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-hardenability (compared to the carbide rich cold work tool steel D2 / 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 MPa according to DIN EN ISO 18265 Table A.1)

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
1510 - 1580°F	furnace	max. 250 HB

Stress relief annealing

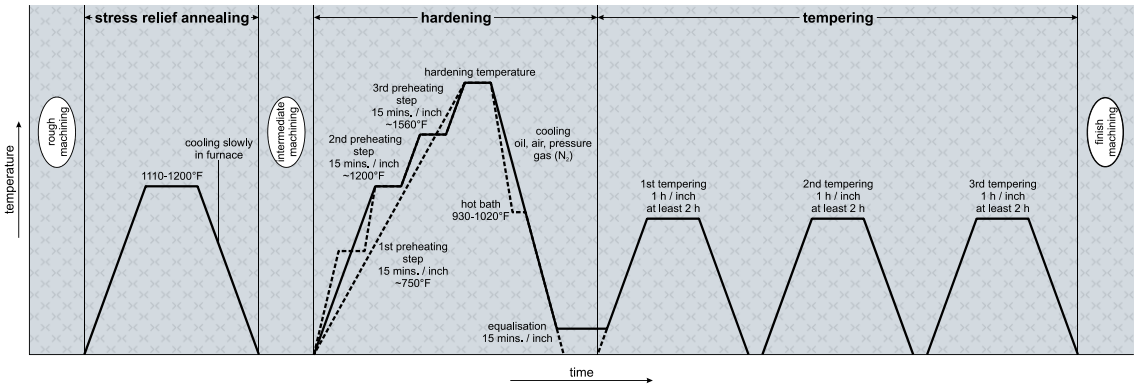
Temperature	Cooling	
1110 - 1200°F	furnace	

Hardening

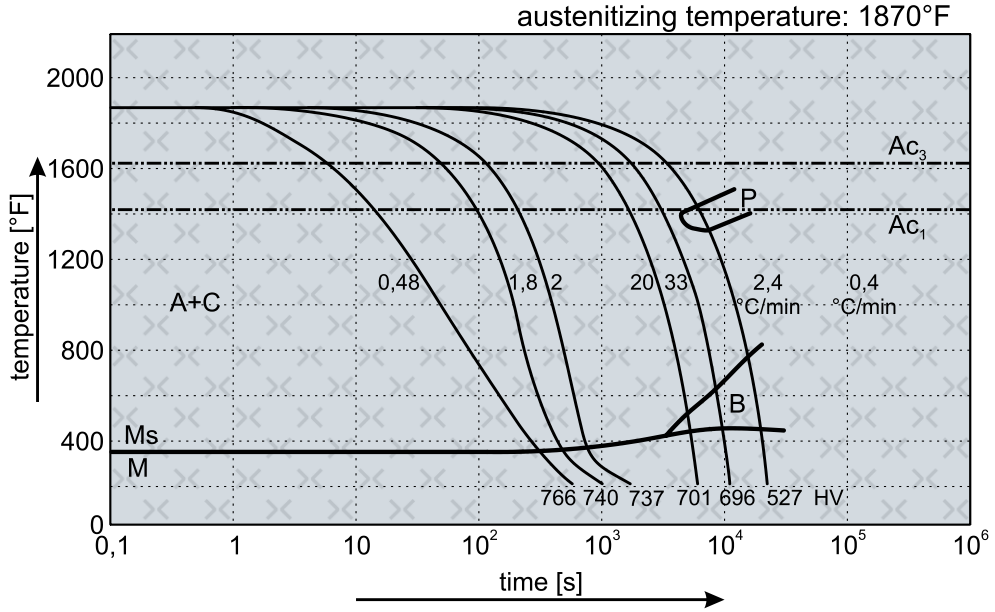
Temperature	Cooling	Tempering
1000 - 1050°F	oil, pressure gas (N_2), air or hot bath 930 - 1020°F	see tempering diagram

Dörrenberg Edelstahl GmbH · Hammerweg 7 · D-51766 Engelskirchen
Tel.: +49 22 63 / 79 1 · Fax: +49 22 63 / 79 20 5 · www.doerrenberg.de

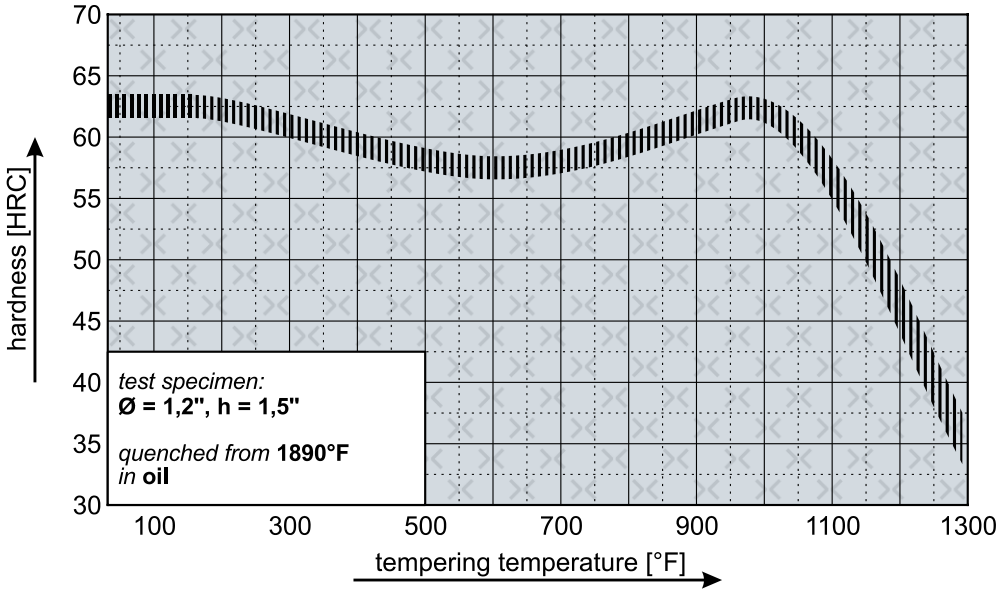
(CP4M®) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.