

Formadur® 2311

Pre-hardened Plastic Mould Steel

Data Sheet
40CrMnMo7
AISI P20 / AFNOR 40CMD8

28.04.26 REV.2.

Chemical composition in %

C	Cr	Mn	Mo
0.40	1.90	1.50	0.20

Material Properties

- Hardness in as-delivered condition 280 to 325 HB
- Good machinability
- Suitable for texturing
- Better polishability than Formadur 2312

Typical Applications

- Plastic moulds
- Mould frames for plastic moulds and pressure casting moulds
- Recipient sleeves

Physical properties

Coefficient of thermal expansion ($10^{-6} K^{-1}$)

	Quenched and tempered
20–100 °C	12.6
20–150 °C	12.8
20–200 °C	13.0
20–250 °C	13.3
20–300 °C	13.5
20–350 °C	13.7
20–400 °C	13.9
20–450 °C	14.1
20–500 °C	14.3

Thermal conductivity (W/m.K)

	Quenched and tempered
23 °C	32.5
150 °C	32.9
300 °C	31.3
350 °C	30.2
400 °C	29.5
500 °C	27.4

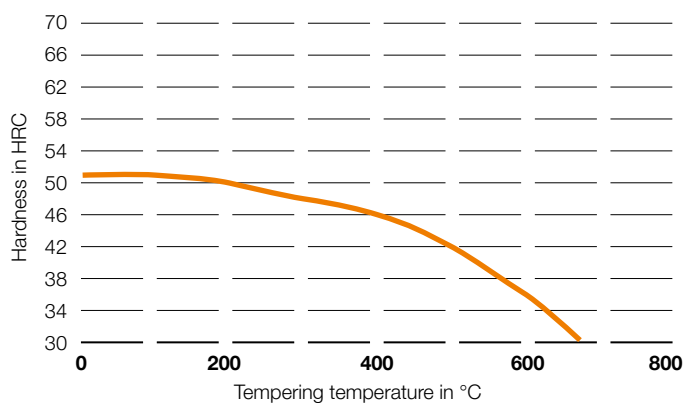
Heat treatment

Soft annealing	710–740 °C	Furnace	≤ 325 HB
Hardening	840–870 °C	Oil or saltbath, 180–220 °C	51 HRC after quenching
Tempering	100 °C		51
	200 °C		50
	300 °C		48
	400 °C		46
	500 °C		42
	600 °C		36
	700 °C		28

Formadur® 2311

Pre-hardened
Plastic Mould Steel

Tempering



Time-temperature-transformation

