DIN - Material - No.	1.2842
Code	90MnCrV8
Comparable standards	AISI: O2, EU: 90MnV8

Chemical composition (Typical analysis %)

C	Si	Mn	Cr	V
0.90	0.25	2.00	0.35	0.10

Steel properties

High dimensional stability at heat treatment. Very high resistance to cracking. High machinability, wear resistant and toughness. Good cutting edge retention.

Physical properties

Thermal conductivity W/(m.K) at 20°C: 30

Density g/cm³ at 20°C: 7.85

Coefficient of linear thermal expansion $10^{-6}\ °C^{-1}$

20-100	20-200	20-300	20-400	20-500	20-600	20-700°C
12.1	13.3	13.8	14.3	14.1	14.2	14.6

Applications

Measuring tools, machine knives for the wood, paper and metal industry, cold cutting shear blades, thread cutting tools.

Stress Relieving

Holding at approx 650°C for one hour.

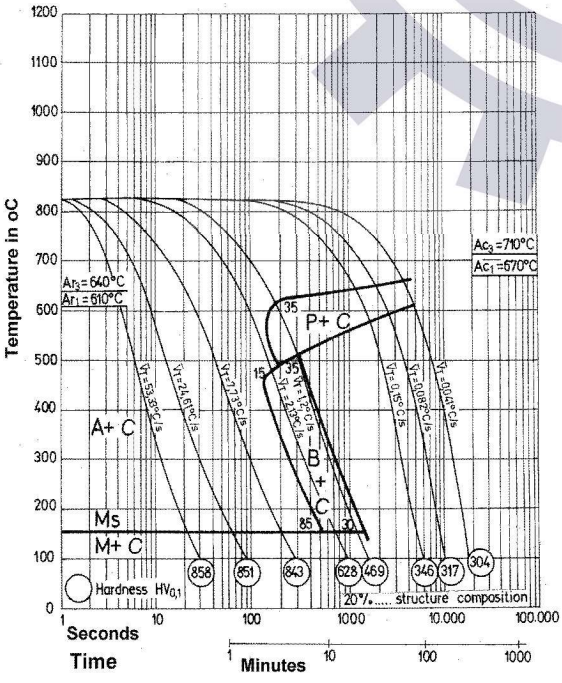
Heat treatment

Soft annealing °C	Cooling	Hardness HB
690 - 720	furnace	max. 229

Hardening from °C	in	Hardness after quenching HRC
790 - 820	oil, thermal bath 180 - 220°C	63 - 65

Tempering	°C	100	200	300	400	500	600
	HRC	63	60	56	50	42	38

Time - Temperature - Transformation - Diagram



Tempering Diagram