

Chemical composition Typical analysis in %

C	Mn	Cr	Mo	S
0.40	1.5	1.9	0.2	0.05

Steel properties

Pre-hardened plastic mould steel, hardness in as-delivered condition 280 to 325 HB. Improved machinability in comparison with THYROPLAST® 2311.

Physical properties

Coefficient of thermal expansion $10^{-6} \text{ m}/(\text{m} \cdot \text{K})$	20 – 100 °C	20 – 200 °C	20 – 300 °C
Annealed	12.5	13.4	13.9
Quenched and tempered	12.3	13.0	13.7

Thermal conductivity $\text{W}/(\text{m} \cdot \text{K})$	100 °C	150 °C	200 °C	250 °C	300 °C
Annealed	40.2	40.9	40.3	40.0	39.0
Quenched and tempered	39.8	40.4	40.4	39.9	39.0

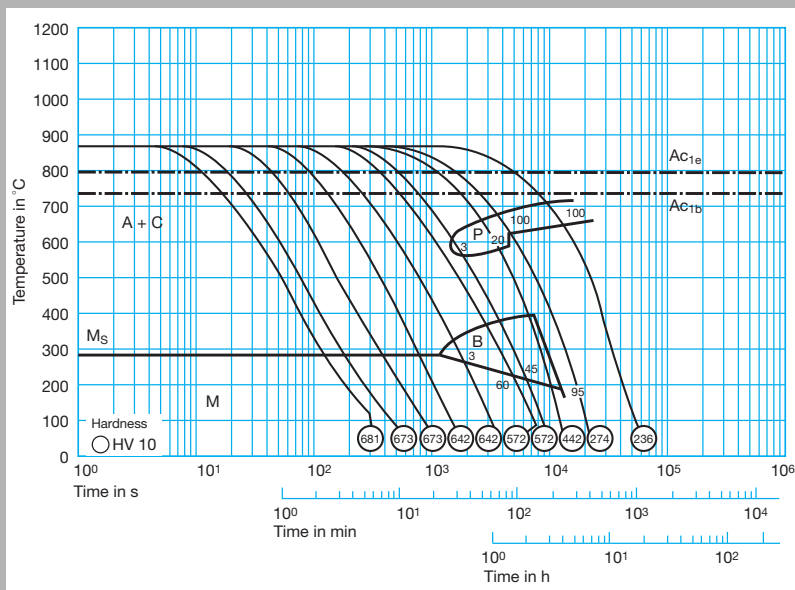
Applications

Plastic moulds, mould frames for plastic moulds and pressure casting moulds and recipient sleeves.

Heat treatment

Soft annealing °C	Cooling	Hardness HB					
710 – 740	Furnace	max. 235					
Hardening °C	Quenching	Hardness after quenching HRC					
840 – 870	Oil or saltbath, 180 – 220 °C	51					
Tempering °C	100	200	300	400	500	600	700
HRC	51	50	48	46	42	36	28

Time-temperature-transformation diagram



Tempering diagram

