Discarded plastic fishing ropes were contaminating the delicate ecosystem of Patagonia. An inspirational project, Atando Cabos, began with the aim of collecting the ropes and recycling them into high-quality products. But the ropes were made of two incompatible materials that wouldn’t mix and couldn’t be separated. ExxonMobil collaborated with Atando Cabos to design a solution.

By using Vistamaxx performance polymers, Atando Cabos was able to compatibilize PE and PP, turn the discarded ropes into high-quality end products and begin a project that brought environmental, social and financial benefits.

After 12 months:
over 1,000 tons of rope recycled

By 2020 Atando Cabos aims to recycle
2,000 tons of rope per year
Recycling of plastics is a global growth market. One of the main barriers to using recycled material is the need for costly and time-consuming separation of incompatible plastics. By allowing incompatible PE and PP plastics to mix in the melt, Vistamaxx polymers reduce the need for separation and give manufacturers the possibility of higher-quality outputs, cost reduction due to increased recycled content and access to new lower-quality, low-cost sources.

Key benefits Vistamaxx™ performance polymers bring to the Atando Cabos project:

Compatibilizes PP and PE
Up to 45% better impact strength
Up to 40% better flow rate
Unlocks new product possibilities

Processing efficiencies and improved end product toughness as demonstrated by improved flow and impact properties:

**Flow properties**

<table>
<thead>
<tr>
<th></th>
<th>Ropes</th>
<th>Ropes plus 5% Vistamaxx™</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFR 230°C [g/10min]</td>
<td>6.0</td>
<td>5.8</td>
</tr>
<tr>
<td>Spiral flow [in]</td>
<td>21.6</td>
<td>21.0</td>
</tr>
</tbody>
</table>

Testing methods for MFR @230°C, 2.16kg based on ASTM D1238
Testing method for Spiral flow based on ExxonMobil method

**Impact strength**

<table>
<thead>
<tr>
<th></th>
<th>Ropes</th>
<th>Ropes plus 5% Vistamaxx™</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notched Izod (J/m)</td>
<td>86</td>
<td>75</td>
</tr>
<tr>
<td>RT</td>
<td>0°C</td>
<td></td>
</tr>
</tbody>
</table>

Testing method for Notched Izod based on ASTM D256

Rethink Recycle with Vistamaxx™ performance polymers

Vistamaxx performance polymers are a proven, cost-effective solution that allows low-cost recycling, targeting high-value applications.

Ropes Ropes plus 5% Vistamaxx™
21.6 21.4 21.2 21.0 20.8 20.6 20.4 20.2 20.0 19.8 19.6 19.4 19.2 19.0 18.8 18.6 18.4 18.2 18.0 17.8 17.6 17.4 17.2 17.0 16.8 16.6 16.4 16.2 16.0 15.8 15.6 15.4 15.2 15.0 14.8 14.6 14.4 14.2 14.0 13.8 13.6 13.4 13.2 13.0 12.8 12.6 12.4 12.2 12.0 11.8 11.6 11.4 11.2 11.0 10.8 10.6 10.4 10.2 10.0 9.8 9.6 9.4 9.2 9.0 8.8 8.6 8.4 8.2 8.0 7.8 7.6 7.4 7.2 7.0 6.8 6.6 6.4 6.2 6.0 5.8 5.6 5.4 5.2 5.0 4.8 4.6 4.4 4.2 4.0 3.8 3.6 3.4 3.2 3.0 2.8 2.6 2.4 2.2 2.0 1.8 1.6 1.4 1.2 1.0 0.8 0.6 0.4 0.2 0.0

Testing method for Notched Izod based on ASTM D256

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