Maxxam™ HST Polypropylene Formulations
Enhanced Polypropylene Materials For Automotive Lightweighting

The Maxxam™ HST line of filled polypropylene (PP) materials provide 15–25 percent greater strength at equivalent glass loading of traditional glass-filled (GF) PP using proprietary chemical coupling technology. These materials offer exceptional levels of stiffness and heat deflection performance compared to GF PP. Maxxam materials are designed for injection molded structural parts with demanding mechanical and thermal property requirements, and can serve as an integral lightweighting solution.

Maxxam HST material enables multiple lightweighting approaches:

- Replace heavier engineered GF resins, such as nylon
- Redesign traditional GF PP parts with thinner walls

KEY CHARACTERISTICS

- Chemically coupled
- Exceptional dimensional stability
- High flow grades

MARKETS AND APPLICATIONS

These high-performance PP formulations are lighter weight solutions for automotive parts typically manufactured with long glass fiber PP. Highlights of Maxxam HST include:

- Provides lightweight solution in structural applications
- Solves distortion and warpage issues in instrumental panel carriers
- Resists deformation up to approximately 150°C in under-the-hood applications
- Allows for higher regrind usage while maintaining property integrity

Stiffness comparison of Maxxam HST to 30% GF engineering polymers

Flexural Modulus (MPa)

*Conditioned at 50% relative humidity
## MAXXAM HST TECHNICAL PROPERTIES

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>CONDITION</th>
<th>UNITS</th>
<th>TEST METHOD</th>
<th>5430</th>
<th>5435</th>
<th>5440</th>
<th>5450</th>
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<tbody>
<tr>
<td>Reinforcement %</td>
<td>-</td>
<td>%</td>
<td>-</td>
<td>30</td>
<td>35</td>
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<td>50</td>
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<tr>
<td>Specific Gravity</td>
<td>73°F (23°C)</td>
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<td>ISO 1183</td>
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<td>1.18</td>
<td>1.23</td>
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<td>Tensile Strength</td>
<td>Yield</td>
<td>MPa</td>
<td>ISO 527</td>
<td>102</td>
<td>105</td>
<td>113</td>
<td>130</td>
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<tr>
<td>Flexural Modulus</td>
<td>73°F (23°C)</td>
<td>MPa</td>
<td>ISO 178</td>
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<td>Notched Charpy</td>
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<td>kJ/m²</td>
<td>ISO 179</td>
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<td>°C</td>
<td>ISO 75</td>
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