

Material: 1.2344



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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: 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	°C
10,9	11,9	12,3	12,7	13,0	13,3	13,5	

Thermal conductivity

W / (m·K)

20	350	700	°C
24,5	26,8	28,8	

Remarks

Polishing: Possible.

Graining: Possible.

Nitriding: Possible.

Hardening: At 1020 - 1040°C

The most suitable heat treatment for the relevant workpiece should be suggested by the heat treatment company.

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

Dimensions Available: W x L : on request

H - : on request