Hey polycarbonate, your competition just got a lot stiffer.

A new model for modulus
Designers, molders, and brands looking for greater functionality in their products have a new alternative to glass, metal, polycarbonate, and other plastics. Eastman Tritan™ HM glass fiber reinforced (GFR) copolyester is a high-modulus material that offers greater stiffness, excellent chemical resistance, BPA-free manufacture, and sound-damping qualities.

A strong choice. A sound choice.
It is perhaps ironic that a stiffer material gives designers greater flexibility. With the addition of glass fibers, Tritan HM is an engineered polymer that enables designers to create durable products with thinner, lighter parts—or to easily mold plastic parts that require stiffness and strength superior to unfilled polymers.

<table>
<thead>
<tr>
<th>Property</th>
<th>Tritan HM 1020 (10% GFR)</th>
<th>Tritan HM 1040 (20% GFR)</th>
<th>Tritan HM 1060 (30% GFR)</th>
<th>Polycarbonate (10% GFR)</th>
<th>Polycarbonate (20% GFR)</th>
<th>Polymide 6® (10% GFR)</th>
<th>Polymide 6® (20% GFR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile strength (MPa)</td>
<td>59</td>
<td>92</td>
<td>114</td>
<td>60</td>
<td>100</td>
<td>60</td>
<td>85</td>
</tr>
<tr>
<td>Tensile modulus (MPa)</td>
<td>2900</td>
<td>5080</td>
<td>7660</td>
<td>3790</td>
<td>5860</td>
<td>2600</td>
<td>4500</td>
</tr>
<tr>
<td>Flexural modulus (MPa)</td>
<td>3020</td>
<td>5000</td>
<td>7290</td>
<td>3490</td>
<td>5520</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

*Polymide 6® is conditioned.

Similar to the neat resin, secondary processing, such as ultrasonic welding, is no problem. Additionally, because Tritan HM has contact clarity, it can undergo other processes for quick reliable joining, e.g., laser welding.

Contact clarity
Tritan HM exhibits superior contact clarity over other competing materials.

Interpolated loss factor (800 Hz) vs. glass fiber loading

Even with high glass loadings, Tritan HM exhibits advanced sound-damping properties, producing less acoustic resonance than products made from glass, polycarbonate (PC), or styrene-acrylonitrile (SAN). As a result, replacing existing housing materials with Tritan HM can help reduce sound by several decibels (dB).
Outperforming other plastics

Like all copolysters within the Tritan family, Tritan HM exhibits superior chemical resistance, which can help prevent environmental stress cracking—especially after exposure to increasingly harsh cleaners and disinfectants. Unlike polyamide, it is also resistant to moisture uptake, so there’s minimal dimensional change in humid conditions.

High-strength performance. Low-stress processing.

With the same chemical resistance and BPA-free manufacturing you’d expect from Tritan products, Tritan HM offers better dimensional stability for applications that demand durability and rigidity. Also, with a wider processing window, it enables molders to create thick and thin walls, creating complex and functional designs. Because it’s Tritan, it’s proven in the market. Brands rely on Tritan for its durability, chemical resistance, aesthetics, and safety. Molders and designers rely on it for its ease of processing, good flow properties, and compatibility with secondary operations such as laser welding and printing.

For processing support, molders and engineers can take advantage of TritanMoldIt.com, an interactive online community for injection molders.

Applications/markets

Because of its processability and superior rigidity, Tritan HM is ideal for:

• Appliances
• Automotive applications
• Electronics

To see whether Eastman Tritan™ HM glass fiber reinforced copolyester is right for your next project, contact your Eastman representative or visit us at www.Eastman.com/Tritan.