

Quality
According to standards
Number

90MnCrV8
EN ISO 4957 : 2002
1.2842



Chemical composition

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

Temperature $\ominus^{\circ}\text{C}$

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 $^{\circ}\text{C}$	minimum 2 cycles		(HB max 229)

Mechanical properties

Tempering table after quenching at 790 $^{\circ}\text{C}$ in oil

HB	739	722	706	668	654	595
HRC	65	64	63	62	60	57
R N/mm²						2240
Tempering at $^{\circ}\text{C}$	50	100	150	200	250	300
Thermal Expansion	$10^{-6} \cdot \text{K}^{-1}$		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/dm ³		7.85			
Specific electric resistivity	ohm.mm ² /m		0.35			
Electrical conductivity	Siemens.m/mm ²		2.85			
$^{\circ}\text{C}$		20	100	200	300	400