

1.2344

Material no.: 1.2344

HASCO colour code: red/red/yellow

Abbreviated DIN name: X 40 CrMoV 5-1

Chemical analysis (%):

C	Si	Cr	Mo	V
0,4	1,0	5,3	1,4	1,0

Hardness when supplied: max. 220 HB (~750 - 770 N/mm²)

Characteristics

Material properties:

Cr-Mo-V alloyed hot-work steel with a high heat resistance and a high temperature wear resistance. Suitable for full quenching and tempering, water-coolable and with thermal shock resistance.

Uses:

Cavity plates, slides, cores and ejectors for pressure die casting tools, standard material for hot-work tools.

Physical properties

Thermal expansion coefficient (10⁻⁶·m)/(m·K)

100	200	300	400	500	600	700
10,9	11,9	12,3	12,7	13,0	13,3	13,5

Thermal conductivity W/(m·K)

20	350	700
24,5	26,8	28,8

Remarks

Polishing: Very easily possible.

Graining: Is possible.

Nitriding: Is possible.

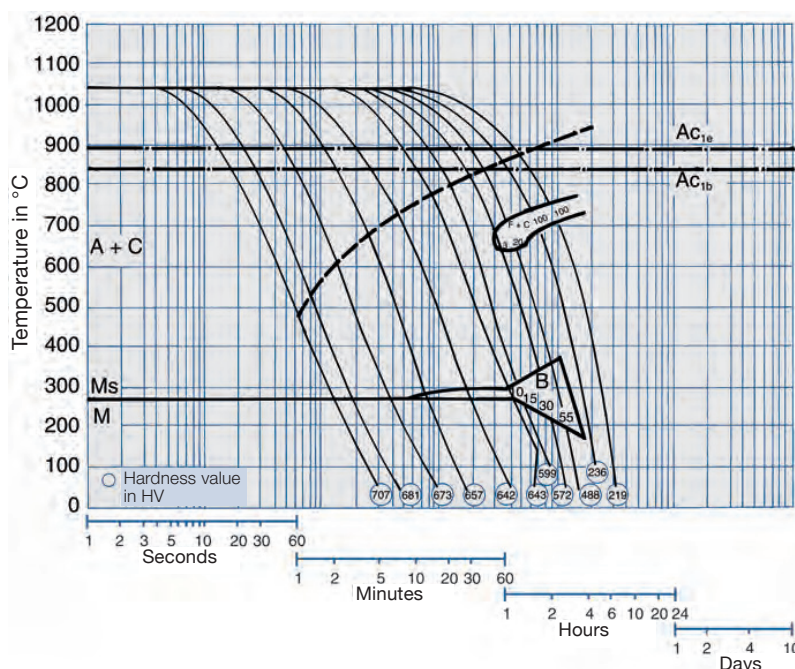
Hardening: At 1020-1040°C
Details can be taken from the time-temperature conversion and tempering charts. The most suitable heat treatment for the relevant work piece should be fixed by the hardening shop. The hardness should be specified by the hardening shop and checked on delivery.

Soft annealing: 820-840°C, 4-6 h

Stress-relief annealing: To eliminate residual stress after coarse machining at 600-650°C, 4 h with slow cooling.

Normal working hardness: approx. 55 HRC

Time-temperature conversion chart



Tempering chart

