

Partners in Tool Steel Solutions

Material No.: Code:

1.2358 60CrMoV18-5

DE - Brand:

AMO

Chemical composition:
(Typical analysis in %)

C	Cr	Mo	V				
0,60	4,50	0,50	0,20				

Steel properties:

Medium alloyed cold work steel that is usually supplied hardened and tempered, high hardening capacity, through hardenability and toughness, good weldability, excellent surface hardenability.

Applications:

Cutting inserts for segmented tool, punching tools, shear knives, plastic moulds, cutting tools.

Condition of delivery:

- a) Quenched and tempered, 950 - 1100 MPa
- b) Soft annealed to max. 240 HB

Physical properties:

Thermal expansion coefficient	$\left[\frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$	68-212°F	68-392°F	68-572°F	68-752°F
		11,5	11,8	12,4	12,8
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	68°F	662°F	1292°F	
		19,4	24,6	26,3	

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
1510 - 1580°F	furnace	max. 240 HB

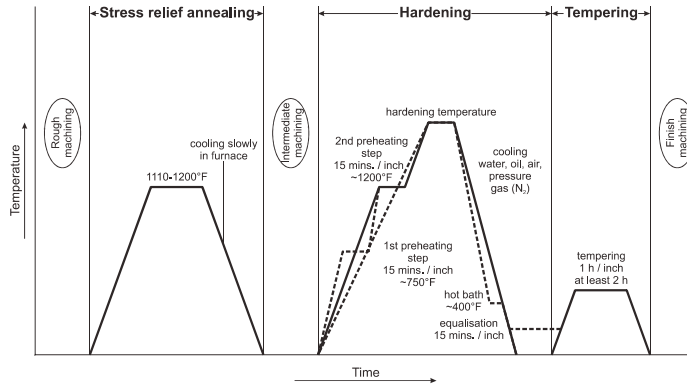
Stress relief annealing

Temperature	Cooling	
1110 - 1200°F	furnace	

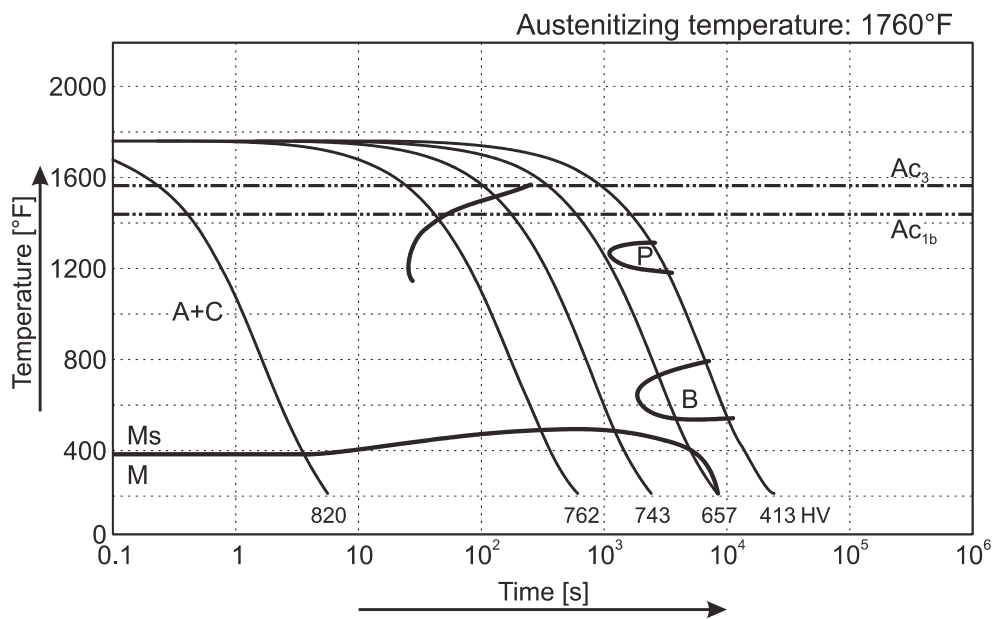
Hardening

Temperature	Cooling	Tempering
1740 - 1795°F	oil, pressure gas (N ₂), air or hot bath 930 - 1020°F	see tempering diagram

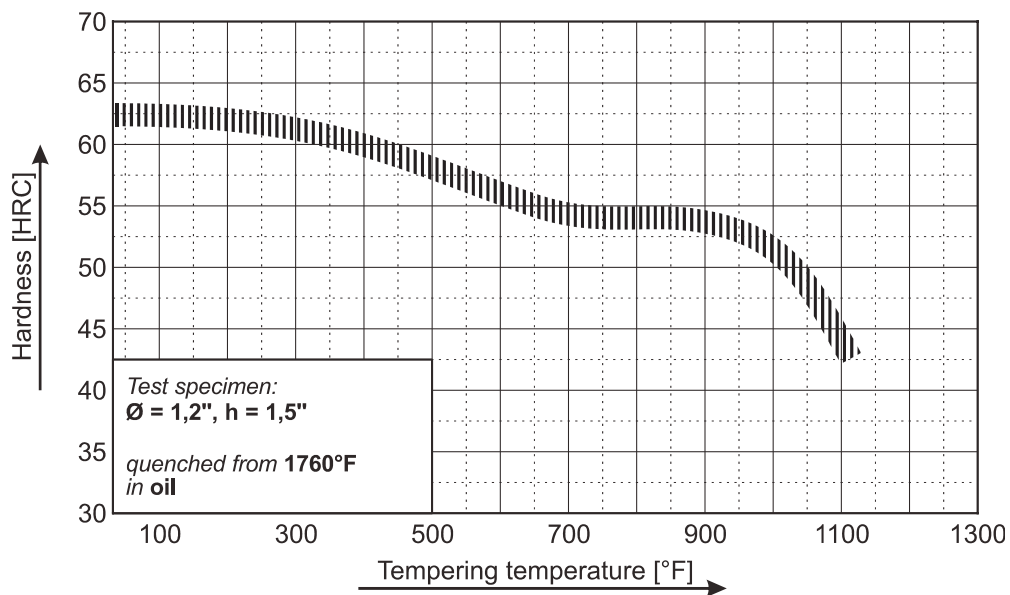
(1.2358) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.