

Thermodur 2343 EFS / 2343 EFS Superclean

X37CrMoV5-1

C 0.38 Si 1.00 Cr 5.30 Mo 1.30 V 0.40

Steel properties

Outstanding high-temperature strength and toughness. Excellent thermal conductivity and low susceptibility to hot cracking. May be water-cooled to a limited extent.

Standards

AISI H11 AFNOR Z38CDV5

Physical properties

Coefficient of thermal expansion at °C

	20 – 100	20 – 200	20 – 300	20 – 400	20 – 500	20 – 600	20 – 700
10⁻⁶ m/(m • K)	11.8	12.4	12.6	12.7	12.8	12.9	12.9

Thermal conductivity at °C

	20	350	700
W/(m • K) Annealed	29.8	30.0	33.4
W/(m • K) Quenched and tempered	26.8	27.3	30.3

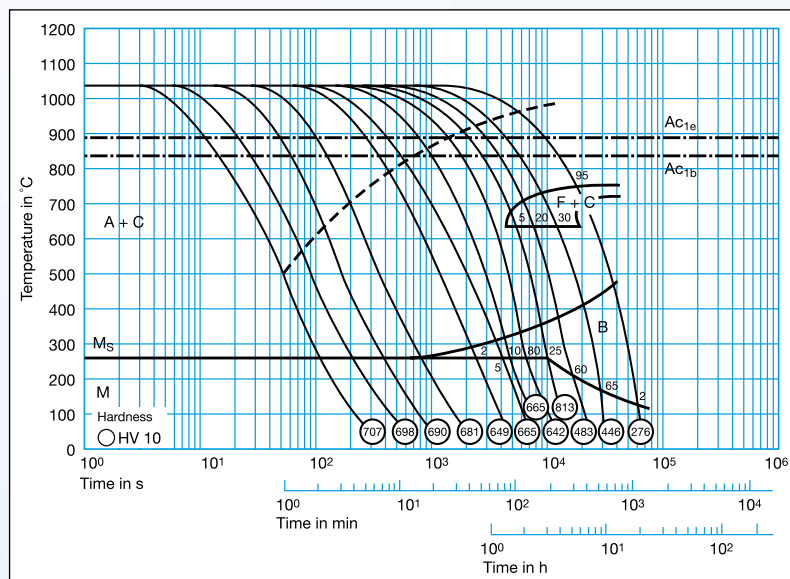
Applications

Hot-work tool steel for universal use. Mandrel bars, pressure casting dies, and extrusion tools. Pressure casting dies and extrusion tools for light metal processing, forging dies, mandrels, shrink rings, hot-shear blades.
For your most challenging requirements, we recommend Thermodur 2343 EFS Superclean (ESR).

Heat treatment

Soft annealing °C 750 – 800	Cooling Furnace	Hardness HB max. 230
Hardening °C 1000 – 1030	Quenching Air, oil or hot bath, 500 – 550 °C	Hardness after quenching HRC 54
Tempering °C HRC	100 200 300 400 500 550 600 650 700	52 52 52 52 54 52 48 38 31

Time-temperature-transformation diagram



Tempering diagram

