Exfola™
Surface Modifier

DEVELOPMENTAL DATA SHEET
A PRODUCT OF MITSUI FINE CHEMICALS, INC.

Exfola™ is an additive for polyolefin, such as polyethylene (PE) and polypropylene (PP), that combines the characteristics of polyolefin and silicone. Exfola™ is most often used as a surface modifier for injection molded parts, or extruded articles and film.

Enhanced surface properties include:
- Releasability
- Oil and Water Repellence
- Lower Coefficient of Friction
- Abrasion Resistance
- Surface Smoothness

Exfola™ is widely used as a surface modifier of polyolefin film, sheet, containers, and packages. The product is available in pellet form, and in two types:
- Polyethylene-based (PE) Masterbatch
- Polypropylene-based (PP) Masterbatch

Unlike traditional silicone blended masterbatch, Exfola™ is a true tri-block copolymer. As such, the product offers:
- Minimal Silicone Transfer
- Minimal Bleed-Out

Developmental Product Data:

<table>
<thead>
<tr>
<th>Property of Base Resin</th>
<th>Grade</th>
<th>PE3027</th>
<th>PP2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Polymer</td>
<td></td>
<td>LDPE</td>
<td>Hom-PP</td>
</tr>
<tr>
<td>Tm (°C)</td>
<td></td>
<td>114</td>
<td>163</td>
</tr>
<tr>
<td>MFR (g/10min) @ 190°C</td>
<td></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>MFR (g/10min) @ 230°C</td>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td></td>
<td>927</td>
<td>900</td>
</tr>
<tr>
<td>Concentration of Exfola (%)</td>
<td></td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Master Batch MFR (g/10min) @ 190°C</td>
<td></td>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>

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