DIN - Material - No.	1.2714
Code	56NiCrMoV7
Comparable standards	EU: 55CrMo8

Chemical composition (Typical analysis %)

C	Si	Mn	Cr	Mo	Ni	V
0.55	0.25	0.75	1.10	0.45	1.65	0.10

Steel properties

Good hardenability. Uniform hardness over sections also at big dimensions. Resistance under impact loadings. Good strength and toughness Good tempering resistance and dimensional stability. Tools can be water or air cooled.

Physical properties

Thermal conductivity W/(m.K)

20	500	600°C
36	37	36

Density g/cm^3

20°C
7.84

Coefficient of linear thermal expansion

10^{-6} °C^{-1}

20-100	20-200	20-300	20-400	20-500	20-600	20-700°C
10.7	11.9	12.2	12.5	12.7	13.1	13.5

Applications

Forging tools, press and extrusion dies, tools for hot pressing and forging of steels and other metals. Moulds, mandrels, embossing tools, tool holders.

Stress Relieving

Holding at approx 650°C for one hour.

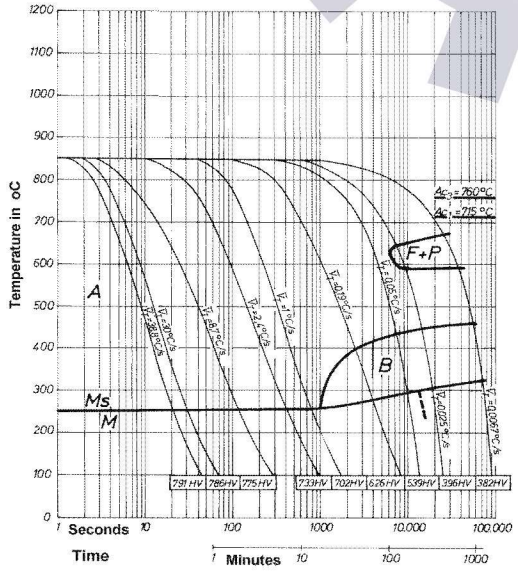
Heat treatment

Soft annealing °C	Cooling	Hardness HB
650 - 700	furnace	max. 248

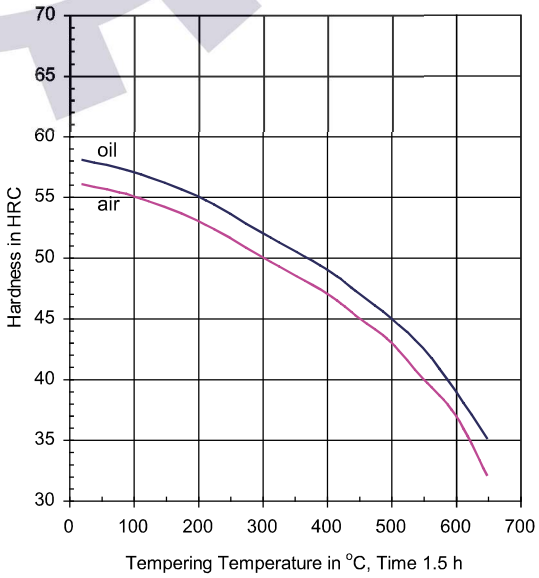
Hardening from °C	in	Hardness after quenching
830 - 870	oil,	58 HRC (2200 N/mm^2)
870 - 900	air	56 HRC (2050 N/mm^2)

Tempering after hardening	°C	100	200	300	400	450	500	550	600	650
	HRC	57	55	52	49	47	45	42.5	39	35
in oil	N/mm^2	2140	1980	1790	1620	1530	1440	1345	1230	1110
	HRC	55	53	50	47	45	43	40	37	32
in air	N/mm^2	1980	1845	1680	1530	1440	1360	1260	1170	1020

Time - Temperature - Transformation - Diagram



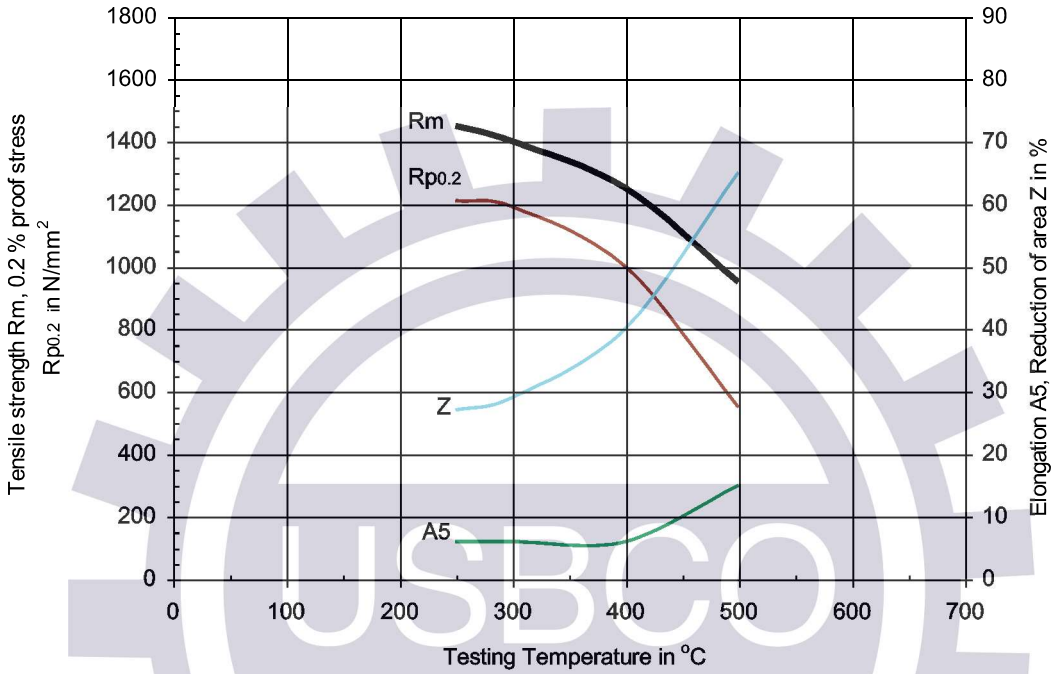
Tempering Diagram



DIN - Material - No. 1.2714
Code 56NiCrMoV7
Comparable standards EU: 55CrMo8

Mechanical properties at elevated temperature

hardened and tempered on 1470 N/mm^2



hardened and tempered on 1130 N/mm^2