Technical Data Sheet

Adflex Z 108 S

Catalloy

Product Description

Adflex Z 108 S is a reactor TPO (thermoplastic polyolefin) manufactured using the proprietary Catalloy process technology from LyondellBasell. Adflex Z 108 S features a very high softness, a very low flexural modulus and a high melt flow rate. It is used by customers for injection molding, impact modification, extrusion coating, soft compounding, film and fiber applications. It is also selected by customers for the modification of polypropylene homopolymer and random copolymer without altering the transparency. The grade is available in natural pellet form.

Regulatory Status

For regulatory compliance information, see Adflex Z 108 S Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status

Commercial: Active

Availability

Europe; North America; South & Central America

Application

Carpet Backing; Filament Yarn; Hygiene Nonwoven; Impact Modification; Pipe Coating; Roofing Underlayment; TPO Foils and Skins

Market

Flexible Packaging; Industrial, Building & Construction; Textile

Processing Method

Cast Film; Compounding; Continuous Filament/Spinning; Extrusion Coating; Injection Molding; Spunbond

Attribute

High Elongation; High Flow; Low Hardness; Low Temperature Impact Resistance; Narrow Molecular Weight Distribution

Typical Properties

<table>
<thead>
<tr>
<th>Physical</th>
<th>Nominal Value</th>
<th>Units</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melt Flow Rate, (230 °C/2.16 kg)</td>
<td>27</td>
<td>g/10 min</td>
<td>ISO 1133-1</td>
</tr>
<tr>
<td>Density, (23 °C, Method A)</td>
<td>0.88</td>
<td>g/cm³</td>
<td>ISO 1183-1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mechanical</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural Modulus</td>
<td>80</td>
<td>MPa</td>
<td>ISO 178</td>
</tr>
<tr>
<td>Tear Strength</td>
<td>62</td>
<td>kN/m</td>
<td>ASTM D624</td>
</tr>
<tr>
<td>Tensile Stress at Break</td>
<td>6</td>
<td>MPa</td>
<td>ISO 527-1, -2</td>
</tr>
<tr>
<td>Tensile Stress at Yield</td>
<td>5</td>
<td>MPa</td>
<td>ISO 527-1, -2</td>
</tr>
<tr>
<td>Tensile Strain at Break</td>
<td>800%</td>
<td>%</td>
<td>ISO 527-1, -2</td>
</tr>
<tr>
<td>Tensile Strain at Yield</td>
<td>20%</td>
<td>%</td>
<td>ISO 527-1, -2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Charpy Impact Strength - Notched</td>
<td>33</td>
<td>kJ/m²</td>
<td>ISO 179</td>
</tr>
<tr>
<td>(23 °C)</td>
<td>Note: Failure Mode - Partial Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-20 °C)</td>
<td>2.8</td>
<td>kJ/m²</td>
<td>ISO 179</td>
</tr>
<tr>
<td>Note: Failure Mode - Partial Break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(-40 °C)</td>
<td>1.3</td>
<td>kJ/m²</td>
<td>ISO 179</td>
</tr>
<tr>
<td>Note: Failure Mode - Complete Break</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Notes
These are typical property values not to be construed as specification limits.

### Processing Techniques
Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

### Company Information
For further information regarding the LyondellBasell company, please visit [http://www.lyb.com/](http://www.lyb.com/).

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### Multi-axial Impact Strength
- (23° C, 2.2 m/s, 3.2 mm plaque) 10 J  
  **Note:** Failure Mode - Ductile
- (-40°C, 2.2 m/s, 3.2 mm plaque) 18 J  
  **Note:** Failure Mode - Ductile

### Hardness
- Shore Hardness, (Shore D, 15 sec) 30  
  **ISO 868**

### Thermal
- Vicat Softening Temperature, (A50) 53 °C  
  **ISO 306**
- Heat Deflection Temperature B, (0.45 MPa, Unannealed) 37 °C  
  **ISO 75B-1, -2**
- DSC Melting Point 142 °C  
  **ISO 11357-3**

### Optical
- Haze, (45 mil) 49 %  
  **ASTM D1003**
- Gloss, (60°, 45 mil) 62  
  **ASTM D2457**

### Additional Information
- Mold Shrinkage  
  **ISO 294-4**

Please contact LyondellBasell for shrinkage information.