

Material No.: Code:

DE - Brand:

1.2344 X40CrMoV5-1

WP5V

Chemical composition:
(Typical analysis in %)

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

Steel properties:

High strength at elevated temperatures, high hot wear resistance, good toughness, thermal conductivity and resistant to hot cracking, limited water cooling possible. Similar to AISI H13.

Applications:

Standard material for hot forming tools, extrusion tools, forging dies, pressure casting tools, hot shear knives, tools for plastic industry. Also available in EFS and ESR condition where better properties are required.

Condition of delivery:

Soft annealed to max. 229 HB

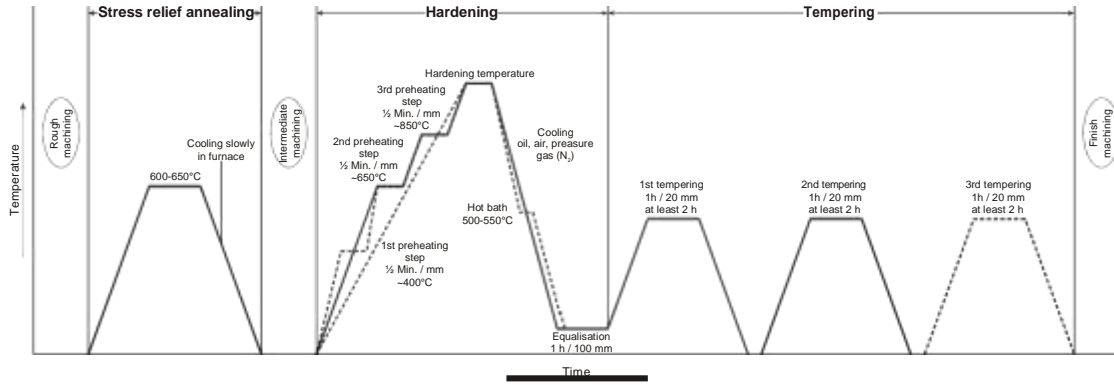
Physical properties:

Thermal expansion coefficient	10 ⁻⁶ m	20-100°C	20-300°C	20-500°C	20-700°C
	m K	10,8	12,3	13,0	13,5
Thermal conductivity	W	20°C	350°C	700°C	
	m K	25,6	28,4	29,4	

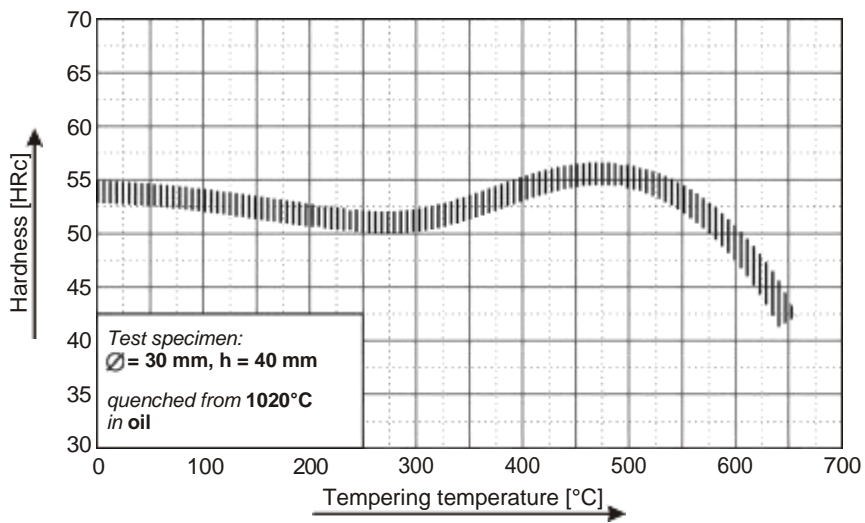
Heat treatment:

Soft annealing	Temperature	Cooling	Hardness
	750 - 800°C	furnace	max. 229 HB
Stress relief annealing	Temperature	Cooling	
	600 - 650°C	furnace	
Hardening	Temperature	Cooling	Tempering
	1020 - 1060°C	oil, pressure gas (N ₂), air or hot bath 500 - 550°C	see tempering diagram

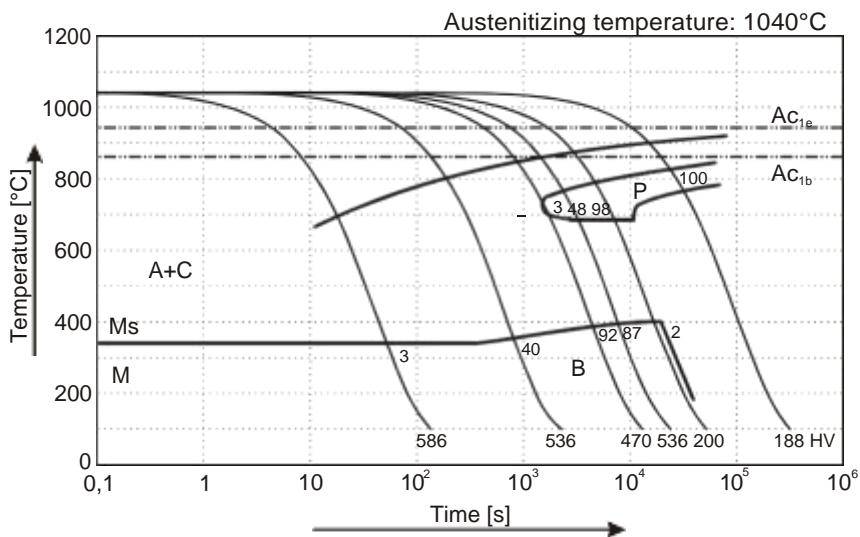
(1.2344) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.