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RenShape® SL

Accurate and durable
ABS-like SL resin

7810

Key features

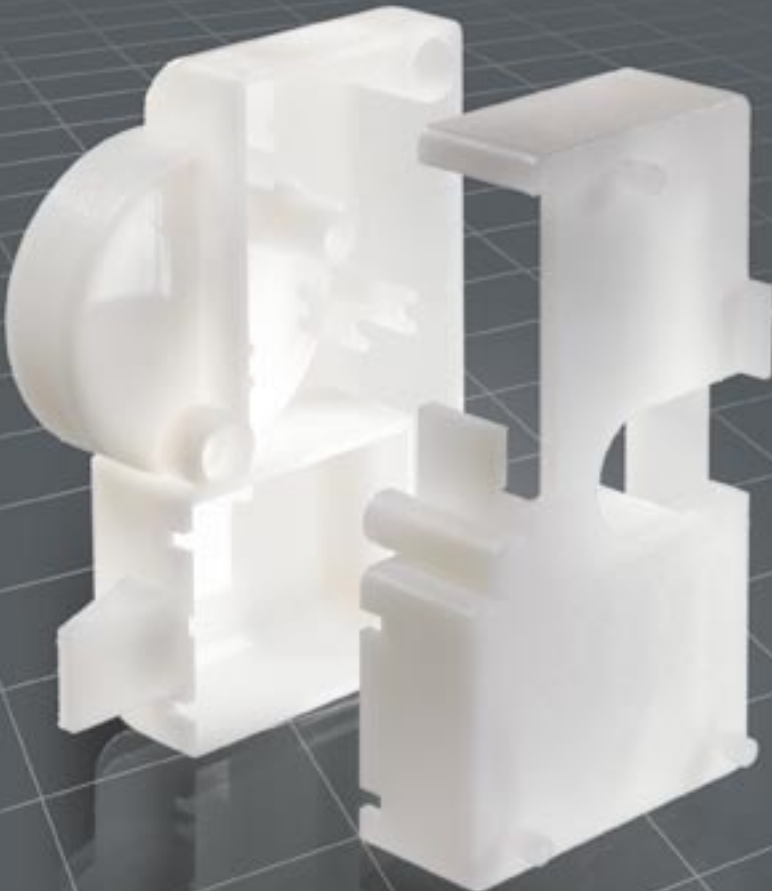
- Improved retention of strength and dimensions of parts in humid condition
- Low viscosity of liquid resin permits easy recoating, easy cleaning of parts and machines
- Good green strength requires minimal part finishing
- Superior vat life to current SL resins on the market

Key benefits

- Users can build accurate and tough parts with an improved dimensional stability
- Less part finishing time with ease of post-curing
- High quality masters for vacuum casting parts

Key applications

Designed for use on solid state SLA® platforms, RenShape® SL 7810 is suitable for master patterns, concept models, functional prototypes and general parts.



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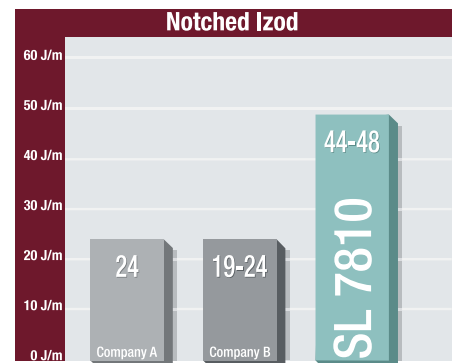
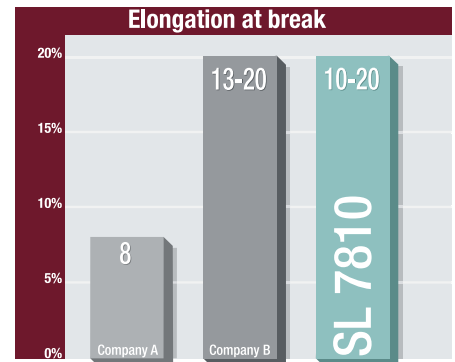
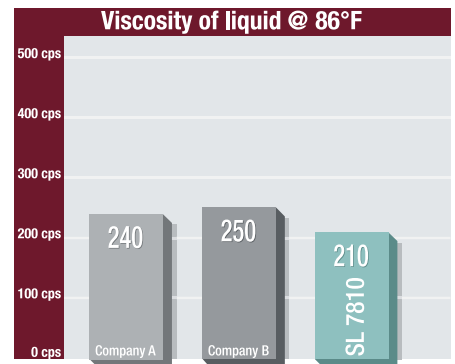
RenShape® SL 7810 stereolithography material is an opaque white, low viscosity resin that produces accurate and durable parts with ABS-like performance and appearance. It produces robust, white models and prototypes with a high gloss fine surface finish and detail. It is particularly suitable for RTV patterns and can be used on solid state SLA® platforms. Parts built with SL 7810 exhibit durability over time beyond 6 months.

Liquid material

Appearance	White liquid
Density at 77°F	1.13 g/cm ³
Viscosity	
at 82°F	240 cps
at 86°F	210 cps
Penetration depth (Dp)	5.6 mils
Critical exposure (Ec)	9.9 mJ/cm ²
Part building layer thickness*	0.004 in.

* Dependent upon part geometry and build parameters

Comparison tables



Post-cured material

	90-minute UV post-cure	90-minute UV + 2 hours @ 176°F thermal post-cure
Hardness ASTM D-2240	86 Shore D	87 Shore D
Flexural modulus ASTM D-790	275-348 ksi	304-348 ksi
Flexural strength ASTM D-790	8 500-10 000 psi	9 000-10 000 psi
Tensile modulus ASTM D-638	260-348 ksi	290-348 ksi
Tensile strength ASTM D-638	5 200-7 400 psi	5 700-7 400 psi
Elongation at break ASTM D-638	10-20%	10-14%
Impact strength, notched Izod ASTM D-256	0.83-0.91 ft.-lb./in.	0.83-0.93 ft.-lb./in.
Heat deflection temperature ASTM D-648 @ 66 psi	124°F	122°F
Glass transition, Tg DMA, E* peak	144°F	144°F
Coefficient of thermal expansion TMA (T<Tg)	96x10 ⁻⁶ / °C	99x10 ⁻⁶ / °C
Cured density	1.16 g/cm ³	—

Huntsman Advanced Materials (Americas) Inc, Americas Customer Service Center, 10003 Woodloch Forest Drive, The Woodlands, Texas 77380, USA • Tel +1 281 719 6000
Fax +1 281 719 6416 • Fax +1 713 235 6416 • advanced_materials@huntsman.com • www.huntsman.com/advanced_materials

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