

## WC (Water Clear) - Specifications

### Description

This 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. It requires less part finishing time and particularly suitable for masters for the investment casting parts.

### Liquid Material

|                                       |                         |
|---------------------------------------|-------------------------|
| <b>Appearance</b>                     | Clear                   |
| <b>Density @77°F</b>                  | 1.13 g/cm <sup>3</sup>  |
| <b>Viscosity</b>                      |                         |
| @82°F                                 | 210 cps                 |
| @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                 |

\* Dependent upon part geometry and build parameters.

# WC

### Post-cured Material\*\*

|  | 90-minute UV post-cure | 90-minute UV + 2 hours @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                    | 286-333 ksi            | 289-338 ksi                                     |
| <b>Flexural strength</b><br>ASTM D-790                   | 9,400-10,300 psi       | 9,400-11,000 psi                                |
| <b>Tensile modulus</b><br>ASTM D-638                     | 278-291 ksi            | 268-292 ksi                                     |
| <b>Tensile strength</b><br>ASTM D-638                    | 5,470-6,050 psi        | 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       | 0.85-1.15 ft.-lb./in.  | 0.81-1.13 ft.-lb./in.                           |
| <b>Heat deflection temperature</b><br>ASTM D-648 @66 psi | 118°F                  | 120°F   |
| <b>Glass transition, Tg</b><br>DMA, E'' peak             | 133°F                  | 135°F   |
| <b>Coefficient of thermal expansion</b><br>TMA (T<Tg)    | -                      | -   |
| <b>Density</b>   | -                      | -   |

\*\* Values dependent upon SLA system and build parameters.

