Material Report

PP + 30% SHORT CHOPPED GLASS FIBER COUPLING AGENT COMPARISON

In this report, we tested the effectiveness of Fusabond P353 and GRAFTABOND™ PPH-MAH 70025 CA as coupling agents in polypropylene, filled with 30% short chopped glass fibers.

MATERIALS USED

Base PP: Resinex PP RXP 2004
Glass Fibers: Thermoflow 636

Coupling Agent:

<table>
<thead>
<tr>
<th>Coupling Agent:</th>
<th>Fusabond P353</th>
<th>GRAFTABOND™ PPH-MAH 70025 CA</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFI (190°C, 0.325 kg):</td>
<td>22.4 g/10 min</td>
<td>20 g/10 min</td>
</tr>
<tr>
<td>Grafting Degree:</td>
<td>1.3 – 1.9 %</td>
<td>≈ 2.5 %</td>
</tr>
</tbody>
</table>

TESTS PERFORMED

Both blends were prepared in composition: 30% GF, 69% PP, 1% Coupling Agent. The blends were extruded on a 36D extruder and specimen were injection molded into A1 specimen size. Tensile (ISO 527-2) and Charpy (ISO179, Specimen size & orientation: 1eU) tests were performed with the specimen.

RESULTS

<table>
<thead>
<tr>
<th>Property</th>
<th>Units</th>
<th>Fusabond P353</th>
<th>GRAFTABOND™ PPH-MAH 70025 CA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Tensile Stress</td>
<td>MPa</td>
<td>92.95</td>
<td>100.2</td>
</tr>
<tr>
<td>Elongation at Break</td>
<td>%</td>
<td>5.1</td>
<td>5.1</td>
</tr>
<tr>
<td>Charpy Impact Strength</td>
<td>kJ/m²</td>
<td>34.1</td>
<td>33.8</td>
</tr>
</tbody>
</table>
Material Report

CONTACTS

MANAGEMENT

CEO/CTO | Victor Bolduev +386 40 534 739

Executive Director / CMO | Pavel Kobzev +386 40 867 937

Pavel@graftpolymer.com

GRAFT POLYMER D.O.O (OFFICE)

Emonska Cesta 2, Ljubljana Slovenia.
Company Num. 8056200000,
VAT. SI 30561345
Tel + 386 1 777 6561
office@graftpolymer.com
www.graftpolymer.com

GRAFT POLYMER D.O.O (PRODUCTION/WAREHOUSE)

Mejaceva ulica 2, 1353 Borovnica Slovenia
Company Num. 8056200000,
VAT. SI 30561345
office@graftpolymer.com
www.graftpolymer.com

GRAFT POLYMER (UK) LTD

Central Working Victoria Eccleston Yards 25,
Eccleston Pl, London, UK, SW1W 9NF.
Company Num. 10776788, VAT. 281712016
www.graftpolymer.com