

DIN - Material - No. 1.2083

Code
Comparable standards AISI: 420 MOD, DIN: X40Cr14

Chemical composition

(Typical analysis %)

C	Si	Mn	Cr	Mo	Ni
0.35	0.40	0.25	13.00	0.20	0.20

Steel properties

High Cr content in the steel matrix. Good corrosion resistant. Polishability, machinability, low distorsion, high wear resisatance and high surface finish. Can be produced in ESR and QT Condition.

Physical properties

 Thermal conductivity W/(m.K)

20°C	200°C	300°C
22	24	26

 Density g/cm³

20°C
7.80

Coefficient of linear thermal expansion

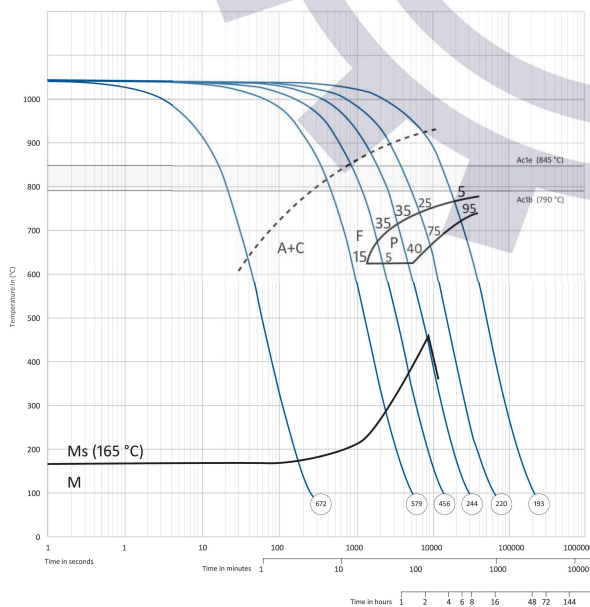
10 ⁻⁶ °C ⁻¹	20-100	20-200	20-300	20-400	20-500	20-600	20-700°C
	10.5	10.9	11.3	11.6	12.0	12.4	12.8

Applications

Moulds for corrosive plastic materials such as PVC, recycled polymers etc., moulds for chemically aggressive plastics and plastics containing abrasive fillers, mould inserts, dies and gauges for PVC extrusions, screws and barrels for extruders, moulds for automotive, food, medical and optical industry such as spectacles, compact discs, lenses.

Heat treatment

Soft annealing °C	Cooling	Hardness HB
760 - 800	furnace	max. 241
Hardening from °C	in	Hardness after quenching HRC
1000 - 1050	oil, air, thermal bath 500 - 550°C	55 - 57

Time - Temperature - Transformation - Diagram

Tempering Diagram
