

Quality 50CrMo4  
According to standards EN 10083-3: 2006  
Number 1.7228



Equivalent	Italy UNI	China GB	Germany DIN	UK	USA AISI/SAE
	50CrMo4	ZG50CrMo	50CrMo4		4150

**Chemical composition**

C% max	Si%	Mn%	P% max	S% max	Cr% max	Mo%
0.46-0.54	0.4	0.50-0.80	0.025	0.035	0.90-1.20	0.15-0.30

**Temperature °C**

Hot-forming	Quenching	Tempering	Stress Relieving	Soft Annealing
1100-850	840-860	540-680	50°C under the temperature of tempering	720 air
	oil or polymer or water	air		HB max 248

**Mechanical properties**

**Hot Rolled (+QT) EN 10083-3: 2006**

size d/t	Testing at room temperature (longitudinal)					
mm	R (N/mm2 min)	Rp 0.2 N/mm2	A% min	C%	Kv	HB
16/8	1100-1300	900	9	40		331-380
16/8 to 40/20	1000-1200	780	10	45	30	298-359
40/20 to 100/60	900-1100	700	12	50	30	271-331
100/6 to 160/100	850-1000	650	13	50	30	253-298
160/100 to 250/160	800-950	500	13	50	30	240-286

**Table of tempering values obtained at room temperature on rounds after quenching at 850°C in oil**

HB	448	421	390	353	327	294
HRC	47.5	45	42	38	35	31
R N/mm2	1620	1490	1350	1185	1070	960
Rp 0.2 N/mm2	1370	1270	1165	1060	930	840
A%	7	10	12	13	13.5	15.5
Kv J		30	40	49	57	60
Tempering at °C	26	28	28	38	94	146
	400	450	500	550	600	650