

Special Steel

DE - Brand:

2738^{PREMIUM}**Chemical composition:**
(Typical analysis in %)

C	Mn	Cr	Ni	Mo			
0,26	1,50	1,35	1,00	0,50			

Steel properties:

Quenched and tempered plastic mould steel with higher strength. Due to the optimised chemical composition also large dimensions through hardenable (>400mm). Good texturing properties and polishability. Very good weldable. High thermal conductivity.

Applications:

Medium and large plastic moulds with high requirements.

Condition of delivery:

Quenched and tempered, 310 - 355 HB
(1050 - 1200 MPa according to DIN EN ISO 18265
Table A.1)

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
		11,8	12,5	13,1	13,3
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C	200°C	300°C	
		37,2	39,0	38,5	

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
710 - 740°C	furnace	max. 235 HB

Stress relief annealing

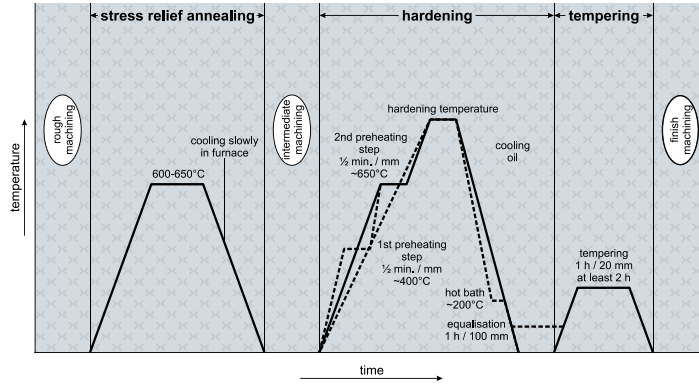
The recommendation 500 - 530°C is valid for quenched and tempered condition. In the soft annealed condition stress relieving between 600 - 650°C is possible.

Temperature	Cooling	
500 - 530°C	furnace	

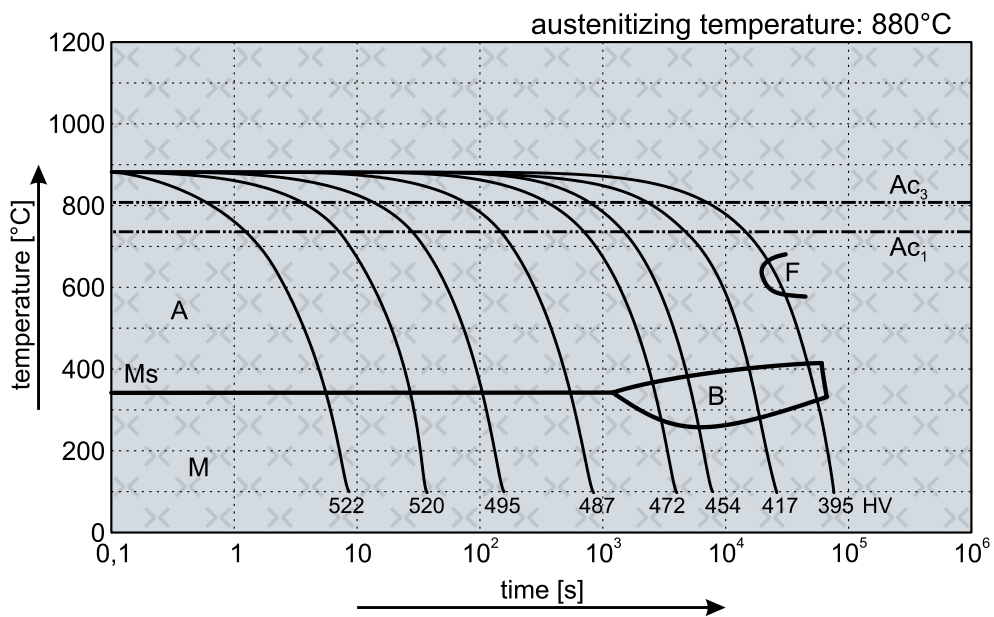
Hardening

Temperature	Cooling	Tempering
870 - 920°C	oil or hot bath 180 - 220°C	see tempering diagram

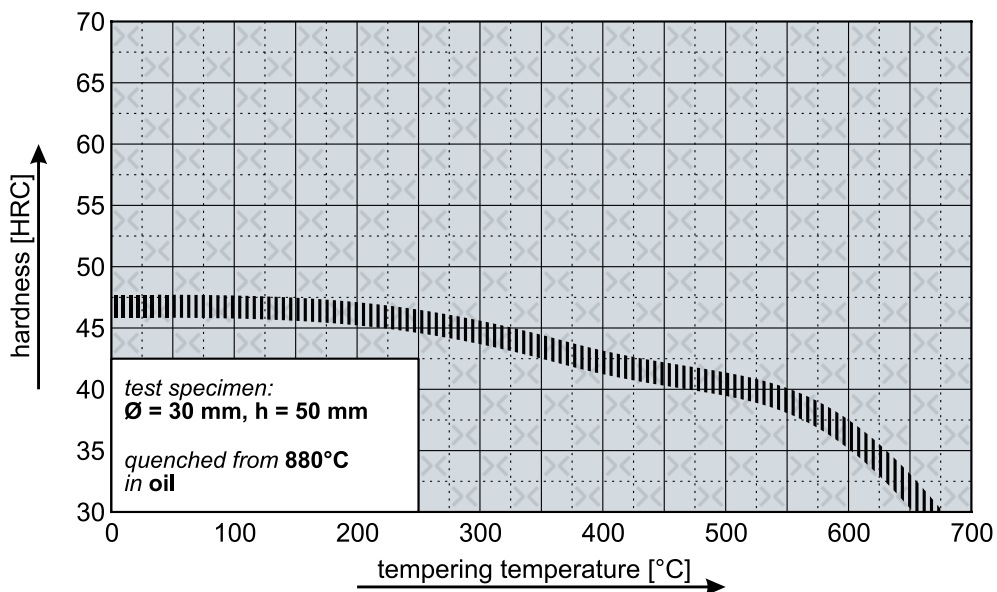
(2738^{PREMIUM}) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.