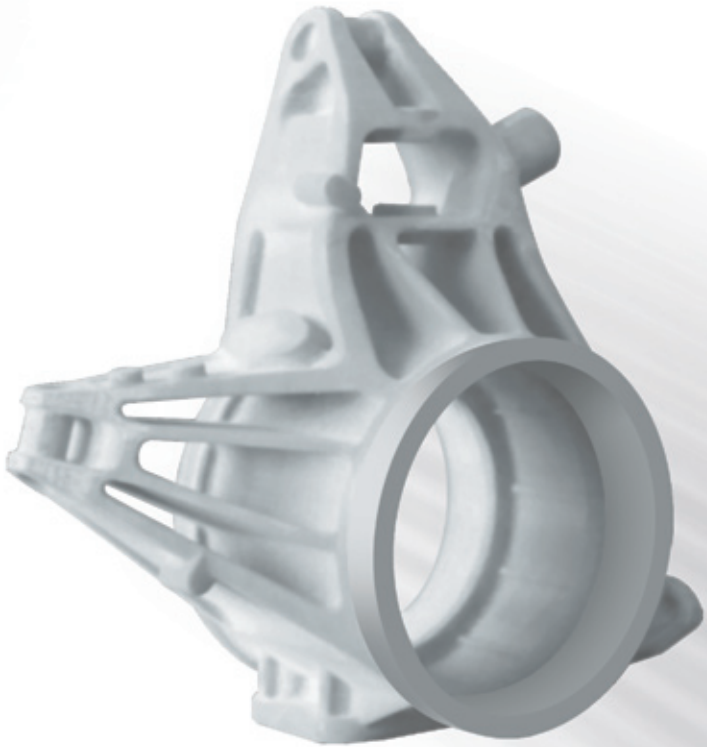
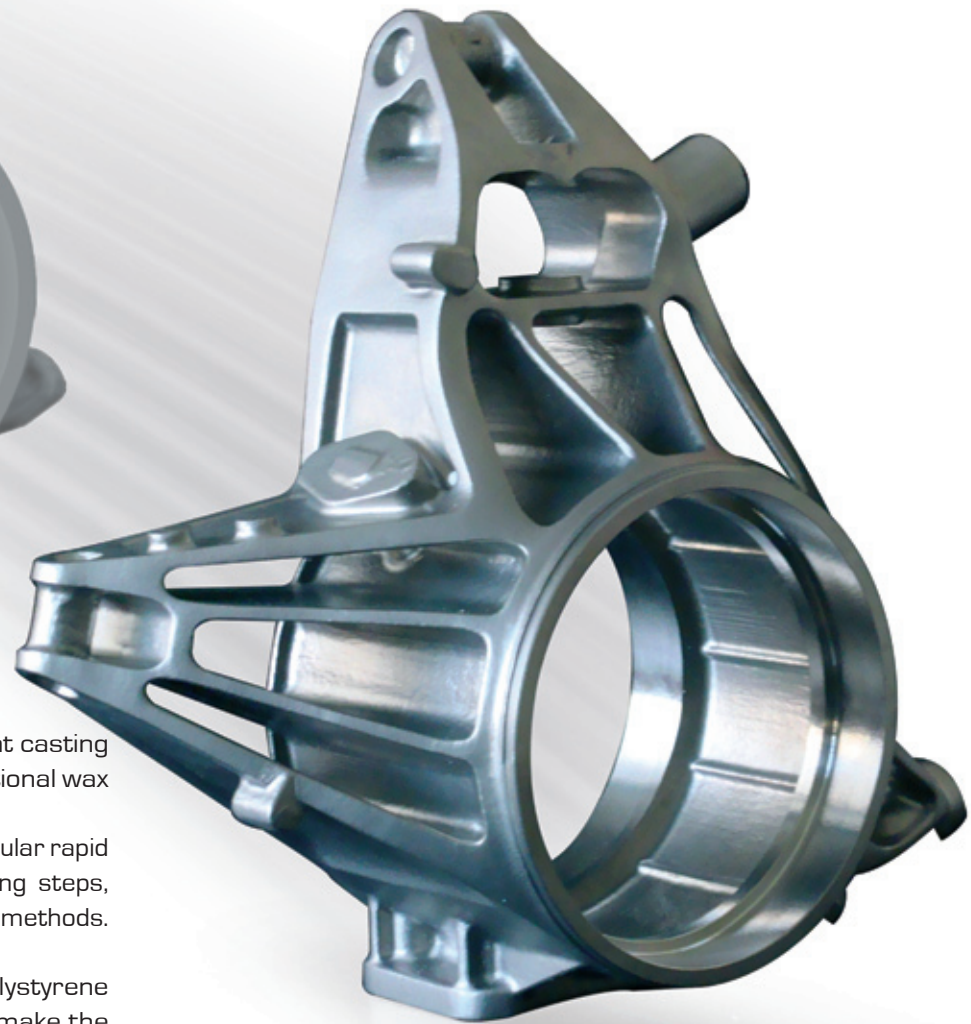
WINDFORM PS





CLASS OF MATERIAL: Polystyrene 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

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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 distributes the material in Europe, USA and Japan, offering customized service as regards timing and delivery conditions of the product, according to customer's requests anywhere in the world.

How to get Windform® products

For any further information on product availability, request quotes or check delivery times, please visit www.windform.eu or send an inquiry to info@crp.eu. CRP Technology customer service will contact you to answer all questions.

Properties Windform® PS	Units	Test Method	Value
Powder Properties			
Bulk Density - Tap	g/cm^3	ASTM D4164	0.43 (+/- 0.05 g/cm^3)
Particle Size Average ([2]) - ^{d}50	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%
Thermal Properties			
Glass Transition (Tg) - Polystyrene	°C	DSC	87.5 (+/- 1°C)