

Material No.: Code:  
**1.2343 X37CrMoV5-1**

DE - Brand:  
**WP5**

**Chemical composition:**  
 (Typical analysis in %)

C	Si	Cr	Mo	V			
0,37	1,00	5,30	1,30	0,40			

**Steel properties:**

Hot work steel with excellent toughness combined with high thermal stability, high resistance to thermal shocks, good thermal conductivity, limited water cooling possible. For toughest applications also available in EFS and ESR.

**Applications:**

Die casting tools, forging dies, extrusion tools, cylinders and screws for plastic processing, hot shear knives, hydro forming tools.

**Condition of delivery:**

Soft annealed to max. 229 HB

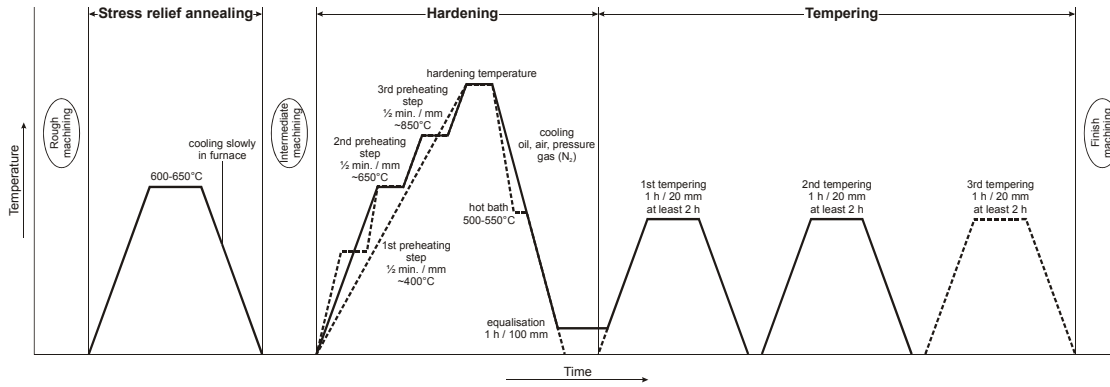
**Physical properties:**

Thermal expansion coefficient	$\left[ \frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$	20-100°C	20-300°C	20-500°C	20-700°C
		11,4	12,4	13,1	13,3
Thermal conductivity	$\left[ \frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C	350°C	700°C	
		25,3	27,6	30,5	

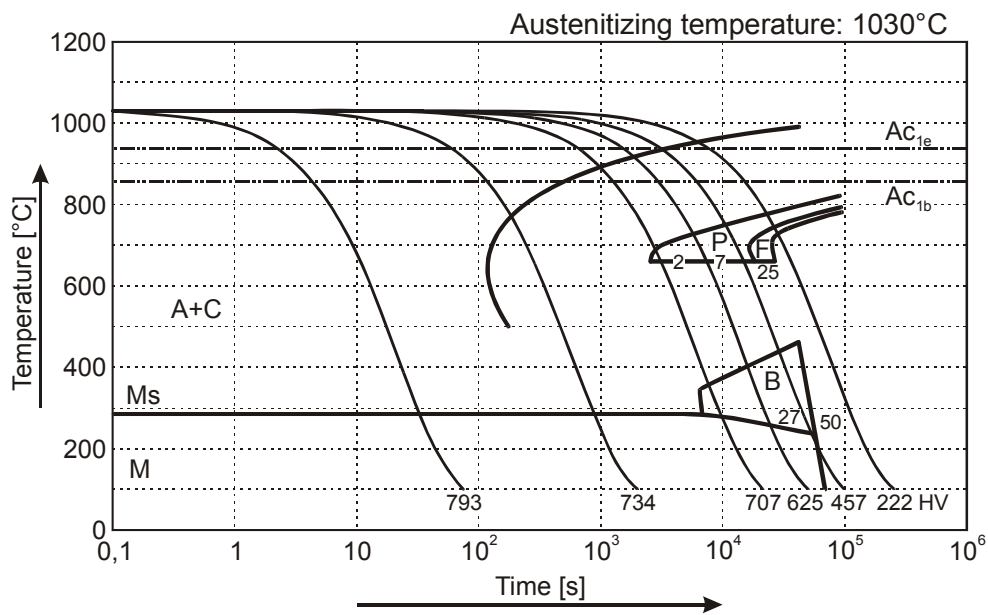
**Heat treatment:**

Soft annealing	<b>Temperature</b>	<b>Cooling</b>	<b>Hardness</b>
	750 - 790°C	furnace	max. 229 HB
Stress relief annealing	<b>Temperature</b>	<b>Cooling</b>	
	600 - 650°C	furnace	
Hardening	<b>Temperature</b>	<b>Cooling</b>	<b>Tempering</b>
	1000 - 1050°C	oil, pressure gas (N <sub>2</sub> ), air or hot bath 500 - 550°C	see tempering diagram

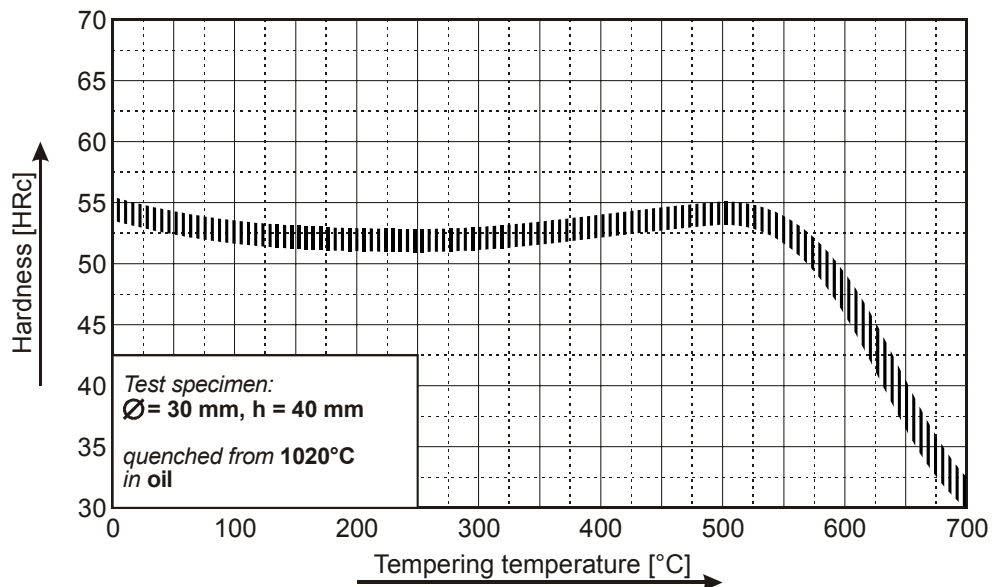
# (1.2343) Thermal Cycle Diagram



## Continuous Cooling Transformation Diagram (CCT)



## Tempering Diagram



Remarks: All technical information is for reference only.