

## Superplast<sup>®</sup>400

### Superplast<sup>®</sup> 400: Patented mould steel that meets or exceeds standards for grades W 1.2711 and W 1.2714.

#### Material properties

40 HRC pre-hardened standard grade designed for the plastic mold industry. High resistance to wear, high toughness, good polishing properties.

#### For which applications

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

Thermoplastics (PE, PS, PP), LFT, thermosetting plastics, ABS, transparent melts.

## PROPERTIES

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

C	Mn	Si	Ni	Cr	Mo	Others
0.25	1.15	0.1	0.75	2	0.6	B, V

### MECHANICAL PROPERTIES

Superplast<sup>®</sup> 400 is delivered **quenched and tempered to 350 - 390 HB (37 - 41.8 HRC)**.

Hardness	Rp 0.2 Yield Strength		Rm Tensile strength		KCV 20 °C	Elastic modulus	
	MPa	ksi	MPa	ksi	J	GPa	ksi
HB							
370	1000	145	1215	176	20	205	29733

Typical values

### PHYSICAL PROPERTIES

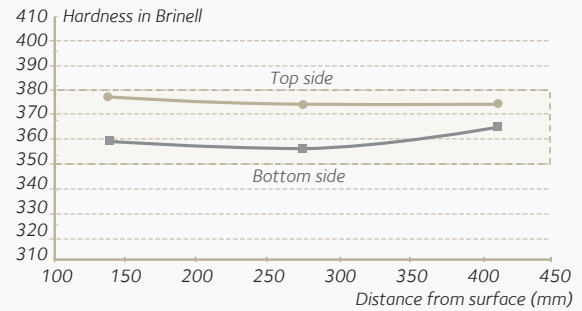
Thermal conductivity W.m-1.K-1	Thermal expansion Coefficient (10-6.K-1)			
	20 °C	20-100 °C	20-200 °C	20-300 °C
38	10.8	11.2	12.9	460

Typical values

## PROPERTIES

### THROUGH HARDENABILITY

The optimized balance of alloying elements confers to Superplast® 400 a **very consistent hardness through block section** (up to 600 mm - thick blocks).



## DELIVERY CONDITIONS

### TYPICAL DELIVERY SIZES

Manufacturing process	Thickness	Width
Hot rolling	7 - 150 mm	1000 - 2500 mm
Hot forging	150 - 610 mm	1000 - 2000 mm



## PLATE PROCESSING

### WELDING

**Cores and cavities can be polished and/or textured** on welded areas if the welding datas provided below are respected. Please consult the user guide for detailed information.

Process	Filler material	Preheating	Post heating	PWHT
GTAW	SP300 WELD - E	min. 325°C	325°C - 2h	550°C

## YOUR CONTACTS

**Perrine Lavalley**  
 Tel. +33 3 85 80 52 56  
[perrine.lavalley@arcelormittal.com](mailto:perrine.lavalley@arcelormittal.com)

<https://industeel.arcelormittal.com>

**Industeel France**  
 Le Creusot Plant  
 56 rue Clemenceau  
 F - 71 201 Le Creusot Cedex

*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.*