



## Superplast® 350

### Superplast® 350 : A patented mould steel that meets or exceeds standards for grades W 1.2738 HH.

#### Material properties

Prehardened steel for medium and very large - size moulds and tools with good machinability. Consistent texturing and polishing improved by **very low sulphur content**. Reliable repair welding and good thermal conductivity.

#### For which tools

Plastic injection or compression mould cores and cavities, large - size moulds for bumpers, dashboards, fenders, television panels, bottle crates, etc.

#### For which plastics

Thermoplastics (PE, PP, PS), thermosetting plastics, ABS, transparent melts. Injection moulding, compression moulding, RIM moulding, etc.

## PROPERTIES

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

C	Si	Mn	S	Ni	Cr	Mo	B
0.26	0.10	1.50	0.002	0.30	1.60	0.65	+

### MECHANICAL PROPERTIES

Superplast® 350 is delivered **quenched and tempered to 330 - 370 HB (35 - 39 HRC)**.

Hardness	Rp 0.2 Yield Strength		Rm Tensile strength		Elongation	Reduction of area	K <sub>C</sub> V 20°C	Elastic modulus	
	MPa	ksi	MPa	ksi				GPa	ksi
HB	MPa	ksi	MPa	ksi	%	Z%	J	GPa	ksi
345	940	136	1095	159	15	50	25	205	29733

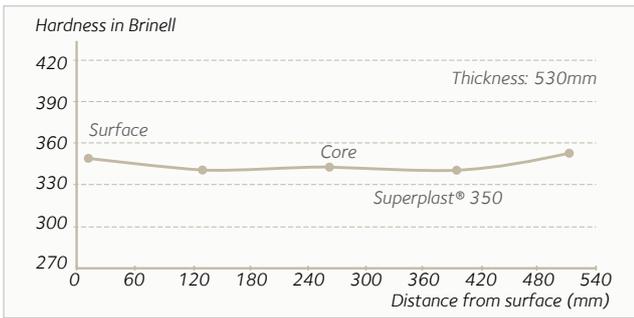
Typical values

### 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	Specific heat J/kg.°C
39	11	12.6	13.1	480

Typical values

## PROPERTIES



### THROUGH HARDENABILITY

Thanks to an optimal balance of alloying elements (especially Boron metallurgy) and high quality heat treatment, Superplast® 350 exhibits a **consistent hardness through large sections**. Diagram beside provides the hardness profile on a 530 mm - thick forged block.

A hardness difference of max 30HB all over the block is guaranteed.

## DELIVERY CONDITIONS

### TYPICAL DELIVERY SIZES

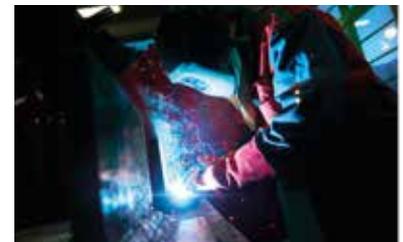
Manufacturing process	Thickness	Width
Hot rolling	8 - 150 mm	1000 - 2000 mm
Hot forging	150 - 1050 mm	1000 - 2000 mm

## PLATE PROCESSING

### WELDING

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

Process	Filler material	Preheating	Post heating	PWHT
GTAW	SP300 WELD - E DIN 25 CrMo 4	min. 150°C	150°C - 2h	550°C - 2h



## 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 Clémenceau  
 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.