

Advanced Materials**RenShape® SL 7800**

STEREOLITHOGRAPHY MATERIAL
For use on Solid State Laser SLA® Systems

Accurate and Durable
Superior QuickCast Performance

DESCRIPTION

RenShape® SL 7800 stereolithography material is a General Purpose resin that combines accuracy with durability. This product is excellent for QuickCast patterns. The unique combination of high elongation and impact strength provides robust performance for functional parts.

LIQUID MATERIAL

MEASUREMENT	CONDITION	VALUE
Appearance		Clear amber liquid
Density	@ 25°C (77°F)	1.12 g/cm ³
Viscosity	@ 25°C (82°F)	300 cps
Viscosity	@ 30°C (86°F)	205 cps
Penetration depth (Dp)		5.74 mils (on SLA 7000/5000 systems) 5.67 mils (on SLA 500/3500/Viper Si2 systems)
Critical exposure (Ec)		9.98 mJ/cm ² (on SLA 7000/5000 systems) 9.51 mJ/cm ² (on SLA 500/3500/Viper Si2 systems)
Part building layer thickness*		0.10mm (0.004 in.)

* Dependent upon part geometry and build parameters.

POST-CURED MATERIAL

MEASUREMENT	TEST METHOD	VALUE 90-minute UV post-cure	VALUE 90-minute UV + 2 hours @ 80°C (176°F) thermal postcure
Hardness, Shore D	ASTM D-2240	87	87
Flexural modulus	ASTM D-790	2,280-2,650 MPa (330-380 ksi)	2,380-2,640 MPa (340-380 ksi)
Flexural strength	ASTM D-790	69-74 MPa (9,900-10,600 psi)	72-74 MPa (10,400-10,600 psi)
Tensile modulus	ASTM D-638	2,075-2,400 MPa (300-350 ksi)	2,180-2,250 MPa (310-320 ksi)
Tensile strength	ASTM D-638	41-47 MPa (6,000-6,800 psi)	44 MPa (6,400 psi)
Elongation at break	ASTM D-638	10-18%	10-15%
Impact strength, notched Izod	ASTM D-256	37-58 J/m (0.7-1.1 ft.-lb./in.)	37-48 J/m (0.7-0.9 ft.-lb./in.)
Heat deflection temperature	ASTM D-648 @ 66 psi	62°C (144°F)	62°C (144°F)
Glass transition, Tg	DMA, E'' peak	57°C (135°F)	59°C (138°F)
Coefficient of thermal expansion	TMA (T<Tg)	100 x 10 ⁻⁶ /°C	109 x 10 ⁻⁶ /°C
Density		1.15g/cm ³	

CAUTION :

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FIRST AID !

Eyes and skin : Flush eyes with water for 15 minutes. Contact a physician if irritation persists. Wash skin thoroughly with soap and water. Remove and wash contaminated clothing before reuse.

Inhalation : Remove subject to fresh air.

Swallowing : Dilute by giving water to drink and contact a physician promptly. Never give anything to drink to an unconscious person.

KEEP OUT OF REACH OF CHILDREN**FOR PROFESSIONAL AND INDUSTRIAL USE ONLY**

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