

Cryodur 2842

90MnCrV8

C 0.90 Si 0.20 Mn 2.00 Cr 0.40 V 0.10

Steel properties

Good cutting edge retention, dimensionally stable during heat treatment.

Standards

AISI O2 AFNOR 90MV8

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)	12.2	13.2	13.8	14.3	14.7	15.0	15.3

Thermal conductivity

at °C	20	350	700
W/(m · K)	33.0	32.0	31.3

Applications

Tool steel for universal use, cutting and stamping tools for sheet up to 6 mm thickness, thread-cutting tools, reamers, gauges, measuring tools, plastic moulds, shear blades, guide strips and ejector pins.

Heat treatment

Soft annealing °C
680 – 720

Cooling
Furnace

Hardness HB
max. 220

Stress-relief annealing °C
approx. 650

Cooling
Furnace

Hardening °C
790 – 820

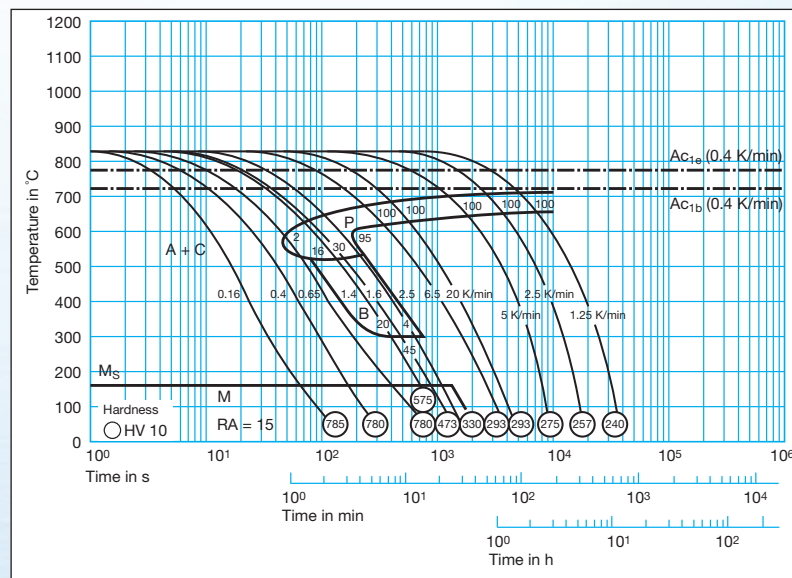
Quenching
Oil or
saltbath, 180 – 220 °C

Hardness after quenching HRC
64

Tempering °C
HRC

100	200	300	400	500	600
63	60	56	50	42	38

Time-temperature-transformation diagram



Tempering diagram

