

## 2711 ISO-B

### Plastic Mould Steel

	C	Si	Mn	P	S	Cr	Ni	Mo	V
■ <b>Typical analysis</b>	0,52	0,20	0,70	0,020	0,002	0,75	1,75	0,30	0,10
■ <b>Chemical composition as per SEL</b>	0,50	0,15-	0,50-	≤0,025	≤0,025	0,60-	1,50	0,25-	0,07-
	0,60	0,35	0,80			0,80	1,80	0,35	0,12

Figures in % by mass.

■ <b>Standards</b>	
Register of European Steels (SEL)	54 NiCrMoV6
AFNOR	55 NCDB 7
AISI	~ 6 F 2
BS	~ BH 224

#### ■ **Characteristics**

High toughness, high compressive strength, polishable.

Nitridable as delivered; hard chrome plateable, flame hardenable, grain reliable

#### ■ **Applications**

For larger compression and injection moulds subject to higher mechanical and thermal stress.

Contour hardening is recommended.

With higher working hardness, also suited to processing SMC and GMT, in combination with surface coating if applicable.

#### ■ **Delivered condition**

Annealed to max. 248 HB.

Hardened and tempered to 280–325 HB ( $\Delta$  approx. 950–1100 MPa)\* or to 355–415 HB ( $\Delta$  approx. 1200–1400 MPa)\* or to customer specification.

■ <b>Physical properties (reference values)</b>			
Thermal expansion coefficient (10 <sup>-6</sup> /K)	20–100 °C	20–250 °C	20–500 °C
	11,0	12,4	13,5
Thermal conductivity (W/mK)	20 °C	250 °C	500 °C
	33,0	35,0	33,0
Young's modulus (GPa)	20 °C	250 °C	500 °C
	212	197	175

\* Surface hardness in Brinell, converted to DIN EN ISO 18265, Table A.1.

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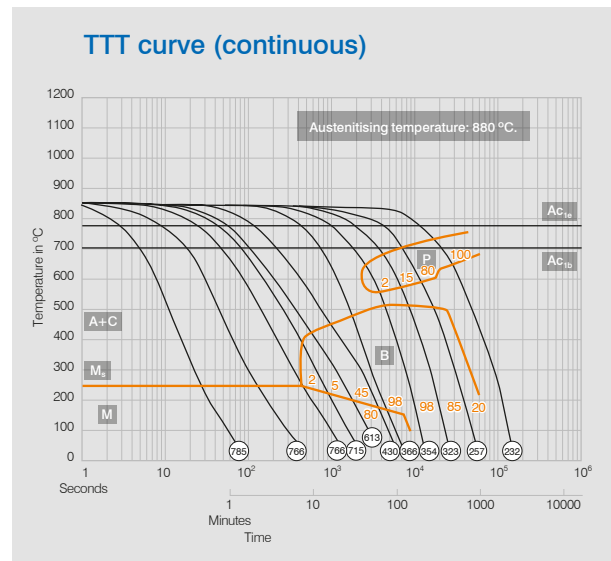
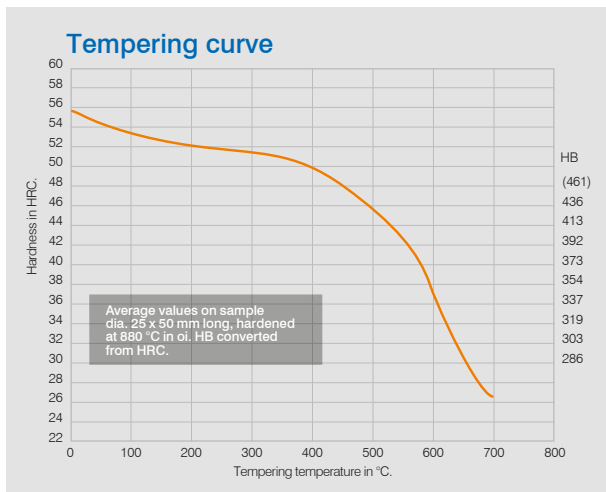
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# Sermetal

a voestalpine company

## 2711 ISO-B Plastic Mould Steel

■ Heat Treatment		
Stress relieving	Temperature:	Approx. 600 °C in the annealed state. Approx. 540 °C in the hardened and tempered state..
	Duration:	1 hour per 50 mm wall thickness.
	Cooling:	Furnace.
Soft annealing	Temperature:	700 °C
	Duration:	1 hour per 25 mm wall thickness.
	Cooling:	Furnace.
Hardening	Hardening:	880 °C
	Duration:	1 minute per mm wall thickness.
Quenching hardness	Max.56 HRC	In oil, hot bath vacuum.
Tempering	Temperature:	See tempering curve
	Duration:	1 hour per 25 mm wall thickness.
	Cooling:	Air
Working Hardness	Max. 280-415 HRC	



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