AISI P20 | P20 | DIN 2311

40CrMnMo7

C 0.38 **Mn** 1.40 **Cr** 1.85 **Mo** 0.20

Steel properties

P 20 is the Pre Hardened Plastic mould steel hardness distributed evenly in large cross sections that have excellent weldability with least hardness elevation, good mirror polishability and less streak texture making finishing easier. Size Section availability upto 255mm thickness. Supply hardness is 240-280 BHN.

Standards

AISI P20

Physical properties

Coefficient of thermal expansion

at °C	20 – 100	20 – 150	20 – 200	20 – 250	20 – 300	20 – 350	20 – 400	20 – 450	20 – 500
10^{-6} m/(m • K)	12.7	12.8	13.1	13.3	13.6	13.7	13.8	14.0	14.3

Quenched and tempered

Thermal conductivity

at °C	23	150	300	350	400	500
W/(m • K)	32.0	32.8	31.4	30.2	29.6	27.5

Quenched and tempered

Applications

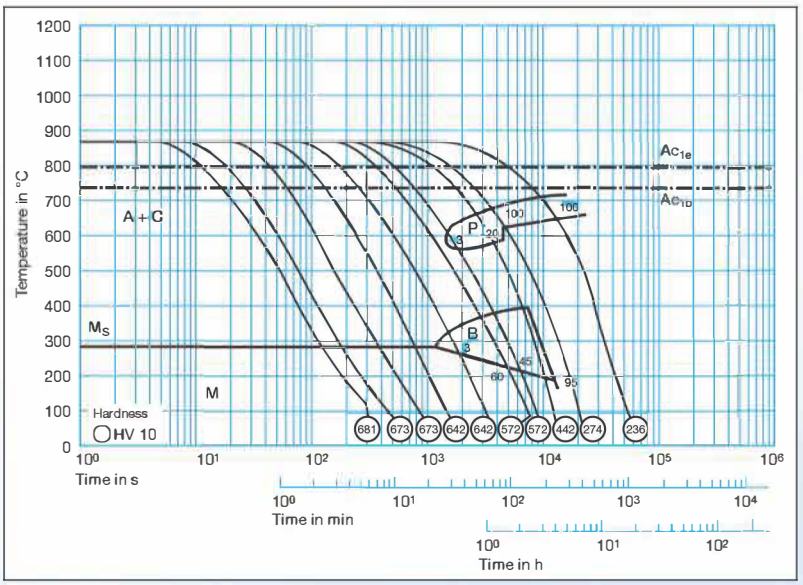
Plastic mould steel equivalent to DIN 2311 use for die holders, zinc die, casting dies, backers, bolsters, injection moulds, mould frames for plastic moulds, Shoe Blocks, pressure casting moulds, recipient sleeves Etc.

Heat treatment

Soft annealing °C	Cooling	Hardness HB
710 – 740	Furnace	max. 235
Hardening °C	**Quenching**	**Hardness after quenching HRC**
850 – 880	Oil or saltbath, 180 – 220 °C	52

Tempering °C	100	200	300	400	500	600	700
HRC	52	50.5	48.5	46	42	36.5	28

Time-temperature-transformation diagram



Tempering diagram