

## 2738 ISO-BM

### Plastic Mould Steel

	C	Si	Mn	P	S	Cr	Ni	Mo
■ <b>Typical analysis</b>	0,36	0,30	1,50	0,020	0,003	2,00	1,00	0,20
■ <b>Chemical composition as per SEL</b>	0,35-	0,20-	1,30-	≤0,030	≤0,030	1,80-	0,90-	0,15-
	0,45	0,40	1,60			2,10	1,20	0,25

Figures in % by mass.

■ <b>Standards</b>	
Register of European Steels (SEL)	~ 40 CrMnNiMo 8-6-4
DIN EN ISO 4957	~ 40 CrMnNiMo 8-6-4
AFNOR	~ 40 CMND 8
AISI	~ P 20 + Ni
BS	~ P 20 + Ni

#### ■ **Characteristics**

Mould steel for large dimensions > 400 mm thick. Properties as for grade 2311 ISO-BM, but with improved through-hardening. Nitridable, hard chrome plateable, flame hardenable, polishable, grain-reliable as delivered.

In an extreme dimensional range, and where there is a requirement for:

- Higher hardness and better through-hardening
- Polishability > 320 grit
- Sensitive etch-graining designs (e.g. HNO<sub>3</sub>)
- Higher thermal conductivity we recommend grade 2738 mod.TS(HH)..

#### ■ **Applications**

Tools for compression and injection moulds, bumpers, dashboards, chairs, rubbish bins, bottle crates, television cabinets, etc.

#### ■ **Delivered condition**

Quenched and tempered to 280–325 HB

(△ approx. 950–1100 MPa)\*

■ <b>Physical properties (reference values)</b>			
Thermal expansion coefficient (10 <sup>-6</sup> /K)	20–100 °C	20–250 °C	20–500 °C
	11,6	12,8	14,3
Thermal conductivity (W/mK)	20 °C	250 °C	500 °C
	34,0	33,5	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; we offer no quality guarantee with higher hardness requirements.

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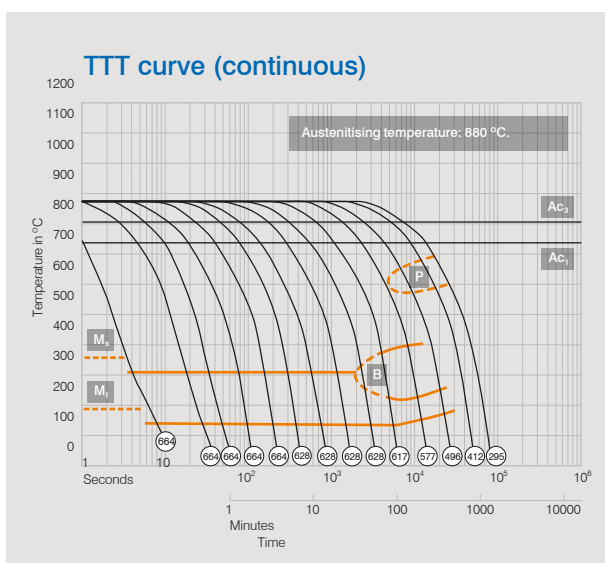
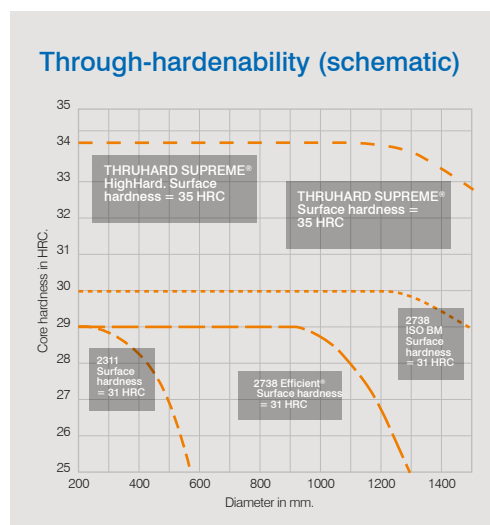
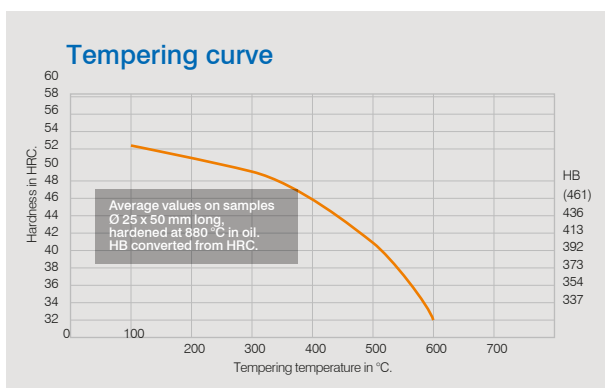
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# Sermetal

a voestalpine company

## 2738 ISO-BM Plastic Mould Steel

■ Heat Treatment		
Stress relieving	Temperature:	Approx. 550 °C in the annealed state.
	Duration:	1 hour per 50 mm wall thickness.
	Cooling:	Furnace.
Soft annealing	Temperature:	720 °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.58 HRC	in oil, hot bath or vacuum
Tempering	Temperature:	See tempering curve
	Duration:	1 hour per 25 mm wall thickness.
	Cooling:	Air
Working Hardness	Max. 280-325 HB	



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