

Formadur 2891

34CrAlNi7

C 0.35 Si 0.40 Al 1.00 Cr 1.70 Mo 0.20 Ni 1.00

Physical properties

Quenched and tempered QT

Heat treatment diameter in mm Ø	Yield stress in MPa $R_{p0.2}$ min.	Tensile strength in MPa R_m	Elongation at fracture in % A min.	Reduction of area at fracture in % Z min.	Notched impact energy (ISO-V) in J A_v min.
16 – 40	680	900 – 1100	10	–	30
> 40 – 100	650	850 – 1050	12	–	30
> 100 – 160	600	800 – 1000	13	–	35
> 160 – 250	600	800 – 1000	13	–	35

Applications

Aluminium-alloyed nitriding steel for large cross sections, suitable for piston rods, extruders, cylinders.

Hardness at different treatment stages

Soft-annealed HB
max. 248

Nitrided surface hardness HV1
approx. 950

Heat treatment

Soft annealing °C
680 – 720

Hardening °C
Furnace

Quenching
Polymer or oil

Tempering °C
580 – 700

Nitriding °C
480 – 570

Thermal expansion

Tempering °C
Linear coefficient of thermal expansion $\alpha \cdot 10^{-6} K^{-1}$

-191 – +16

20 – 100

20 – 200

20 – 300

20 – 400

20 – 500

9.1

11.1

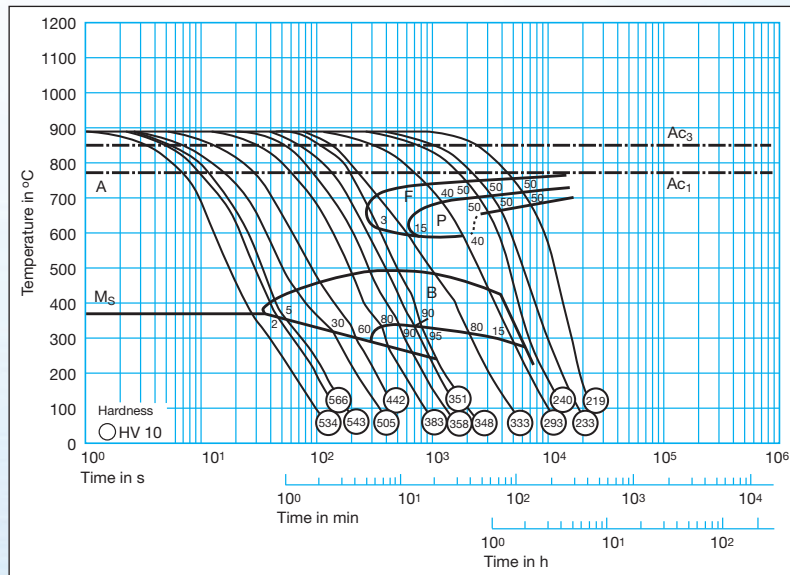
12.1

12.9

13.5

13.9

Time-temperature-transformation diagram



Tempering diagram

