


Quality	90MnCrV8	
According to standards	EN ISO 4957 : 2002	
Number	1.2842	

Chemical composition

C%	Si%	Mn%	P%	S%	Cr%
max			max	max	max
0.85-0.95	0.10-0.40	1.80-2.20	0.03	0.03	0.20-0.50
	Mo%	Ni%	V%		
	max	max	max		
	-	-	0.05-0.20		

Temperature °C

Hot-forming	Quenching	Tempering	Stress-relieving	Soft annealing
1050-850	790-820 oil, polymer or salt bath	+T (180-220 calm air)	after machining & before quenching 650 furnace cooling to 320, then air	700 calm air
	200-250 °C	minimum 2 cycles		(HB max 229)

Mechanical properties

Tempering table after quenching at 790°C in oil						
HB	739	722	706	668	654	595
HRC	65	64	63	62	60	57
R N/mm2						2240
Tempering at °C	50	100	150	200	250	300
Thermal Expansion	10 ⁻⁶ . K ⁻¹		11.5	12	12.2	12.5
Modulus of elasticity long.	GP a	210				
Modulus of elasticity tang.	GP a	80				
Specific heat capacity	J/(kg.K)	460				
Thermal conductivity	W/(m.K)	30				
Density	kg/dm3	7.85				
Specific electric resistivity	ohm.mm2/m	0.35				
Electrical conductivity	Siemens.m/m2	2.85				
°C		20	100	200	300	400