ES 120 K ESR

Name:
X 40 Cr 14

Material No.:
1.2083

Typical analysis in %:

C	Cr
0.4	14.0

As-supplied condition:
Soft-annealed to max. 241 HB (810 N/mm²)

Characteristics:
Corrosion-resistant mould steel, with highest cleanliness and very good polishability, good machinability, low distortion through-hardening steel, high hardenability, high wear resistance.

General fields of application:
Tools for use on corrosive plastics.

Special note:
Best corrosion resistance is obtained in the hardened and low tempered condition with a polished surface.

Heat treatment data:

	Temperature	*Duration*	*Cooling*
Soft annealing	760 - 800 °C	2 - 5 h	furnace
Stress-relief annealing	600 - 650 °C	min. 4 h	furnace
Hardening	1000 - 1050 °C	Group II	oil, air WB 500° C
Tempering	250 - 570 °C see tempering curve	min. 2 h depending on cross section	still air

Physical characteristics:

Coefficient of thermal expansion: between 20 °C and:

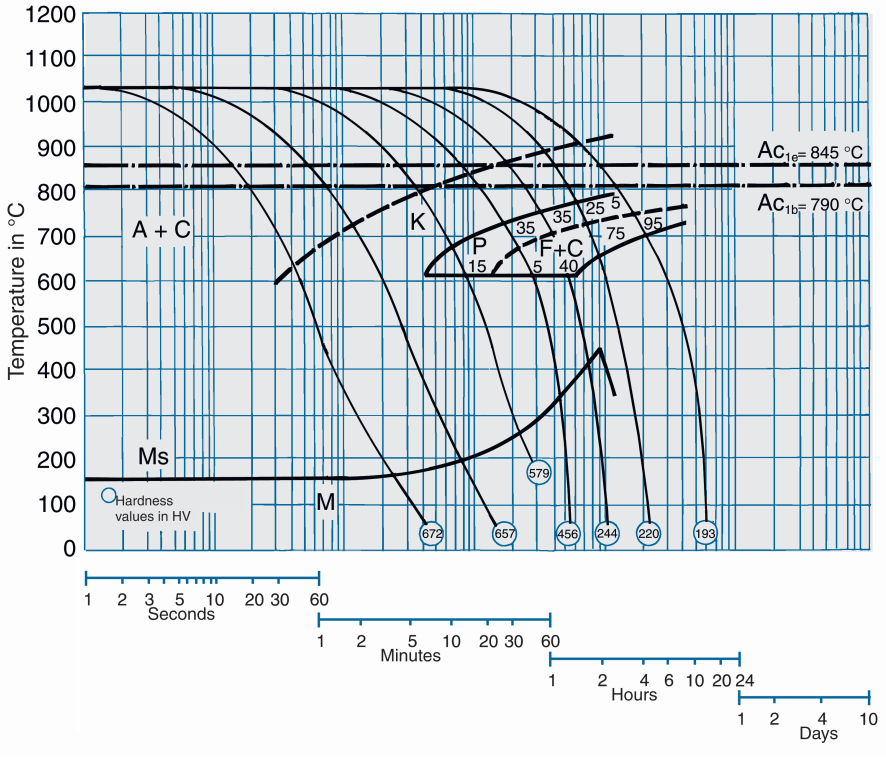
10^{-6} x m	100	200	300	400 °C
m x K	10.5	11.0	11.6	11.9

Thermal conductivity:

W	20	200	300	400 °C
m x K	21.0	22.0	23.8	24.7

Normal working hardness: 50 - 55 HRC

Continuous time-temperature-transformation diagram



Tempering curve