**Product Description**

*Circulen* HP456J is a circular polymer, which contains building blocks from non-mechanical recycling processes converting renewables and organic or plastic wastes into new cracker feedstock. The content of recycled cracker feedstock is certified by mass balance.

*Circulen* HP456J is a polypropylene homopolymer used for extrusion and thermoforming applications. *Circulen* HP456J is formulated with a low water-carry-over additive package. Typical applications are monofilaments, ropes and tapes.

**Regulatory Status**

For regulatory compliance information, see *Circulen* HP456J Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

This grade is not intended for medical and pharmaceutical applications.

**Status**

Commercial: Active

**Availability**

Africa-Middle East; Europe

**Application**

Intermediate Bulk Containers; Raffia/Tapes/Strapping

**Market**

Textile

**Processing Method**

Tapes & Raffia

**Attribute**

Homopolymer

<table>
<thead>
<tr>
<th>Typical Properties</th>
<th>Nominal Value</th>
<th>Units</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melt Flow Rate, (230 °C/2.16 kg)</td>
<td>3.4</td>
<td>g/10 min</td>
<td>ISO 1133-1</td>
</tr>
<tr>
<td>Density</td>
<td>0.900</td>
<td>g/cm³</td>
<td>ISO 1183-1</td>
</tr>
<tr>
<td><strong>Mechanical</strong></td>
<td>1400</td>
<td>N/mm²</td>
<td>ISO 178</td>
</tr>
<tr>
<td>Flexural Modulus</td>
<td>23</td>
<td>N/mm²</td>
<td>ISO 527-1,-2</td>
</tr>
<tr>
<td>Tensile Stress at Break, (23 °C, 50 mm/min)</td>
<td>34</td>
<td>N/mm²</td>
<td>ISO 527-1,-2</td>
</tr>
<tr>
<td>Tensile Stress at Yield, (23 °C, 50 mm/min)</td>
<td>600</td>
<td>%</td>
<td>ISO 527-1,-2</td>
</tr>
<tr>
<td>Tensile Strain at Break, (23 °C, 50 mm/min)</td>
<td>11</td>
<td>%</td>
<td>ISO 527-1,-2</td>
</tr>
<tr>
<td>Tensile Strain at Yield, (23 °C, 50 mm/min)</td>
<td>600</td>
<td>%</td>
<td>ISO 527-1,-2</td>
</tr>
<tr>
<td><strong>Thermal</strong></td>
<td>153</td>
<td>°C</td>
<td>ISO 306</td>
</tr>
<tr>
<td>Vicat Softening Temperature, (A50)</td>
<td>90</td>
<td>°C</td>
<td>ISO 75B-1,-2</td>
</tr>
<tr>
<td>Deflection Temperature Under Load, (0.45 MPa, Unannealed)</td>
<td>90</td>
<td>°C</td>
<td>ISO 75B-1,-2</td>
</tr>
</tbody>
</table>
Notes

These are typical property values not to be construed as specification limits.

Conveying:
Conveying equipment should be designed to prevent production and accumulation of fines and dust particles that are contained in polymer resins. These particles can under certain conditions pose an explosion hazard. Conveying systems should be grounded, equipped with adequate filters and regularly inspected for leaks.

Storage:
The resin is packed in 25 kg bags, octabins or bulk containers protecting it from contamination. If it is stored under certain conditions, i.e. if there are large fluctuations in ambient temperature and the atmospheric humidity is high, moisture may condense inside the packaging. Under these circumstances, it is recommended to dry the resin before use. Unfavorable storage conditions may also intensify the resin's slight characteristic odor.

Resin should be protected from direct sunlight, temperatures above 40°C and high atmospheric humidity during storage. Higher storage temperatures may reduce the storage time.

The information submitted is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. This information does not remove the obligation of the customer to inspect the material on arrival and notify us of any faults immediately. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.

Company Information

For further information regarding the LyondellBasell company, please visit http://www.lyb.com/.

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