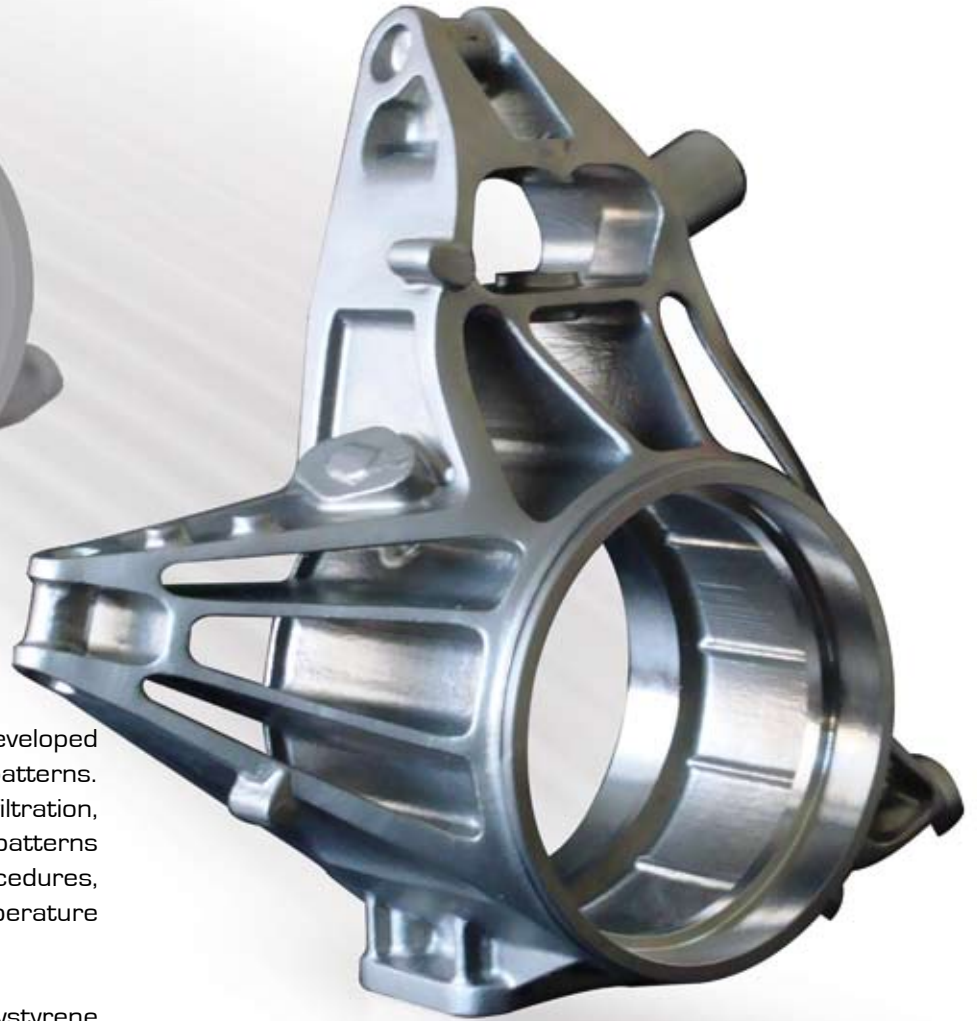


# WINDFORM **PS**



**CLASS OF MATERIAL:** Polyamide based material

**TECHNOLOGY:** Selective Laser Sintering

Windform® PS is a new polystyrene based material, developed specifically to produce complex investment casting patterns. The sintered patterns are ideal for conventional wax infiltration, and become easy to handle and finish. Windform® PS patterns are designed to work within regular rapid casting procedures, including autoclave and flash firing steps, low-temperature furnaces and vacuum plaster casting methods.

Improved properties, compared to other polystyrene materials already available on the market, and that make the difference, are:

- Improved surface quality and fine feature preservation
- Reduced “curling” effect on the first layers
- Very low ash content, therefore well suited for highly reactive alloys, such as Titanium, Aluminium, Magnesium, Steel and Nickel based alloys.

A BREAKTHROUGH  
IN RAPID CASTING ARENA  
**COMPLEX INVESTMENT**  
**CASTING PATTERNS**

## **APPLICATIONS:**

- Complex investment casting patterns
- Casting with highly reactive alloys, as well as conventional cast alloys

The casting structure is formed from an aggregate of grains or polyhedral crystallites which produce isotropic compensation: it is obvious that isotropy has great advantages, for instance, FEM calculations are very close to the real behaviour of the part.

Moreover, Rapid Casting with laser sintered patterns allows complete design freedom (no support structures are needed): thus reducing undercut and tool path problems during CNC machining.

It's therefore possible to create the product along its mechanical stress axes, and to obtain a perfect reproduction of all details of the RP pattern, with tolerances and surface finishing of a very high quality (such as fully machined parts).

## **WHERE TO FIND WINDFORM® PRODUCTS**

CRP Technology produces Windform® PS parts and it also ships the material throughout Europe, the USA, and Japan. CRP Technology and its partners offer client specific service in terms of time and delivery conditions, according to customer's requests anywhere in the world.

## **HOW TO GET WINDFORM® PRODUCTS**

For further information, quotations, and delivery times, please visit the official website [www.windform.it](http://www.windform.it) or send an information request to [info@crp.eu](mailto:info@crp.eu). CRP will contact you to discuss your application requirements in more detail.

<b>PROPERTIES WINDFORM® PS</b>	Units	Test Method	Value
<b>POWDER PROPERTIES</b>			
Bulk Density - Tap	g/cm <sup>3</sup>	ASTM D4164	0.43 (+/- 0.05 g/cm <sup>3</sup> )
Particle Size Average [2] - d <sub>50</sub>	micron	Laser diffraction (ISO 13320)	52 (+/- 7 microns)
Particle Size Range [2] - 90%	micron	Laser diffraction (ISO 13320)	25-100 micron
Moisture Absorption - 20	%	ISO 62	< 0.1%
Ash Content	%	ASTM D482	< 0,02%
<b>THERMAL PROPERTIES</b>			
Glass Transition [T <sub>g</sub> ] - Polystyrene	°C	DSC	87.5 (+/- 1°C)