

# Stereolithography Materials

**SL**  
DIRECT

for use on

**RenShape® SL 7560**

**Solid State Laser**  
SLA® systems

Durable Stereolithography Material that Simulates ABS-like Parts

- Good combination of durability and rigidity
- Good temperature performance
- Excellent side walls and fine features
- Outstanding appearance
- Excellent for RTV patterns
- Durable parts for functional applications

## Liquid Material

MEASUREMENT	CONDITION	VALUE
Appearance		White
Density	@ 25°C (77°F)	1.18 g/cm <sup>3</sup>
Viscosity	@ 28°C (82°F)	250 cps
Viscosity	@ 30°C (86°F)	200 cps
Penetration depth (Dp)		5.2 mils
Critical exposure (Ec)		5.4 mJ/cm <sup>2</sup>
Part building layer thickness*		0.10mm (0.004in)

\*Dependent upon part geometry and build parameters.

## Post-Cured Material

MEASUREMENT	TEST METHOD	**VALUE	**VALUE
		90-minute UV post-cure	90-minute UV + 2 hours @ 80°C thermal post-cure
Hardness, Shore D	ASTM D 2240	86	88
Flexural modulus	ASTM D 790	2,400 - 2,600 MPa (350 - 375 KSI)	2,400 - 2,650 MPa (350 - 380 KSI)
Flexural strength	ASTM D 790	83 - 104 MPa (12,000 - 15,000 PSI)	83 - 104 MPa (13,000 - 15,000 PSI)
Tensile modulus	ASTM D 638	2,400 - 2,600 MPa (350 - 375 KSI)	2,400 - 2,700 MPa (350 - 385 KSI)
Tensile strength	ASTM D 638	42 - 62 MPa (6,000 - 9,000 PSI)	56 - 69 MPa (8,000 - 10,000 PSI)
Elongation at break	ASTM D 638	6 - 15%	6 - 15%
Impact strength, notched Izod	ASTM D 256	28 - 44 J/m (0.5 - 0.8 ft - lbs/in)	28 - 44 J/m (0.5 - 0.8 ft - lbs/in)
Heat deflection temperature	ASTM D 648 @ 66 PSI	56 - 60°C (133 - 140°F)	84 - 101°C (183 - 214°F)
Glass transition, Tg	DMA, E" peak	60°C (140°F)	62°C (144°F)
Density		1.22 g/cm <sup>3</sup>	

\*\* Values dependent upon SLA system and build parameters.

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