

DIN - Material - No.

1.2550

Code

60WCrV7

Comparable standards

AISI: S1

Chemical composition

(Typical analysis %)

C	Si	Cr	Mo	V	W
0.60	0.85	0.30	1.05	0.15	2.0

Steel properties

Shock resisting tool steel with very good toughness in combination with high hardenability. Impact-resistant, tungsten-alloyed cold-work tool.

Physical properties

Thermal conductivity W/(m.K) $\frac{20^{\circ}\text{C}}{25}$

Density g/cm³ $\frac{20^{\circ}\text{C}}{7.93}$

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	20-800 ^o C
	11.0	12.5	13.0	13.5	14.9	14.7	14.9	12.7

Applications

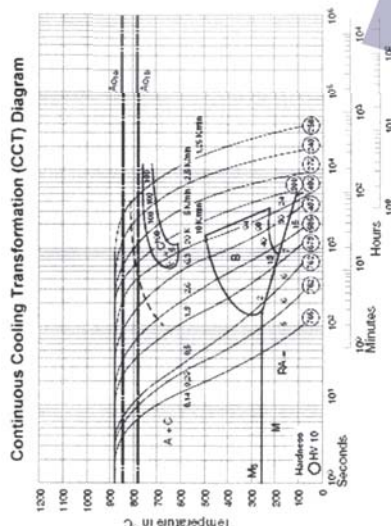
For cutting tools (dies, punches) for plate, woodworking tools, blanking dies for cutting sheet metals up to 12 mm thickness, trimming and splitting dies, shear blades, chipping knives, pneumatic chisels, coining tools, cold shear blades, ejectors.

Stress Relieving

Holding at approx 650^oC for one - two hour.

Heat treatment

Soft annealing°C		Cooling		Hardness HB			
710 - 750		Furnace		225			
Heat up	Preheating 1. step	Preheating 2. step	Hardening from		Tempering	As tempered hardness HRC	
°C	°C	°C	°C	in	°C		
			860 - 900	oil or hot bath at 180-220°C	1h 600 - 650 slowly	60 - 64	
Tempering	°C	100	200	300	400	500	600
	HRC	60	58	56	52	48	43

Time - Temperature - Transformation - Diagram

Tempering Diagram
