

Stereolithography Materials

SL
DIRECT

for use on

RenShape® SL 5195

SLA® 5000
system

Highly Accurate Stereolithography Material for Master Patterns

- Low viscosity
- Wide process latitude and high yield
- Highly accurate with superior surface finish
- Suitable for QuickCast™ applications
- Suitable as master patterns for tooling inserts
- Suitable for form, fit and function testing

Liquid Material

MEASUREMENT	CONDITION	VALUE
Appearance		Clear Amber
Density	@ 25°C (77°F)	1.16 g/cc
Viscosity	@ 30°C (86°F)	180 cps
Penetration depth (Dp)		5.2 mils
Critical exposure (Ec)		13.1 mJ/cm ²
Part building layer thickness*		0.05 mm (0.002 in) 0.10 mm (0.004 in) 0.125 mm (0.005 in) 0.15 mm (0.006 in)

*Dependent upon part geometry and build parameters.

Post-Cured Material

MEASUREMENT	TEST METHOD	VALUE
		90-minute UV post-cure
Hardness, Shore D	ASTM D 2240	83
Flexural modulus	ASTM D 790	1,628 MPa (236 KSI)
Flexural strength	ASTM D 790	49.3 MPa (7,150 PSI)
Tensile modulus	ASTM D 638	2,090 MPa (303 KSI)
Tensile strength	ASTM D 638	46.5 MPa (6,740 PSI)
Elongation at break	ASTM D 638	11%
Impact strength, notched Izod	ASTM D 256	54 J/m (1.0 ft - lbs/in)
Heat deflection temperature	ASTM D 648 @ 66 PSI @ 264 PSI	47°C (117°F) 43°C (109°F)
Glass transition, Tg	DMA, E'' peak	67 - 82°C
Coefficient of thermal expansion	TMA (T<Tg) TMA (T>Tg)	108 x 10 ⁻⁶ /°C 189 x 10 ⁻⁶ /°C
Thermal conductivity		0.182 W/m °K (4.33 x 10 ⁻⁴ cal/sec.cm.°C)
Density		1.18g/cm ³

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