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## Advanced Materials

# RenShape® SL V1 Stereolithography Material

For use on Solid State Laser SLA® Systems

High Accuracy

Superior Quick-Cast Performance

## DATA SHEET

### DESCRIPTION

RenShape® SL V1 Stereolithography Material is a general purpose resin that combines ultimate accuracy with low viscosity and is humidity resistant. This product is excellent for quick-cast patterns. The unique combination is also ideal for master patterns.

### LIQUID MATERIAL

MEASUREMENT	CONDITION	VALUE
Appearance		Clear Amber
Density	@ 25°C (77°F)	1.17 g/cm <sup>3</sup>
Viscosity	@ 28°C (82°F)	230 cps
Viscosity	@ 30°C (86°F)	185 cps
Penetration depth (Dp)		4.1 mils
Critical exposure (Ec)		11.4 mJ/cm <sup>2</sup>
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
Hardness, Shore D	ASTM D-2240	87
Flexural modulus	ASTM D-790	2,937 MPa (423 ksi)
Flexural strength	ASTM D-790	107 MPa (15,405 psi)
Tensile modulus	ASTM D-638	3,104 MPa (447 ksi)
Tensile strength	ASTM D-638	74 MPa (10,590 psi)
Elongation at break	ASTM D-638	6.3%
Impact strength, notched Izod	ASTM D-256	23 J/m (0.42 ft.-lb./in.)
Heat deflection temperature	ASTM D-648 @ 66 psi @ 264 psi	64°C (147°F) 57°C (135°F)
Glass transition, Tg	DMA, E" peak	71°C (160°F)
Coefficient of thermal expansion	TMA (T<Tg) TMA (T>Tg)	80 x 10 <sup>-6</sup> /°C 192 x 10 <sup>-6</sup> /°C
Density		1.19 g/cm <sup>3</sup>



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## STORAGE

RenShape® SL V1 may be stored for up to 18 months from date of manufacture at between 18 and 35°C provided the components are stored in sealed containers.

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## Handling precautions

### Caution

Do not use this product until the MSDSs have been read and understood. To protect against any potential health risks presented by our products, the use of proper personal protective equipment (PPE) is recommended. Eye and skin protection is normally advised. Respiratory protection may be needed if mechanical ventilation is not available or is insufficient to remove vapors. For detailed PPE recommendations and exposure control options consult the product MSDS or a Huntsman EHS representative.

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