

RenShape® SL

Accurate and durable
general purpose SL resin

7800

Key features

- Ultra low ash content (reduced by 95-98%) which is suitable for QuickCast™ application
- Improved retention of strength and dimensions of parts in humid condition
- Low viscosity of liquid resin permits easy recoating and draining of parts and allows 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 that retain dimensions and impact resistance over time without switching vat for different applications
- Less part finishing time with ease of post-curing
- Higher quality casting masters for the investment casting parts

Key applications

Designed for use on solid state SLA® platforms, RenShape® SL 7800 is suitable for master patterns, concept models, functional prototypes and general parts.



7800 RenShape® SL

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Enriching lives through innovation

RenShape® SL 7800 stereolithography material is a general purpose resin that combines accuracy with durability. This clear, light amber-coloured photopolymer is designed to produce accurate concept models and functional prototypes with a unique combination of high impact strength and elongation, which eliminates the need to switch photopolymers for each new applications.

Liquid material

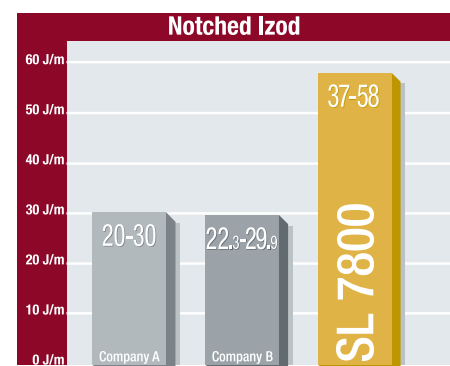
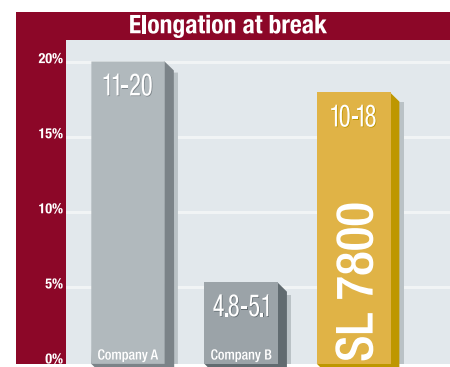
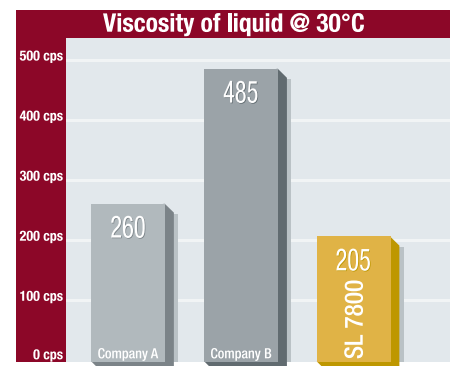
Appearance	Clear amber liquid
Density at 25°C (77°F)	1.12 g/cm ³
Viscosity	
at 25°C (82°F)	300 cps
at 30°C (86°F)	205 cps
Penetration depth (Dp)	
on SLA 7000/5000 systems	5.74 mils
on SLA 500/3500/Viper Si2 systems	5.67 mils
Critical exposure (Ec)	
on SLA 7000/5000 systems	9.98 mJ/cm ²
on SLA 500/3500/Viper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

* Dependent upon part geometry and build parameters

Post-cured material

	90-minute UV post-cure	90-minute UV + 2 hours @ 80°C (176°F) thermal post-cure
Hardness ASTM D-2240	87 Shore D	87 Shore D
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)	100x10 ⁻⁶ / °C	109x10 ⁻⁶ / °C
Density	1.15 g/cm ³	-

Comparison tables



advanced_materials@huntsman.com • www.huntsman.com/advanced_materials

EUROPE / MIDDLE EAST

Huntsman Advanced Materials (Switzerland) GmbH, Klybeckstrasse 200,
CH-4057 Basel, Switzerland
Tel + 41 61 966 33 33 - Fax + 41 61 966 33 34

AMERICAS

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

ASIA / PACIFIC

Huntsman Advanced Materials, Shibakoen Ridge Bldg. 3F,
1-8-21 Shibakoen Minato-ku Tokyo 105-0011, Japan
Tel + 813 54 03 8195 - Fax + 813 5403 8186

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