

Proto3000 Duraform® EX Selective Laser Sintering (SLS®) Prototyping Polymer

Category : Polymer , Rapid Prototyping Polymer

Material Notes:

Plastic for use with all Sinterstation® Pro and Sinterstation HiQ™ series SLS® systems
Description: This impact-resistant plastic offers the toughness of injection-molded polypropylene and ABS and is suitable for Rapid Manufacturing.
Features: Outstanding toughness
 Excellent impact resistance
 Repeatable mechanical properties
 Easy-to-process
 Consistent black or natural color
Benefits: Offers toughness of injection-molded ABS and polypropylene
 Build prototypes that withstand aggressive functional testing
 Create accurate and repeatable parts as demanded by manufacturers
 Increase market opportunities through enhanced properties
 Eliminate painting by using black color
Applications: Complex, thin-walled ductwork:-Motorsports-Aerospace-Unmanned air vehicles (UAV's)
 Housings and enclosures
 Impellers
 Connectors
 Consumer sporting goods
 Vehicle dashboards and grilles
 Bumpers
 Snap-fit designs
 Living hinges
 Functional prototypes that require end-use performance properties
 Appropriate for low- to mid-volume rapid manufacturing
 Information provided by Proto3000 for their prototyping engineering services.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Proto3000-Duraform-EX-Selective-Laser-Sintering-SLS-Prototyping-Polymer.php

Physical Properties	Metric	English	Comments
Density	1.01 g/cc	0.0365 lb/in ³	ASTM D792
Water Absorption	0.48 % @Time 86400 sec	0.48 % @Time 24.0 hour	ASTM D570
Water Absorption at Saturation	1.15 %	1.15 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	69	69	ASTM D785
Hardness, Rockwell M	34	34	ASTM D785
Hardness, Shore D	74	74	ASTM D2240
Tensile Strength, Ultimate	48.0 MPa	6960 psi	ASTM D638
Tensile Strength, Yield	37.0 MPa	5370 psi	ASTM D638
Elongation at Break	47 %	47 %	ASTM D638
Elongation at Yield	5.0 %	5.0 %	ASTM D638
Tensile Modulus	1.517 GPa	220.0 ksi	ASTM D638
Flexural Strength	42.0 MPa	6090 psi	ASTM D790
	46.0 MPa	6670 psi	ASTM D790

Flexural Modulus Mechanical Properties	1.31 GPa Metric	190 ksi English	ASTM D790 Comments
Izod Impact, Notched	0.740 J/cm	1.39 ft-lb/in	ASTM D256
Izod Impact, Unnotched	14.86 J/cm	27.84 ft-lb/in	ASTM D256
Gardner Impact	11.8 J	8.70 ft-lb	ASTM D5420

Thermal Properties	Metric	English	Comments
CTE, linear	120 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	66.7 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM E831
	@Temperature 0.000 - 50.0 $^{\circ}\text{C}$	@Temperature 32.0 - 122 $^{\circ}\text{F}$	
	342 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	190 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM E831
	@Temperature 85.0 - 145 $^{\circ}\text{C}$	@Temperature 185 - 293 $^{\circ}\text{F}$	
Specific Heat Capacity	1.75 J/g- $^{\circ}\text{C}$	0.418 BTU/lb- $^{\circ}\text{F}$	ASTM E1269
Thermal Conductivity	0.510 W/m-K	3.54 BTU-in/hr-ft 2 - $^{\circ}\text{F}$	ASTM E1225
Deflection Temperature at 0.46 MPa (66 psi)	188 $^{\circ}\text{C}$	370 $^{\circ}\text{F}$	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	48.0 $^{\circ}\text{C}$	118 $^{\circ}\text{F}$	ASTM D648
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.30e+13 ohm-cm	1.30e+13 ohm-cm	ASTM D257
Surface Resistance	4.90e+12 ohm	4.90e+12 ohm	ASTM D257
Dielectric Constant	4.5	4.5	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	18.5 kV/mm	470 kV/in	ASTM D149
Dissipation Factor	0.050	0.050	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215, Fengxian District, Shanghai City, China