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HUNTSMAN

Enriching lives through innovation

Product Data

RenShape[®] SL 7810 STEREOLITHOGRAPHY MATERIAL

**For use on:
Solid State Laser
SLA[®] Systems**

- ABS-like Performance
- Good Durability

DESCRIPTION

RenShape[®] SL 7810 stereolithography material is a white, low viscosity stable liquid that produces strong white models and prototypes with good surface finish and detail, and ABS-like appearance. The product is also well suited for building RTV patterns. Parts built with SL 7810 exhibit durability over time beyond 6 months.

MEASUREMENT	CONDITION	VALUE
Appearance		White liquid
Density	@ 25°C (77°F)	1.13 g/cm ³
Viscosity	@ 28°C (82°F)	240 cps
Viscosity	@ 30°C (86°F)	210 cps
Penetration depth (Dp)		5.6 mils
Critical exposure (Ec)		9.9 mJ/cm ²
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	86	87
Flexural modulus	ASTM D-790	1,900-2,400 MPa (275-348 ksi)	2100-2,400 MPa (304-348 ksi)
Flexural strength	ASTM D-790	59-72 MPa (8,500-10,000 psi)	62-72 MPa (9,000-10,000 psi)
Tensile modulus	ASTM D-638	1,800-2,400 MPa (260-348 ksi)	2,000-2,400 MPa (290-348 ksi)
Tensile strength	ASTM D-638	36-51 MPa (5,200-7,400 psi)	39-51 MPa (5,700-7,400 psi)
Elongation at break	ASTM D-638	10-20%	10-14%
Impact strength, notched Izod	ASTM D-256	44-48 J/m (0.83-0.91 ft.-lb./in.)	44-49 J/m (0.83-0.93 ft.-lb./in.)
Heat deflection temperature	ASTM D-648 @ 66 psi @ 264 psi	51°C (124°F) --°C (--°F)	50°C (122°F) --°C (---°F)
Glass transition, Tg	DMA, E" peak	62°C (144°F)	62°C (144°F)
Coefficient of thermal expansion	TMA (T<Tg)	96 x 10 ⁻⁶ /°C	99 x 10 ⁻⁶ /°C
Cured Density		1.16g/cm ³	

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CAUTION:

Huntsman Advanced Materials Americas Inc. maintains up-to-date Material Safety Data Sheets (MSDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material. Copies of the latest MSDS may be requested by calling our customer service group at 888-564-9318 or emailing your request to advanced_materials@huntsman.com.

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

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