

# RenShape SL 7870

Tough, durable and ultra clear SL resin

## Key features

Improved retention of strength and dimensions of parts in humid conditions

Low viscosity of liquid resin permits easy recoating, draining and easy cleaning of parts and machines

Good green strength requires minimal part finishing

## Key benefits

Supplies clear, components with outstanding clarity and excellent accuracy

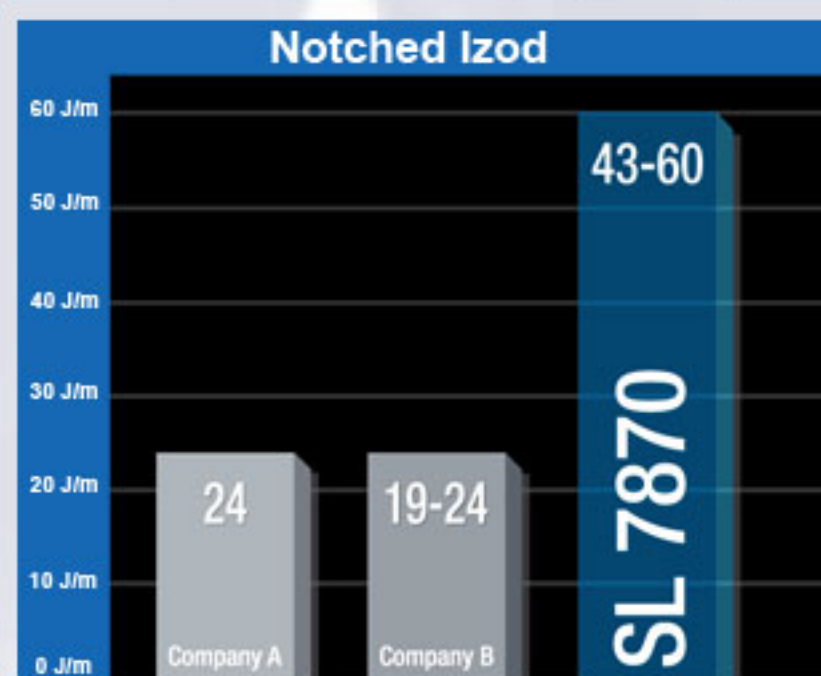
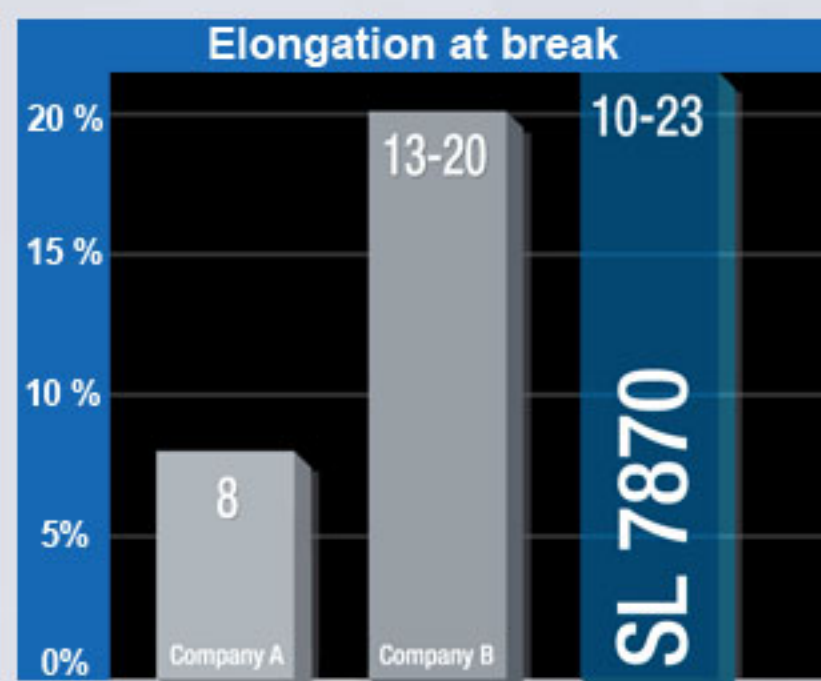
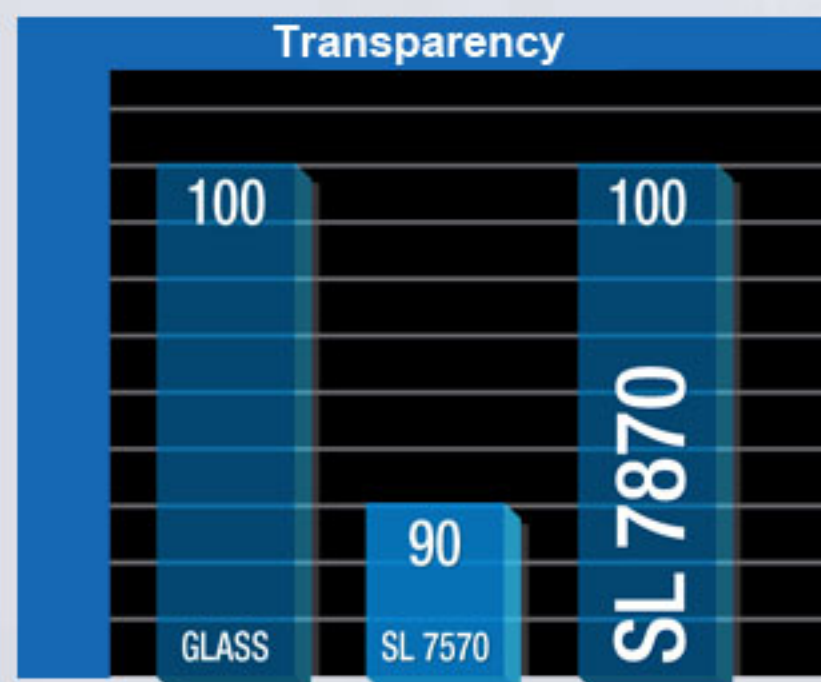
Less part finishing time with ease of post-curing

Higher quality casting masters for the investment casting parts

## Key applications

RenShape SL 7870 is a clear, low viscosity stereolithography resin with excellent accuracy. It offers a large working envelope of physical properties, as well as a unique combination of high elongation and impact strength which allows the building of durable parts.

### Comparison tables



### Liquid material

<b>Appearance</b>	Clear
<b>Density</b> at 25°C (77°F)	1.13 g/cm <sup>3</sup>
<b>Viscosity</b>	
at 28°C (82°F)	210 cps
at 30°C (86°F)	180 cps
<b>Penetration depth (Dp)</b>	7.2 mils
<b>Critical exposure (Ec)</b>	10.6 mJ/cm <sup>2</sup>
<b>Part building layer thickness*</b>	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
<b>Hardness</b> ASTM D-2240	86 Shore D	87 Shore D
<b>Flexural modulus</b> ASTM D-790	1 980-2 310 MPa (286-333 ksi)	2 010-2 350 MPa (289-338 ksi)
<b>Flexural strength</b> ASTM D-790	65-71 MPa (9 400-10 300 psi)	65-74 MPa (9 400-11 000 psi)
<b>Tensile modulus</b> ASTM D-638	1 930-2 020 MPa (278-291 ksi)	1 860-2 030 MPa (268-292 ksi)
<b>Tensile strength</b> ASTM D-638	38-42 MPa (5 470-6 050 psi)	39-42 MPa (5 620-6 050 psi)
<b>Elongation at break</b> ASTM D-638	10-22%	10-23%
<b>Impact strength, notched Izod</b> ASTM D-256	45-61 J/m (0.85-1.15 ft.-lb./in.)	43-60 J/m (0.81-1.13 ft.-lb./in.)
<b>Heat deflection temperature</b> ASTM D-648 @ 66 psi	48°C (118°F)	49°C (120°F)
<b>Glass transition, Tg</b> DMA, E" peak	56°C (133°F)	57°C (135°F)