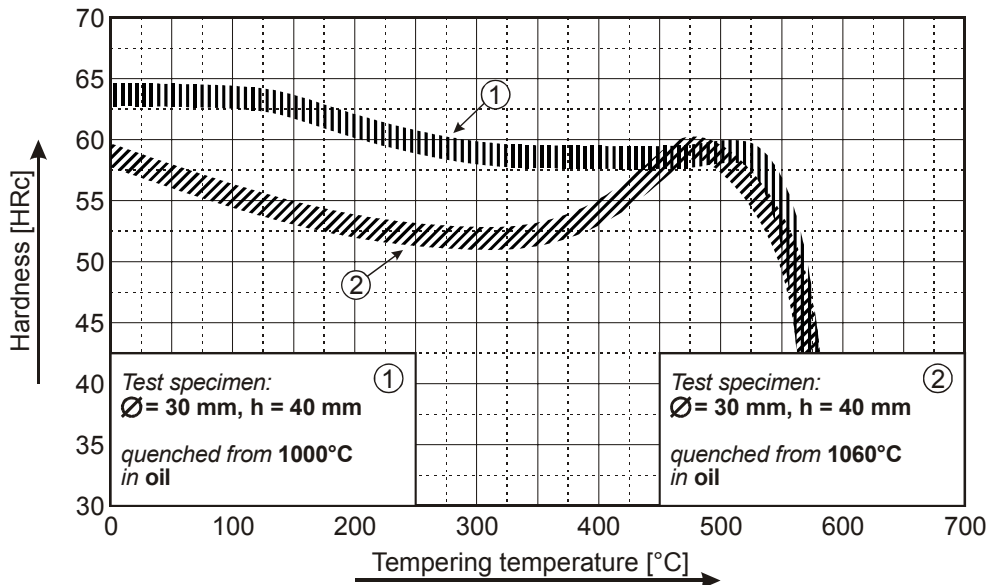
(1.2601) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.