Achieve™ Advanced polypropylene (PP) offers a significant step beyond traditional PP performance. Brand owners and manufacturers can challenge reality and rethink what’s possible in their applications.

This new high performance PP product family represents our latest advancements in proprietary catalyst, process and application technology. The performance of Achieve Advanced PP combined with value chain collaboration enables customers to unlock new business opportunities.

Achieve Advanced PP eliminates trade-offs in performance, processing and end-of-life handling that are associated with conventional polymers. As well as upgrading standard PP, it is perfect for replacing other materials, including over-engineered ABS.

- Extraordinarily tough automotive parts
- Remarkably rigid containers, cups and tubs
- Tremendously comfortable nonwovens
- Amazingly eye-catching appliances

Rethink what’s possible in automotive performance, packaging design, hygiene comfort and appliance appeal.
Extraordinarily tough automotive parts

With higher impact than standard impact copolymers (ICP), Achieve™ Advanced PP enables tougher, lighter vehicle components that are durable and safe.

Achieve Advanced PP enables customers to create new interior and exterior vehicle parts with improved performance – that do more with less. With multi-region supply of consistent quality materials, it can be used neat or in compounds to meet specifications globally.

- Step-out toughness/stiffness balance
- Opportunity to lightweight
- 35% higher impact
- Up to 50% less plastomer use

Remarkably rigid containers, cups and tubs

Offering high melt strength, Achieve Advanced PP enables the economic production of thinner containers, cups and tubs that are easier to thermoform.

The high stiffness provides downgauging opportunities while excellent processing can improve cycle times and offer higher output. High stiffness and increased filler loading contribute to packaging solutions that do more with less.

- High melt strength
- 15% downgauging
- 7% faster cycle time
- Reusable and widely recyclable
Tremendously comfortable nonwovens

Delivering outstanding barrier properties and high fabric strength, Achieve™ Advanced PP enables the consistent manufacture of leak-proof and strong nonwovens.

The strength/softness balance of nonwovens can be tailored to meet customer needs by blending Achieve Advanced PP grades, making them ideal for hygiene products like diapers, wipes, adult incontinence and feminine care products.

- Up to 15% higher fabric strength
- Outstanding barrier properties
- Clean and consistent processing

Amazingly eye-catching appliances

With superior gloss and stiffness compared to standard ICP, Achieve Advanced PP allows brand owners to economically produce appearance parts for appliances.

Achieve Advanced PP is perfect for upgrading existing PP solutions or replacing over-engineered acrylonitrile butadiene styrene (ABS).

- Replacing standard ICP
  - 20% higher gloss
  - 10% improved stiffness

- Replacing ABS
  - 20% cost savings
  - 14% lower density for lighter weight parts

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1. Economic cost calculation is based on the ICIS average ABS price in North East Asia in February 2018. Using a 0.8kg ABS part as an example, savings include the unit price difference between ABS and Achieve Advanced PP7123KNE1, as well as density benefits. Actual total savings are based on the weight of a customer’s replacement part and other associated costs.
Application recommendations & product gradeslate
The Achieve™ Advanced PP portfolio offers a range of grades that provide elevated performance and advanced processing benefits for your applications. Collaboration across the value chain allows brand owners and manufacturers to unlock new opportunities that economically enhance their businesses.

Automotive - interior and exterior vehicle parts

<table>
<thead>
<tr>
<th>Grade</th>
<th>MFR (230°C/2.16 kg) g/10 min</th>
<th>Tensile stress at yield MPa</th>
<th>Flexural modulus 1% secant (2.0 mm/min) – MPa</th>
<th>Flexural modulus 1% secant (0.051 in/min) – psi</th>
<th>Notched Izod impact (23°C) – J/m</th>
<th>Notched Izod impact (23°C) – kJ/m²</th>
<th>Notched Izod impact (−20°C) – kJ/m²</th>
<th>Heat distortion temperature (0.45 MPa) °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieve Advanced PP8285E1</td>
<td>30</td>
<td>19.9</td>
<td>1020</td>
<td>144000</td>
<td>No break</td>
<td>46</td>
<td>6.8</td>
<td>82.8</td>
</tr>
<tr>
<td>ASTM D1238 ISO 527-2 ISO 178 ASTM D790A ASTM D256A ISO 180/1A ISO 180/1A ISO 75-2/B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rigid packaging - containers, cups and tubes

<table>
<thead>
<tr>
<th>Grade</th>
<th>MFR (230°C/2.16 kg) g/10 min</th>
<th>Flexural modulus 1% secant (MPa / psi)</th>
<th>Notched Izod impact (23°C) (J/m</th>
<th>ft·lb/in)</th>
<th>HDT at 66 psi unannealed (°C/°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieve Advanced PP6282NE1</td>
<td>1.8</td>
<td>2020 / 293000</td>
<td>44 / 0.83</td>
<td>116 / 241</td>
<td></td>
</tr>
<tr>
<td>ASTM D1238 ASTM D790A ASTM D256 ASTM D648</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Hygiene - nonwoven fabrics

<table>
<thead>
<tr>
<th>Grades</th>
<th>Conversion process</th>
<th>MFR*</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieve Advanced PP3854</td>
<td>Spunbond</td>
<td>24 MFR</td>
<td>Outstanding uniformity for high-strength and fine denier.</td>
</tr>
<tr>
<td>Achieve Advanced PP6035G1</td>
<td>Meltblown</td>
<td>500 MFR</td>
<td>Enhanced strength with broad processing window.</td>
</tr>
<tr>
<td>Achieve Advanced PP6936G2</td>
<td>Meltblown</td>
<td>1550 MFR</td>
<td>Superior barrier and softness.</td>
</tr>
</tbody>
</table>

* MFR 230°C/2.14kg test methods based on ASTM D1238.

Appliance - appearance parts

<table>
<thead>
<tr>
<th>Grade</th>
<th>MFR (230°C/2.16 kg) g/10 min</th>
<th>Tensile stress at yield MPa</th>
<th>Flexural modulus 1% secant (2.0 mm/min) – MPa</th>
<th>Flexural modulus 1% secant (0.051 in/min) – psi</th>
<th>Notched Izod impact (23°C) – J/m</th>
<th>Notched Izod impact (23°C) – kJ/m²</th>
<th>Notched Izod impact (−20°C) – kJ/m²</th>
<th>Heat distortion temperature (0.45 MPa) °C</th>
<th>Gardner gloss (60°)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieve Advanced PP7123KNE1</td>
<td>11</td>
<td>30.8</td>
<td>1680</td>
<td>228000</td>
<td>85</td>
<td>6.9</td>
<td>102</td>
<td>89</td>
<td></td>
</tr>
</tbody>
</table>

Values given are typical and should not be interpreted as specifications. Data generated by or on behalf of ExxonMobil Chemical. Test methods are based on the ASTM and/or ISO standards.

Use Achieve™ Advanced PP to challenge reality and rethink what’s possible.

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