

Formadur 2316 / 2316 Superclean

X38CrMo16

C 0.36 Cr 16.00 Mo 1.20

Steel properties

Increased corrosion resistance in comparison to Formadur 2083, good polishability. Usually this steel grade is supplied in a quenched and tempered condition with a working hardness of approx. 300 HB.

Standards

AISI 420mod

Physical properties

Coefficient of thermal expansion

at °C	20 – 100	20 – 150	20 – 200	20 – 250	20 – 300	20 – 350	20 – 400	20 – 450	20 – 500
$10^{-6} \text{ m/(m} \cdot \text{K)}$	10.5	10.7	10.8	10.9	11.1	11.3	11.5	11.6	11.7

Quenched and tempered

Thermal conductivity

at °C	23	150	300	350	400	500
$\text{W/(m} \cdot \text{K)}$	23.5	24.2	24.3	24.4	24.1	23.2

Quenched and tempered

Applications

Moulds for processing plastics with corrosive reactions.

Heat treatment

Soft annealing °C

760 – 800

Cooling

Furnace

Hardness HB

max. 230

Hardening °C

1020 – 1050

Quenching

Oil or saltbath, 500 – 550 °C

Hardness after quenching HRC

49

Tempering °C

HRC

100

49

200

47

300

46

400

46

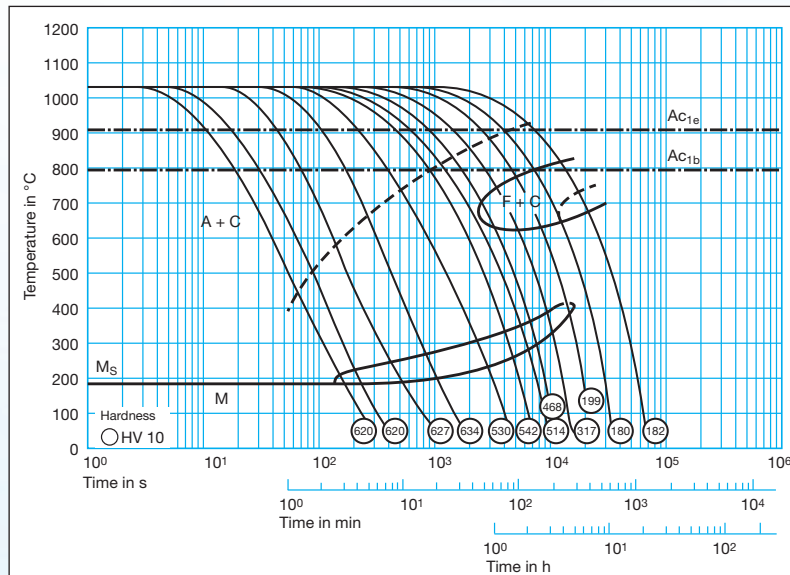
500

47

600

32

Time-temperature-transformation diagram



Tempering diagram

