

Special Steel

DE - Brand:

CP4M[®]

Chemical composition

(Typical analysis in %)

C	Cr	Mo	V				
0,60	5,00	+	+				

Steel properties

Cr-Mo-V alloyed, secondary hardenable cold work tool steel with high toughness, dimensionally stable, better weldability and through-hardenable (compared to the carbide rich cold work tool steel 1.2379). Excellent base material for nitriding or coating (CVD, PVD).

Applications

Deep drawing, punching and cutting tools, tools for hot and cold forming of higher tensile sheet material.

Condition of delivery

- a) Soft annealed to max. 250 HB
- b) Quenched and tempered, 280 - 325 HB
(950 - 1100 N/mm² according to DIN EN ISO 18265 Table A.1)

Heat treatment

Soft annealing

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

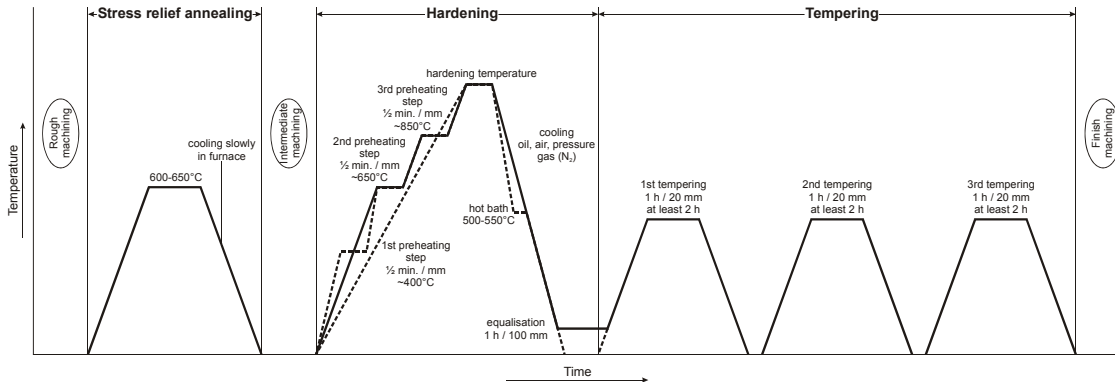
Stress relief annealing

Temperature	Cooling	
600 - 650°C	furnace	

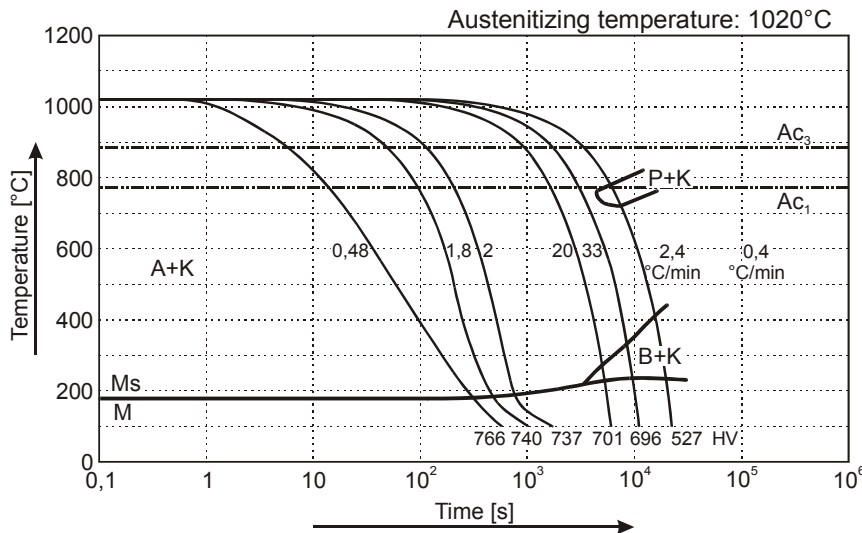
Hardening

Temperature	Cooling	Tempering
1000 - 1050°C	oil, pressure gas (N ₂), air or hot bath 500 - 550°C	see tempering diagram

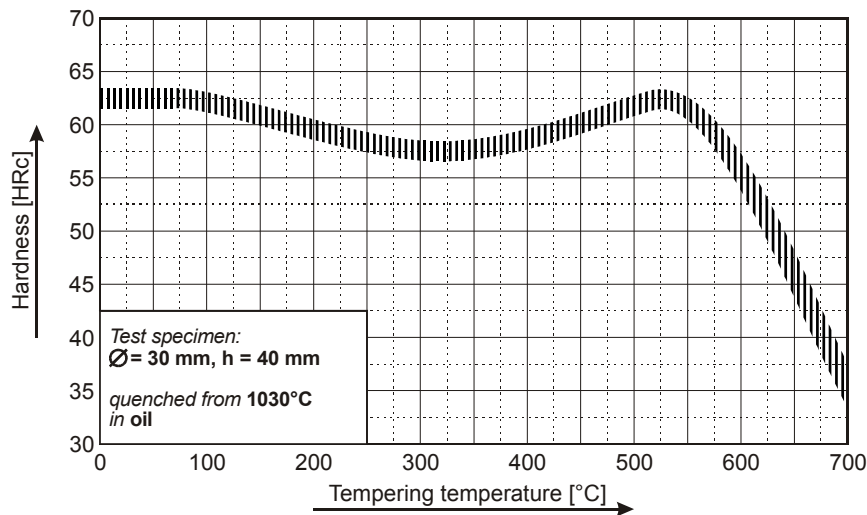
(CP4M®) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.