Honeywell Spectra® Fiber 1000
high-strength, light-weight
polyethylene fiber

Product Information Sheet
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high-strength, light-weight polyethylene fiber

PRODUCT DESCRIPTION: Spectra fiber 1000, the second in a series of Spectra fibers, was developed to meet customers’ needs for increased performance. It is available in a multitude of deniers for use in a wide range of applications.

This extended-chain polyethylene fiber has one of the highest strength-to-weight ratios of any man-made fiber. Spectra fiber 1000 has a tenacity 15 to 20 percent higher than that of Spectra fiber 900. Spectra fiber is, pound for pound, 15 times stronger than steel, more durable than polyester and has a specific strength that is up to 40 percent greater than that of aramid fiber. Specific performance is dependent upon denier and filament count.

Applications:
• Police and military ballistic vests and helmets
• Composite armor for vehicles and aircraft
• Marine lines and commercial fishing nets
• Industrial cordage and slings
• Sailcloth, fishing line and other sporting equipment
• Cut-protection products

Product Benefits:
• Light enough to float (0.97 g/cc specific gravity)
• High resistance to chemicals, water and ultraviolet light
• Excellent vibration damping
• Highly resistant to flex fatigue
• Low coefficient of friction
• Good resistance to abrasion
• Low dielectric constant makes it virtually transparent to radar

PHYSICAL PROPERTIES

<table>
<thead>
<tr>
<th>(Nominal)</th>
<th>Spectra® Fiber 1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight/Unit Length (Denier) (Decitex)</td>
<td>75</td>
</tr>
<tr>
<td>Ultimate Tensile Strength (g/den) (Gpa)</td>
<td>43</td>
</tr>
<tr>
<td>Breaking Strength (lbs.)</td>
<td>7</td>
</tr>
<tr>
<td>Modulus (g/den) (Gpa)</td>
<td>1550</td>
</tr>
<tr>
<td>Elongation (%)</td>
<td>2.9</td>
</tr>
<tr>
<td>Density (g/cc) (lbs/in³)</td>
<td>0.97</td>
</tr>
<tr>
<td>Filament/tow</td>
<td>40</td>
</tr>
<tr>
<td>Filament (dpf)</td>
<td>1.9</td>
</tr>
</tbody>
</table>

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