

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) Soft annealed to max. 240 HB
- b) Quenched and tempered, 280 - 325 HB  
(950 - 1100 N/mm<sup>2</sup> 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
	11,5	11,8	12,4	12,8

Thermal conductivity

$\left[ \frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C	350°C	700°C
	19,4	24,6	26,3

### Heat treatment

Soft annealing

Temperature	Cooling	Hardness
820 - 860°C	furnace	max. 240 HB

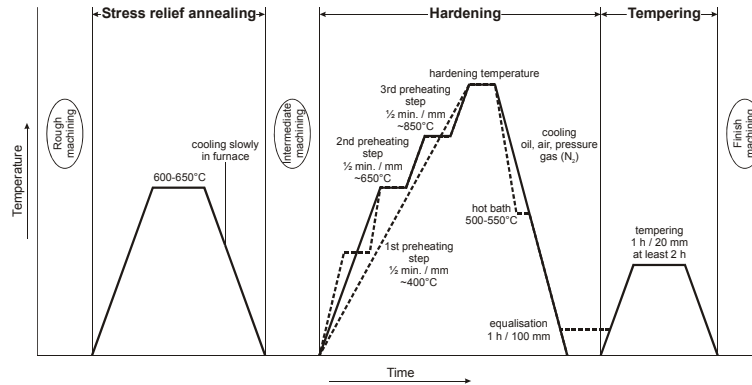
Stress relief annealing

Temperature	Cooling	
600 - 650°C	furnace	

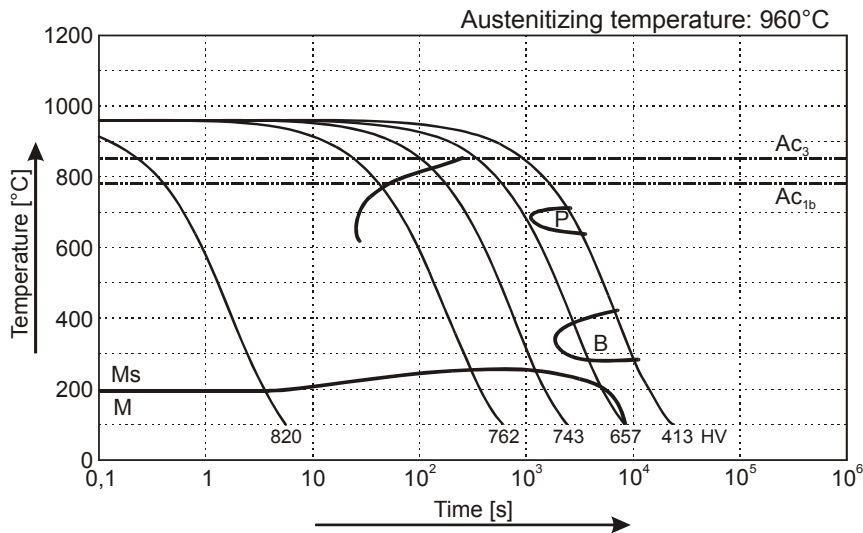
Hardening

Temperature	Cooling	Tempering
950 - 980°C	oil, pressure gas (N <sub>2</sub> ), air or hot bath 500 - 550°C	see tempering diagram

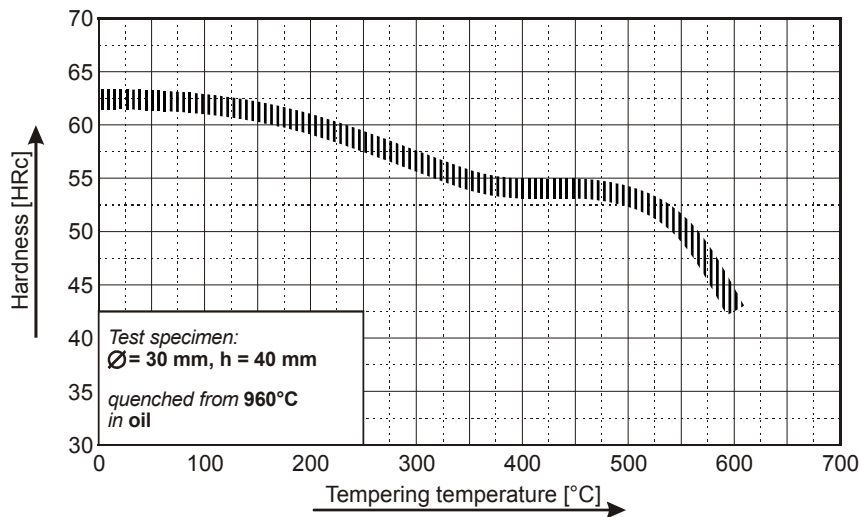
**(1.2358) Thermal Cycle Diagram**



**Continuous Cooling Transformation Diagram (CCT)**



**Tempering Diagram**



Remarks: All technical information is for reference only.