



## Superplast®400

### Superplast® 400: Premium mould steel that meets or exceeds standards for grades W 1.2711 and W 1.2714.

#### Material properties

Prehardened steel for medium and large - size moulds and tools with high wear resistance. Consistent texturing and polishing improved. Reliable repair welding and high dimensional stability.

#### For which tools

Plastic injection mould cores and cavities, large - size moulds, compression dies under high mechanical and thermal stresses.

#### For which plastics

Thermoplastics, long fibre reinforced thermoplastics (LFT), thermosetting plastics, ABS, transparent melts. Injection moulding, compression moulding, RIM moulding, etc.

## PROPERTIES

### CHEMICAL ANALYSIS (TYPICAL; IN WEIGHT%)

C	Mn	Ni	Cr	Mo	B
0.31	1.15	0.50	2.30	0.70	+

### MECHANICAL PROPERTIES

Superplast® 400 is delivered **quenched and tempered to 350 - 380 HB (37 - 41 HRC)**.

Test thickness	Test hardness	Yield strength	Tensile strength
560 mm	370 HB	1000 N/mm <sup>2</sup>	1215 N/mm <sup>2</sup>

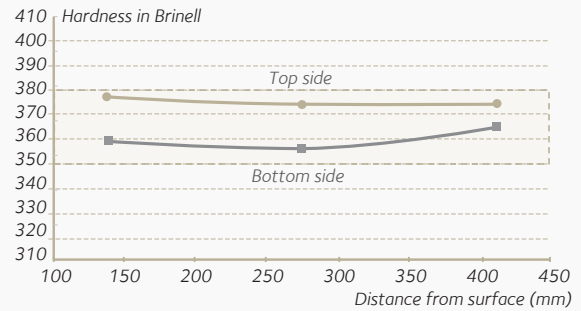
### PHYSICAL PROPERTIES

		25 °C	100 °C	200 °C	300 °C
Thermal expansion coefficient (from 25 °C)	10 <sup>-6</sup> /K		10.8	11.2	12.9
Thermal conductivity	W/mK	38.0	37.5	36.0	36.0
Specific heat (J/Kg/K)	J/Kg/K	460	500	530	560
Young modulus	kN/mm <sup>2</sup>	205			

## PROPERTIES

### THROUGH HARDENABILITY

The optimized balance of alloying elements confers to Superplast® 400 a **very consistent hardness through block section** (up to 800 mm - thick blocks).



## DELIVERY CONDITIONS

### TYPICAL DELIVERY SIZES

Manufacturing process	Thickness	Width
Hot rolling	15 - 150 mm	1000 - 2000 mm
Hot forging	150 - 800 mm	1200 - 2000 mm



## PLATE PROCESSING

### WELDING

**Cores and cavities can be polished and/or textured** following welding data provided below. Please consult the user guide for detailed information.

Process	Filler material	Preheating	Post heating	PWHT
GTAW	SP300 WELD - E DIN 25 CrMo 4	min. 175°C	175°C - 2h	550°C - 2h.

## YOUR CONTACTS

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*Technical data and information are to the best of our knowledge at the time of printing. However, they may be subject to some slight variations due to our ongoing research programme on steels. Therefore, we suggest that information be verified at time of enquiry or order. Furthermore, in service, real conditions are specific for each application. The data presented here are only for the purpose of description, and considered as guarantees when written formal approval has been delivered by our company. Further information may be obtained from the address opposite.*