

DIN - Material - No.	1.2510
Code	100MnCrW4
Comparable standards	AISI: 01, EU: 95MnWCr5
Chemical composition	C Si Mn Cr V W
(Typical analysis %)	0.95 0.25 1.10 0.60 0.10 0.60

Steel properties	Very high resistance to cracking. High machinability, medium toughness and resistance to wear. Dimensional stability during heat treatment. Good cutting edge retention.
-------------------------	--

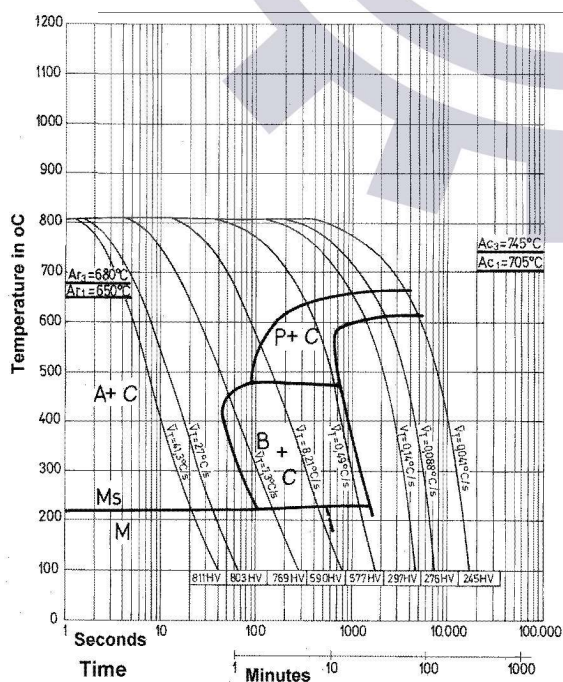
Physical properties	Thermal conductivity W/(m.K)	$\frac{20^{\circ}\text{C}}{30}$						
	Density g/cm ³	$\frac{20^{\circ}\text{C}}{7.85}$						
	Coefficient of linear thermal expansion							
	$10^{-6} \text{ }^{\circ}\text{C}^{-1}$	20-100	20-200	20-300	20-400	20-500	20-600	20-700°C
		12.1	12.9	13.3	14.0	14.4	14.8	14.9

Applications	Blanking and Stamping dies for cutting sheets upto 6mm thick, guages, plastic moulds, shear blades.
---------------------	---

Stress Relieving	Holding at approx 650°C for one hour.
-------------------------	---------------------------------------

Heat treatment	Soft annealing °C	Cooling	Hardness HB
	740 - 770	furnace	max. 230
	Hardening from °C	in	Hardness after quenching HRC
	780 - 820	oil, thermal bath 180 - 220°C	64
	Tempering	°C	100 200 300 400 500 600 650
		HRC	64 61 56 51 44 37 34

Time - Temperature - Transformation - Diagram



Tempering Diagram

