Doerrenberg

Material No.: 1.2826 Code: 60MnSiCr4 DE - Brand: MS

Chemical composition:
(Typical analysis in %)

C	Si	Mn	Cr				
0,60	1,00	1,10	0,30				

Steel properties:

Cold work tool steel, good toughness, high elasticity in tempered condition. Similar to AISI S4.

Applications:

Clamping chucks, face plates, split chucks, trimming dies, ejectors, die plates, cold bending tools.

Condition of delivery:

Soft annealed to max. 220 HB

Physical properties:

Thermal expansion coefficient	$\left[\frac{10^{-6}\cdot m}{m \cdot K}\right]$	20-100°C	20-200°C	20-300°C	20-400°C
		12,1	12,8	13,3	13,5

Thermal conductivity	$\left[\frac{W}{m \cdot K}\right]$	20°C	350°C
		34,1	36,0

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
680 - 720°C	furnace	max. 220 HB

Stress relief annealing

Temperature	Cooling	
600 - 650°C	furnace	

Hardening

Temperature	Cooling	Tempering
820 - 860°C	oil or hot bath 180 - 220°C	see tempering diagram

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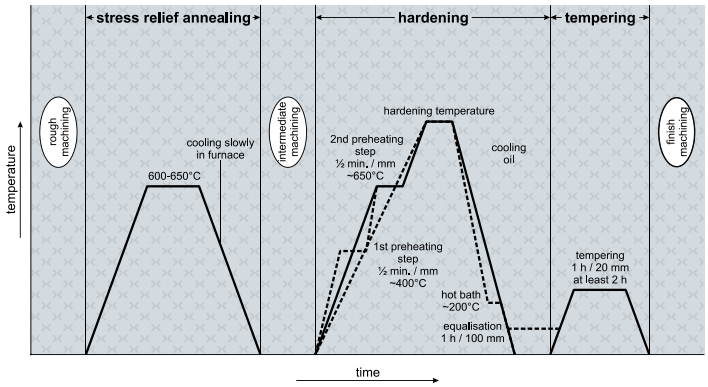
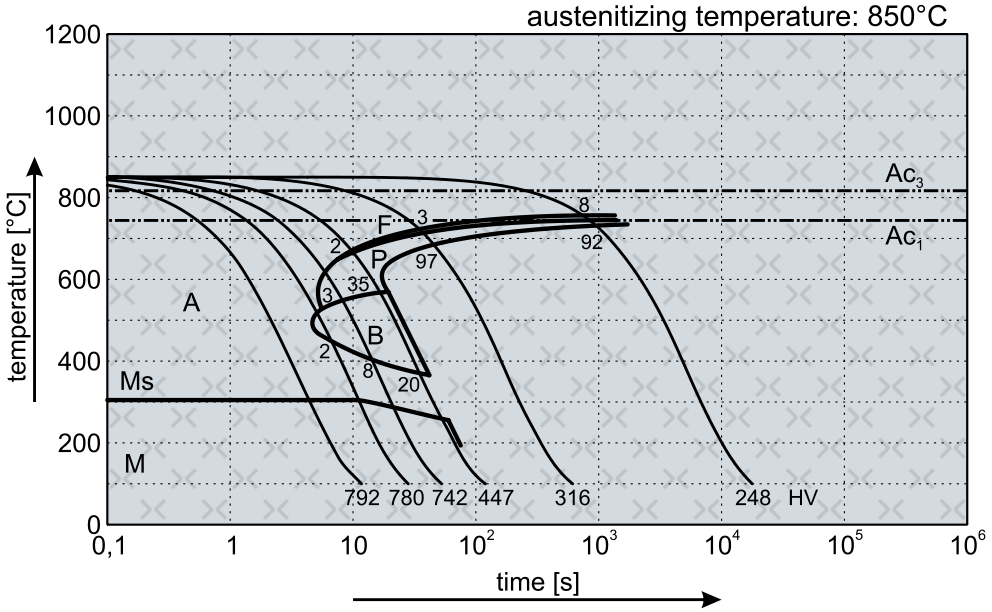
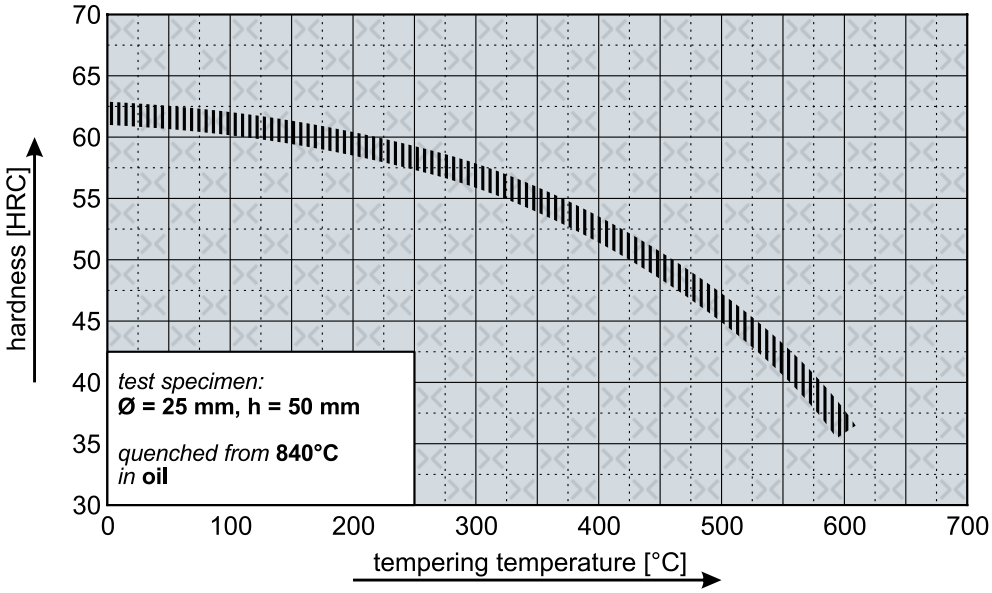
(1.2826) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.