WINDFORM® PS

Specialty Polystyrene

CRP Technology s.r.l.

Message:

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.
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).

General Information			
Features	Autoclavable Outstanding Surface Finish		
Uses	Mold Making Molds/Dies/Tools		
Forms	Powder		
Processing Method	3D Printing, Laser Sintering/Melting		
Physical	**Nominal Value**	**Unit**	**Test Method**
Water Absorption (Equilibrium, 23°C, 50% RH)	< 0.10	%	ISO 62
Ash Content	< 0.020	%	ASTM D482
Bulk Density - Tap	380 to 480	g/l	ASTM D4164
Particle Size - Average	45.0 to 59.0	µm	ISO 13320
Particle Size Distribution - 90%	25.0 to 100.0	µm	ISO 13320
Thermal	**Nominal Value**	**Unit**	**Test Method**
Glass Transition Temperature	86.5 to 88.5	°C	DSC

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

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