Superplast® STAINLESS

Superplast® Stainless

- MOLD BASES
- PARISON MOLDS
- HOT RUNNER MANIFOLDS
- DIE SETS
- CAVITY AND CORES
  (WHERE HIGH POLISH IS NOT REQUIRED)

Features

- Improved machinability,
- Improved consistency and weldability.
- Available up to 140 mm (5.5”) thick for a 2000mm (78.7”) width plate

INTERNATIONAL MOLD STEEL, INC.

6796 Powerline Dr. • Florence, KY • 41042 • 1-800-625-6653 • www.imsteel.com

A NEW SPECIFIC GRADE

Superplast® Stainless is a prehardened free-machining stainless mold steel specially designed for plastic mold bases, and providing improved performances compared to standard grades such as W1.2085.

Superplast® Stainless

SUPERPLAST® STAINLESS OFFERS

- Improved machinability,
- Improved consistency and weldability.

Moreover, thanks to its low Carbon and 12% Chromium content, Superplast® Stainless ensures a good corosion resistance both in humid atmospheres and in corrosive molding environments (PVC).

CHEMICAL ANALYSIS

	C	S Max	Si	Cr
Superplast® Stainless	0.07	0.15	0.10	12.0
W1.2085	0.4	0.07	0.35	16.0

Typical values

MECHANICAL PROPERTIES

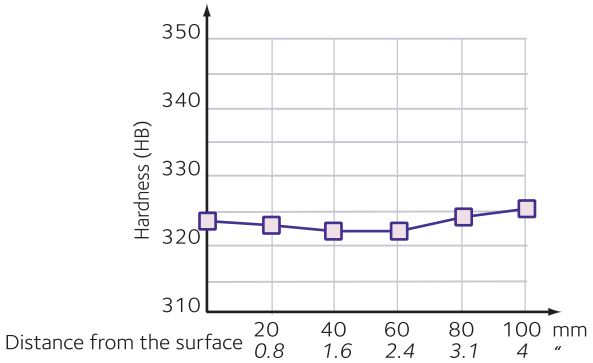
	YS 0.2 MPa(KSI)	UTS MPa (KSI)	El% 5d	HB
Superplast® Stainless	890 (129)	1000 (145)	14	310
W1.2085	870 (126)	1000 (145)	12	310

Superplast® Stainless is delivered prehardened with a hardness between 290 and 330 HB (30-34 HRC*)

* HRC Hardness is only indicative value (translation from HB according to ISO 18265 : 2003 table B2)

MICROSTRUCTURE

Superplast® Stainless is a martensitic stainless steel offering microstructure and hardness consistency through thickness

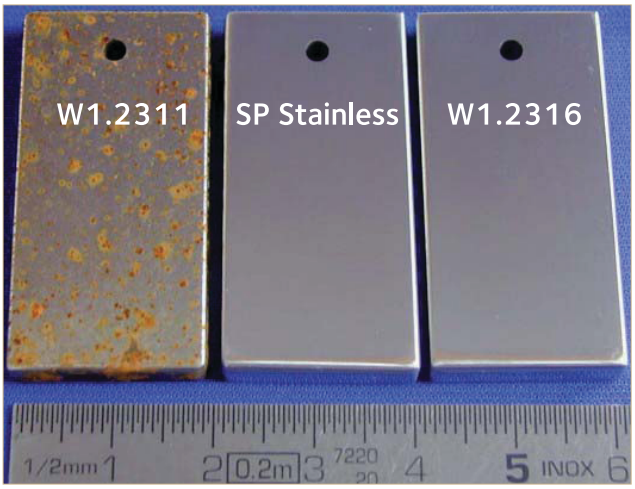


Example in a 100 mm (4") thick plate

PROCESSING ABILITIES

CORROSION RESISTANCE

Thanks to its specific chemistry with a low carbon content, high level of chromium and appropriate others alloying elements, Superplast® Stainless offers good corrosion resistance in corrosive molding environments (PVC) and in humid atmospheres.



Humid-dry alternated atmosphere test

WELDING PROPERTIES

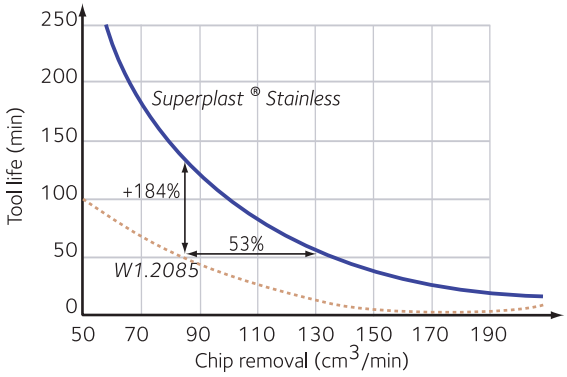
The low carbon content offers a good aptitude for weld repairs, avoiding any risk of cold cracking when appropriate welding wire is used.

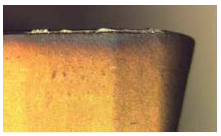
To obtain more information regarding welding process, please contact Industeel.

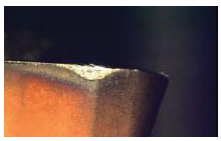
IMPROVED MACHINABILITY

The specific chemical analysis, together with a high Sulfur level, confer an excellent machinability to Superplast® Stainless.

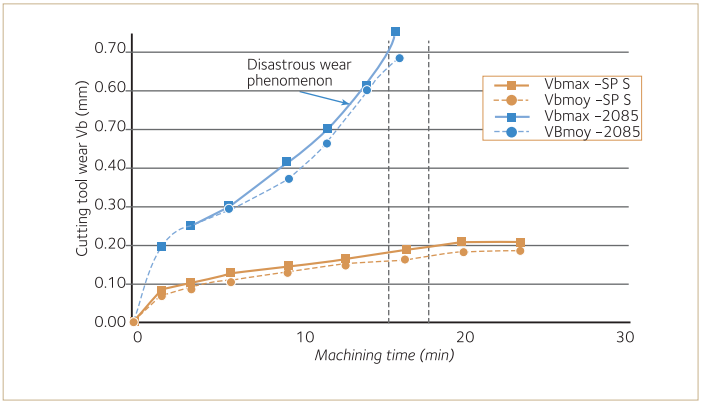
Performances are definitively improved compared to conventional grades.







- Cutting speed : 140 m/min
- fz = 1.5 mm/U
- a_p = 0.9 mm
- a_e = 40 mm
- Milling tool : Mitsubishi AJX 12-052A04R
- Cutters : JDMW 120420 ZDSR-FTFH 7020



Milling tests conducted in ENSAM Cluny (F)

Superplast® Stainless

SPS BAR PROGRAM

Rough Thickness		Width's	8.125	10.125	11.125	12.125	13.625	15.125	16.125	18.125	20.125	22.125
0.75			X	X	X	X	X	X	X	X	X	X
1			X	X	X	X	X	X	X	X	X	X
1.27			X	X	X	X	X	X	X	X	X	X
1.625			X	X	X	X	X	X	X	X	X	X
1.875			X	X	X	X	X	X	X	X	X	X
2.074			X	X	X	X	X	X	X	X	X	X
2.375			X	X	X	X	X	X	X	X	X	X
2.625			X	X	X	X	X	X	X	X	X	X
2.875			X	X	X	X	X	X	X	X	X	X
3.08			X	X	X	X	X	X	X	X	X	X

Industeel ArcelorMittal

All information in this brochure is for the purpose of information only.

INTERNATIONAL MOLD STEEL, INC.

6796 Powerline Dr. • Florence, KY • 41042 • 1-800-625-6653 • www.imsteel.com