STAND UP POUCHES

Flex cracking resistance & excellent organoleptics with Lumicene®
Opportunities & challenges

Stand Up Pouch is a fast growing market: compared to traditional packaging, it can offer significant advantages in terms of production, shipping and warehousing costs while reducing CO₂ emissions. However it is a challenging packaging format to ensure goods protection and meet demanding organoleptic requirements.

Lumicene® key benefits

Total’s answer is its metallocene range: Lumicene® and Lumicene Supertough® offering excellent organoleptic properties, tailored sealing (temperature / force) and superior mechanical properties (including flex crack resistance, dart drop and tear resistance).
**CASE STUDY – HIGH PERFORMANCE POUCH FROM THIN FILM**

<table>
<thead>
<tr>
<th>Function</th>
<th>Layer</th>
<th>Product</th>
<th>Thickness [µm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lamination</td>
<td>E</td>
<td>LDPE FE8000</td>
<td>15</td>
</tr>
<tr>
<td>Downgauging</td>
<td>D</td>
<td>Luminene® M4707EP</td>
<td>15</td>
</tr>
<tr>
<td>Downgauging &amp; puncture</td>
<td>C</td>
<td>Supertough 32ST05</td>
<td>5</td>
</tr>
<tr>
<td>Stiffness &amp; planarity</td>
<td>B</td>
<td>Luminene® M4707EP</td>
<td>7.5</td>
</tr>
<tr>
<td>Sealing</td>
<td>A</td>
<td>Luminene® M1810EP</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Total = 50 µm

- Easy to run on industrial machine
- High seal strength > 50 N/15 mm
- Pass burst test > 1050 mbar
- Pass vacuum test > 30 s @ 800 mbar
- Pass 2m drop test

- Lamination with 12 µm PET
- Format 140x240x40 mm
- 5 mm seal width, round corners
- Standard sealing parameters
WHAT TOTAL CAN OFFER

High protection even when abused

- Supertough has highest Flex cracking resistance

Excellent organoleptics – less VOC

- Fewer short chains
- Less volatile organic compounds

Tailored sealing properties