

Quality 40CrMnMo7
 According to standards Werkstoff
 Number 1.2311



Chemical composition

C% max	Si%	Mn%	P% max	S% max	Cr% max
0.35-0.45	0.20-0.40	1.30-1.60	0.035	0.035	1.80-2.10
Temperature $\ominus^{\circ}\text{C}$					
Mo% max		Ni% max	V% max		
0.15-0.25		-	-		

Hot-forming	Quenching	Tempering	Stress-relieving	Soft annealing
1050-850	840-870 (Oil or polymer)	650-670 (Calm air)	50° Under the temperature of tempering	720-780 furnace cooling (HB max 230)
	860-880 (calm air)	180-220 (Calm air)		s.b. = salt bath

Mechanical properties

Thermal Expansion	$10^{-6} \cdot \text{K}^{-1}$		11.1	12.1	13.4	14.2
Modulus of elasticity long.	GP a	210			196	177
Modulus of elasticity tang.	GP a	81			75	68
Specific heat capacity	J/(kg.K)	460				
Thermal conductivity	W/(m.K)	34			33.4	33
Density	kg/dm ³	7.83				
Specific electric resistivity	ohm.mm ² /m	0.19				
Electrical conductivity	Siemens.m/m ²	5.26				
$\ominus^{\circ}\text{C}$		20	100	200	250	500