

# ProtoCAM

*Excellence in Rapid Prototyping*

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## *CastForm PS Properties*

Measurement	Test Method	Value
<b><u>Powder Properties</u></b>		
Particle Size Average (d50)	Laser Diffraction	62 $\mu\text{m}$
Particle Size Range (90%)	Laser Diffraction	25-106 $\mu\text{m}$
Powder Density (Tap)	ASTM D4164	0.46 g/cm <sup>3</sup>
<b><u>Thermal Properties</u></b>		
Glass Transition: T <sub>g</sub> (Polystyrene)	DSC	89°C
Melt Point (Wax)		<63°C
DTUL, 0.45 MPa	ASTM D648	33°C
DTUL, 1.82 MPa	ASTM D648	40°C
Flash Point (Polystyrene)	Cleveland Open Cup	350°C
Flash Point (Wax)	Cleveland Open Cup	>200°C
Autoignition Point (Polystyrene)		410°C
<b><u>Physical and Mechanical Properties</u></b>		
Specific Gravity (20°C)	ASTM D792	0.86
Moisture Absorption 20°C, 65%RH	ASTM D570	0.06%
Ash Content	ASTM D482	0.02%
Tensile Strength	ASTM D638	2,840 MPA
Tensile Modulus	ASTM D638	1,604 MPA
<b><u>Impact Strength</u></b>		
Notched Izod	ASTM D256	<11 J/m
Unnotched Izod	ASTM D256	14 J/m
<b><u>Surface Finish</u></b>		
As SLS Processed, (Ra)		13 $\mu\text{m}$
After Finishing, (Ra)		3 $\mu\text{m}$