**Product Description**

Through continuous innovation and collaboration with our customers over many years, Somos® delivers the next generation in toughness and durability with Somos® NeXt.

Somos® NeXt is a highly durable stereolithography material which produces very accurate parts with high feature resolution. This material is ideal for the production of tough, complex parts that also exhibit excellent moisture and thermal resistance. Somos® NeXt has a look and feel that is almost indistinguishable from finished traditional thermoplastics, making it perfect for building parts and prototypes for functional testing applications — resulting in time, money and material savings during product development.

Somos® NeXt is an outstanding material for industries such as aerospace, automotive, medical, consumer products and electronics.

**Key Benefits**

- Superior strength and durability
- Exceptionally versatile
- Thermoplastic-like performance, look and feel

**Ideal Applications**

- Tough, functional end-use prototypes
- Snap-fit designs
- Jigs and fixtures
- Packaging and sporting goods

**Seeing was believing for Warrior Sports**

During a test game that used professional athletes, hard rubber balls (weighing 5.25 ounces) were caught and thrown using Somos® NeXt prototype lacrosse heads. Speeds of 90+ mph were achieved to test the durability of not only the design of the head, but also, the durability of Somos® NeXt.
### Liquid Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White</td>
</tr>
<tr>
<td>Viscosity</td>
<td>$-1,000$ cps @ $30^\circ$C</td>
</tr>
<tr>
<td>Density</td>
<td>$-1.17$ g/cm³ @ $25^\circ$C</td>
</tr>
</tbody>
</table>

### Optical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$E_c$</td>
<td>$12.0$ mJ/cm²</td>
</tr>
<tr>
<td>$D_p$</td>
<td>$5.8$ mils</td>
</tr>
<tr>
<td>$E_{10}$</td>
<td>$67$ mJ/cm² (.010 inch thickness)</td>
</tr>
</tbody>
</table>

### Mechanical Properties

<table>
<thead>
<tr>
<th>ASTM Method</th>
<th>Property Description</th>
<th>Metric</th>
<th>Imperial</th>
</tr>
</thead>
<tbody>
<tr>
<td>D638M</td>
<td>Tensile Modulus</td>
<td>2,430 MPa</td>
<td>352 ksi</td>
</tr>
<tr>
<td>D638M</td>
<td>Tensile Strength at Yield</td>
<td>42.2 MPa</td>
<td>6.1 ksi</td>
</tr>
<tr>
<td>D638M</td>
<td>Tensile Strength at Break</td>
<td>32.8 MPa</td>
<td>4.8 ksi</td>
</tr>
<tr>
<td>D638M</td>
<td>Elongation at Break</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>D638M</td>
<td>Elongation at Yield</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>D638M</td>
<td>Poisson's Ratio</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>D790M</td>
<td>Flexural Strength</td>
<td>69.3 MPa</td>
<td>10.1 ksi</td>
</tr>
<tr>
<td>D2240</td>
<td>Flexural Modulus</td>
<td>2,470 MPa</td>
<td>358 ksi</td>
</tr>
<tr>
<td>D256A</td>
<td>Izod Impact (Notched)</td>
<td>50 J/m</td>
<td>0.94 ft-lb/in</td>
</tr>
<tr>
<td>D2240</td>
<td>Hardness (Shore D)</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>D570-98</td>
<td>Water Absorption</td>
<td>0.40%</td>
<td></td>
</tr>
</tbody>
</table>

### Thermal/Electrical Properties

<table>
<thead>
<tr>
<th>ASTM Method</th>
<th>Property Description</th>
<th>Metric</th>
<th>Imperial</th>
</tr>
</thead>
<tbody>
<tr>
<td>E831-05</td>
<td>C.T.E. -40 - 0°C (-40 - 32°F)</td>
<td>73 µm/m°C</td>
<td>40.6 µin/in°F</td>
</tr>
<tr>
<td>E831-05</td>
<td>C.T.E. 0 - 50°C (32 - 122°F)</td>
<td>111 µm/m°C</td>
<td>61.7 µin/in°F</td>
</tr>
<tr>
<td>E831-05</td>
<td>C.T.E. 50 - 100°C (122 - 212°F)</td>
<td>172 µm/m°C</td>
<td>95.6 µin/in°F</td>
</tr>
<tr>
<td>E831-05</td>
<td>C.T.E. 100 - 150°C (212 - 302°F)</td>
<td>173 µm/m°C</td>
<td>96.2 µin/in°F</td>
</tr>
<tr>
<td>D150-98</td>
<td>Dielectric Constant 60 Hz</td>
<td>4.7</td>
<td></td>
</tr>
<tr>
<td>D150-98</td>
<td>Dielectric Constant 1 KHz</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>D150-98</td>
<td>Dielectric Constant 1 MHz</td>
<td>3.6</td>
<td></td>
</tr>
<tr>
<td>D149-97a</td>
<td>Dielectric Strength</td>
<td>15.2 kV/mm</td>
<td>386 V/mil</td>
</tr>
<tr>
<td>D648</td>
<td>HDT @ 0.46 MPa (66 psi)</td>
<td>56°C</td>
<td>133°F</td>
</tr>
<tr>
<td>D648</td>
<td>HDT @ 1.81 MPa (264 psi)</td>
<td>50°C</td>
<td>122°F</td>
</tr>
</tbody>
</table>

These values may vary and depend on individual machine processing and post-curing practices.