HASCO®

Material data sheet

1.2312

Material no.: 1.2312

Abbreviated DIN name: 40 CrMnMoS 8-6

Chemical analysis (%):

C	Mn	S	Cr	Mo	
0,4	1,5	0,07	1,9	0,2	

HASCO colour code: brown
Flat steel: yellow

Hardness when supplied: annealed to max. 280 - 325 HB (~950- 1100 N/mm²)

Characteristics

Material properties:

This material should be used in its supplied condition.
There is consequently no need to harden the finished parts.
Good machinability due to the high sulphur content.

Uses: Cavity plates and frame plates for compression moulds and injection moulding tools . Tool components subjected to high pressures. Other uses in mouldmaking where relatively high strength is specified without subsequent heat treatment. For higher surface requirements, please contact us direct.

Physical properties

Thermal expansion coefficient
$(10^{-6}\cdot m)/(m\cdot K)$

100	200	300	400	500	600	700	°C
12,2	12,9	13,5	13,9	14,2	14,5	14,8	

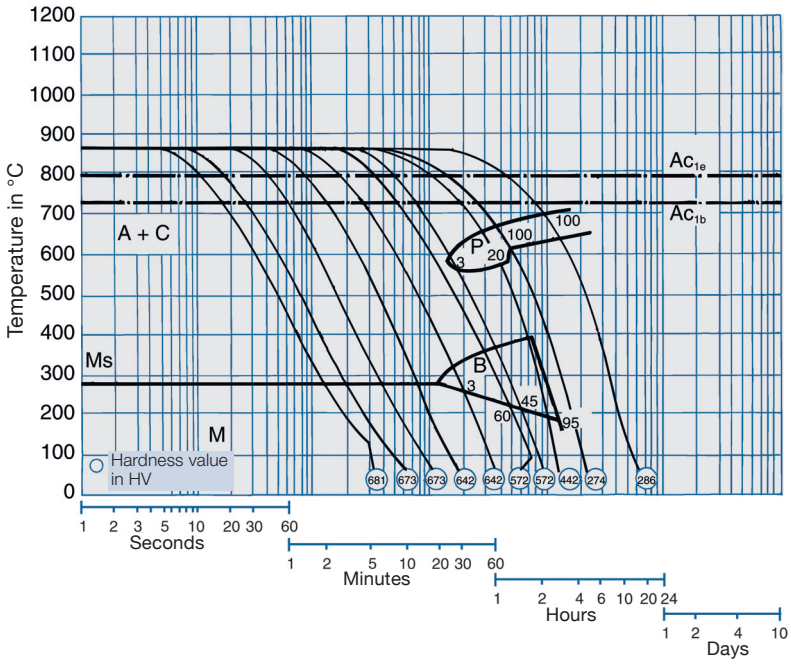
Thermal conductivity
$W/(m\cdot K)$

20	350	700	°C
34,5	33,5	32,0	

Remarks

Polishing:	Not usual because of the high sulphur content.
Graining:	Not usual because of the high sulphur content.
Nitriding:	Possible, improves the wear resistance of the surface.
Hardening:	Not usual because material is used in its supplied condition.
Soft annealing:	Not usual.
Stress-relief annealing:	To eliminate residual stress after coarse machining at max. 480°C, approx. 4 h with slow furnace cooling.

Time-temperature conversion chart



Tempering chart