

Stereolithography Materials

SL
DIRECT

for use on

RenShape® SL 7565

Solid State Laser
SLA® systems

Stereolithography Material that Simulates Clear ABS-Like Parts

- High durability combined with ABS-like rigidity
- Good transparency and clarity
- High elongation at break (>20%)
- Extremely fast and low viscosity
- Excellent for QuickCast™ Patterns
- Durable parts for functional applications

Liquid Material

MEASUREMENT	CONDITION	VALUE
Appearance		Clear, with a hint of amber
Density	@ 25°C (77°F)	1.17 g/cm ³
Viscosity	@ 28°C (82°F)	206 cps
Viscosity	@ 30°C (86°F)	165 cps
Penetration depth (Dp)		5.2 mils
Critical exposure (Ec)		8.2 mJ/cm ²
Part building layer thickness*		0.10mm (0.004in)

*Dependent upon part geometry and build parameters.

Post-Cured Material

**Values dependent upon SLA system and build parameters.

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	84	85
Flexural modulus	ASTM D 790	1,900 - 2,100 MPa (274 - 300 KSI)	1,900 - 2,100 MPa (274 - 300 KSI)
Flexural strength	ASTM D 790	60 - 66 MPa (8,600 - 9,500 PSI)	60 - 66 MPa (8,600 - 9,500 PSI)
Tensile modulus	ASTM D 638	2,000 - 2,500 MPa (290 - 360 KSI)	2,000 - 2,500 MPa (290 - 360 KSI)
Tensile strength	ASTM D 638	46 - 54 MPa (6,600 - 7,800 PSI)	46 - 54 MPa (6,600 - 7,800 PSI)
Elongation at break	ASTM D 638	19 - 30%	22 - 35%
Impact strength, notched Izod	ASTM D 256	27 - 38 J/m (0.5 - 0.7 ft - lbs/in)	28 - 38 J/m (0.5 - 0.7 ft - lbs/in)
Heat deflection temperature	ASTM D 648 @ 66 PSI	48 - 52°C (118 - 126°F)	51 - 57°C (124 - 135°F)
Glass transition, Tg	DMA, E" peak	56°C (133°F)	72°C (162°F)
Coefficient of thermal expansion	TMA (T<Tg)	117 x 10 ⁻⁶ /°C	101 x 10 ⁻⁶ /°C
Density		1.21 g/cm ³	

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