



Material No.: Code:
1.2826 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

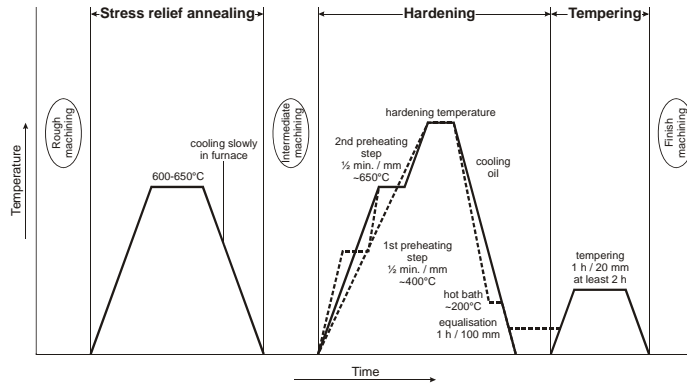
Physical properties:

Thermal expansion coefficient	$\left[\frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$	20-100°C	20-200°C	20-300°C	20-400°C
		12,1	12,8	13,3	13,5
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C	350°C		
		34,1	36,0		

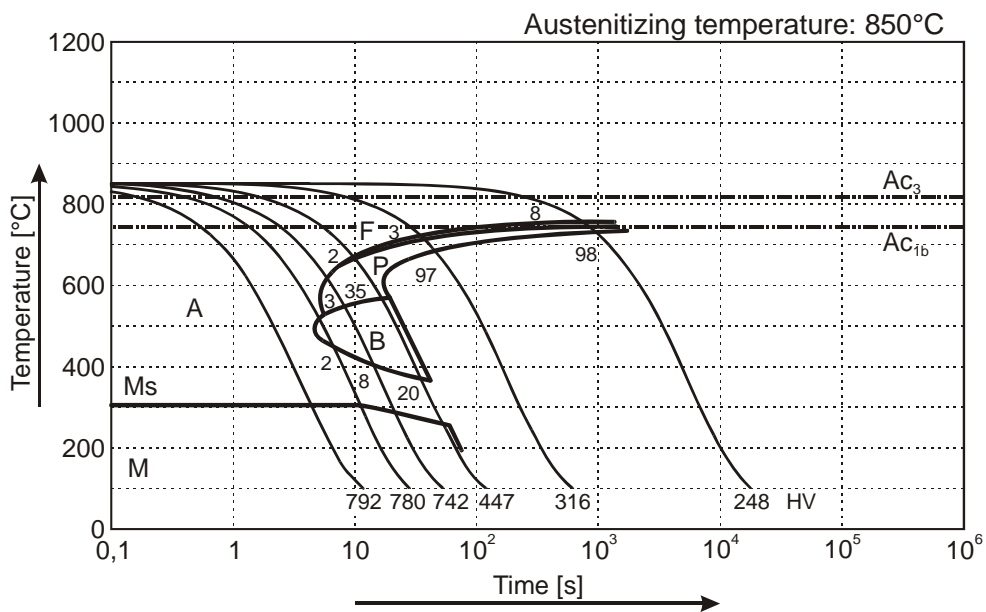
Heat treatment:

Soft annealing	<table border="1"><tr><th>Temperature</th><th>Cooling</th><th>Hardness</th></tr><tr><td>680 - 720°C</td><td>furnace</td><td>max. 220 HB</td></tr></table>	Temperature	Cooling	Hardness	680 - 720°C	furnace	max. 220 HB
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680 - 720°C	furnace	max. 220 HB					
Stress relief annealing	<table border="1"><tr><th>Temperature</th><th>Cooling</th><th></th></tr><tr><td>600 - 650°C</td><td>furnace</td><td></td></tr></table>	Temperature	Cooling		600 - 650°C	furnace	
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Hardening	<table border="1"><tr><th>Temperature</th><th>Cooling</th><th>Tempering</th></tr><tr><td>820 - 860°C</td><td>oil or hot bath 180 - 220°C</td><td>see tempering diagram</td></tr></table>	Temperature	Cooling	Tempering	820 - 860°C	oil or hot bath 180 - 220°C	see tempering diagram
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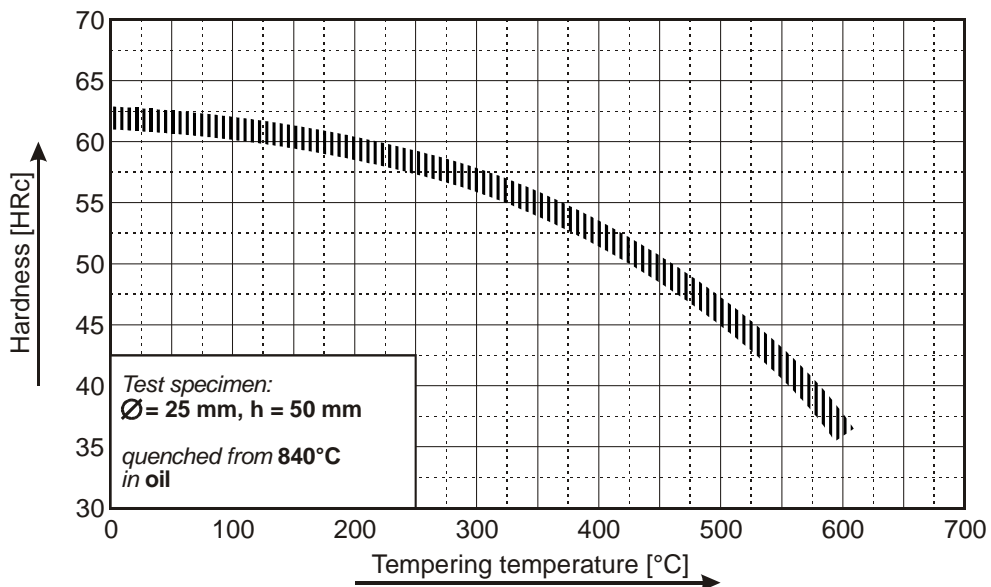
(1.2826) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.