

**NEW**

# RenShape® SL 7870

Tough, durable and  
ultra clear SL resin

## Key features

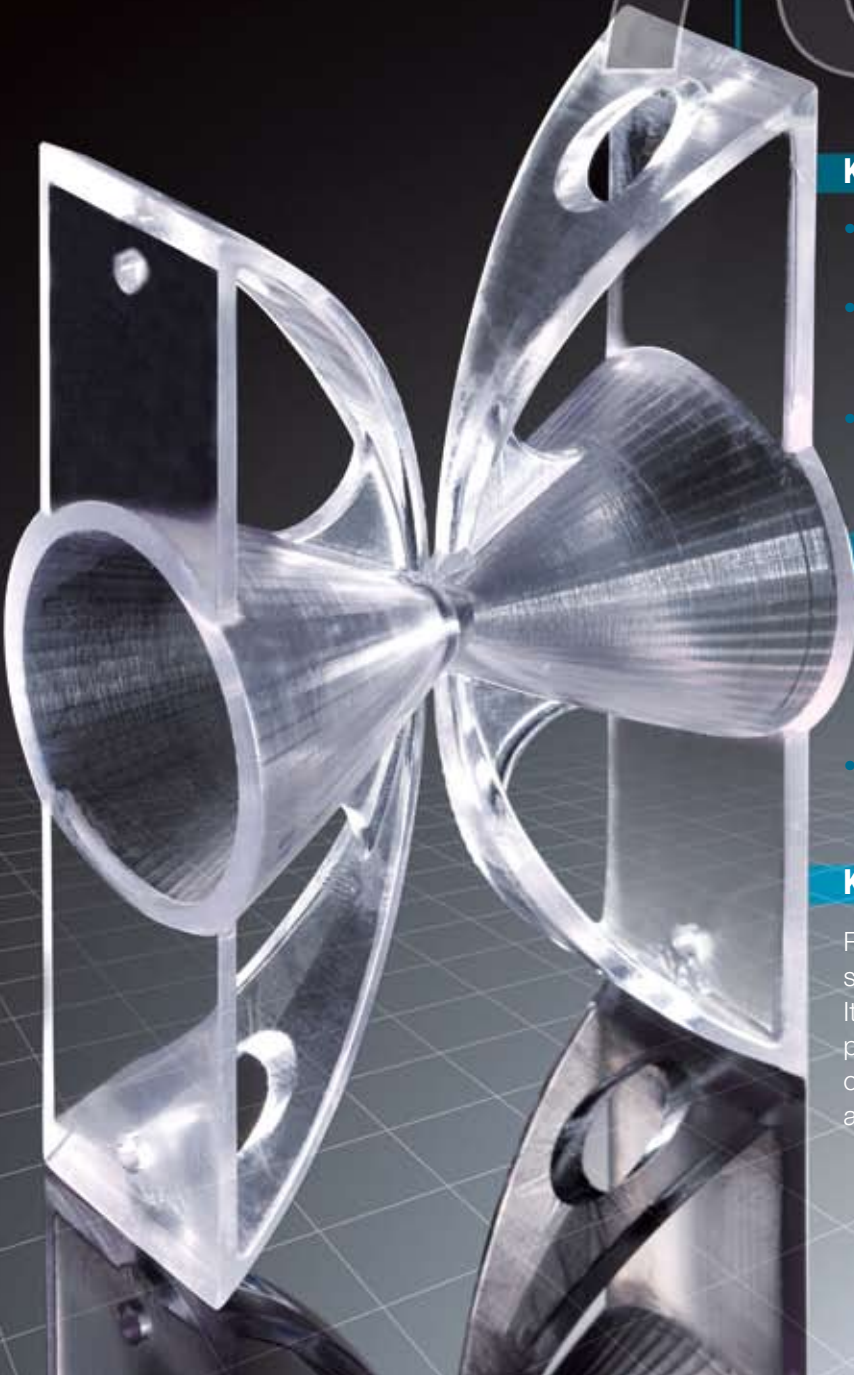
- Improved retention of strength and dimensions of parts in humid conditions
- Low viscosity of liquid resin permits easy recoating, draining and easy cleaning of parts and machines
- Good green strength requires minimal part finishing

## 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.



# 7870 RenShape® SL

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Enriching lives through innovation

## Liquid material

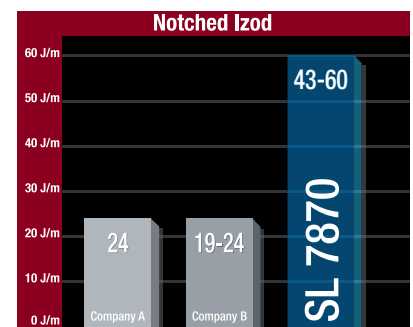
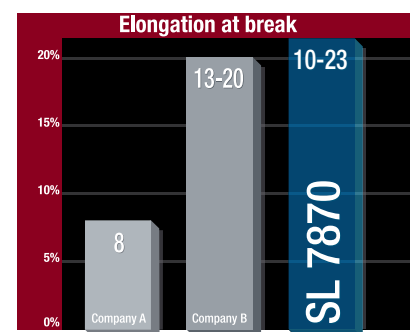
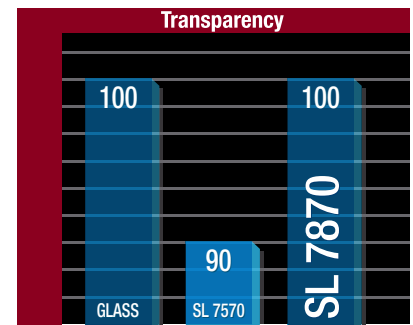
|                                       |                         |
|---------------------------------------|-------------------------|
| <b>Appearance</b>                     | Clear                   |
| <b>Density</b> at 25°C (77°F)         | 1.13 g/cm <sup>3</sup>  |
| <b>Viscosity</b>          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

## Comparison tables



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