ES Aktuell

Name:
40 CrMnMo 7

Material No.:
1.2311

Typical analysis in %:

C	Mn	Cr	Mo
0.4	1.5	1.9	0.2

As-supplied condition:
Quenched and tempered to a hardness of 280 to 325 HB (950 - 1100 N/mm²)

Characteristics:
Quenched and tempered plastic mould steel, good polishability, nitridable, suitable for chromium plating, uniform hardness throughout the cross section up to a thickness of approx. 400 mm

General fields of application:
Plastic moulds, mould frames for plastic and die casting moulds

Special note:
Can also be supplied in EST grade with improved grain and polishability.

If grained only ES Aktuell in EST grade should be used.

We recommend stress-relief annealing for more than 30% machining before finish machining.
For material cross sections over 400 mm we recommend ES Aktuell 1000 or ES Aktuell 1200 for their better through tempering.

Heat treatment data:

	Temperature	*Duration*	*Cooling*
Stress-relief annealing	max. 480°C	min. 4 h	furnace

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Physical characteristics:

Coefficient of thermal expansion: between 20 °C and:

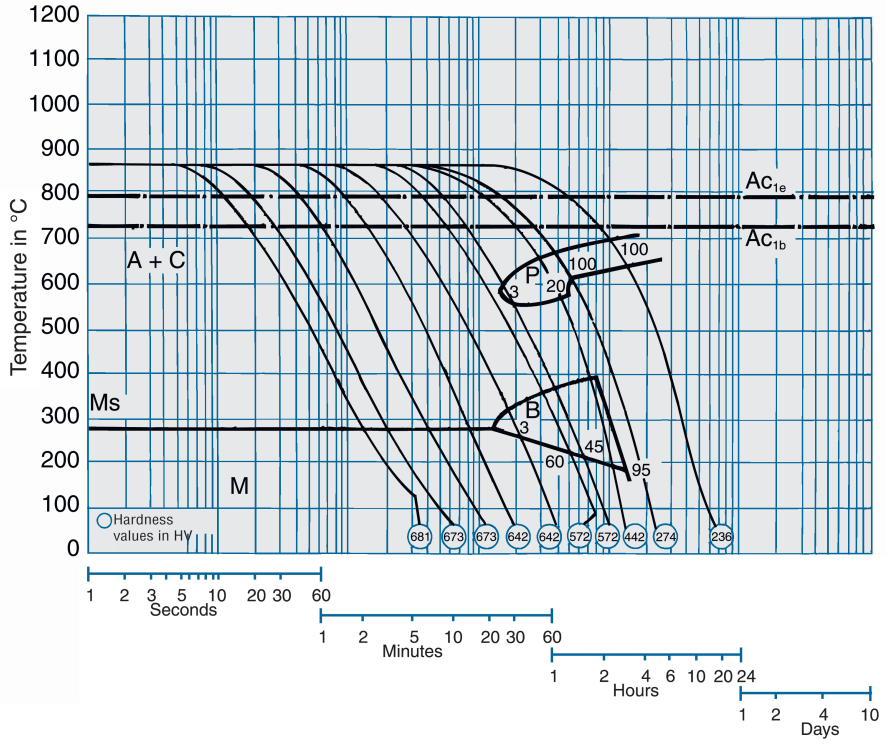
10^{-6} x m	100	200	300	400	500	600	700 °C
m x K	11.1	12.9	13.4	13.8	14.2	14.6	14.9

Thermal conductivity:

W	20	350	700°C
m x K	34.5	33.5	32.0

Normal working hardness: Used in the as-supplied condition

Continuous time-temperature-transformation diagram



Tempering curve