LOTADER® 4700

Ethylene – Acrylic Ester - Maleic Anhydride terpolymer

DESCRIPTION

LOTADER® 4700 is a random terpolymer of ethylene, acrylic ester and maleic anhydride, polymerized by high-pressure autoclave process.

- Acrylic ester brings softness and polarity, while keeping high thermal stability during processing.
- The high content of acrylic ester leads to high flexibility (low-cristallinity) and high impact absorption behaviour.
- Maleic anhydride gives reactivity (towards OH and NH₂ groups), leading to optimal dispersion during melt mixing with engineering thermoplastics (mainly polyamides).

TYPICAL PROPERTIES

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
<th>Unit</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Acrylate content</td>
<td>29</td>
<td>% Wt</td>
<td>FTIR (internal method)</td>
</tr>
<tr>
<td>Maleic Anhydride content</td>
<td>1.3</td>
<td>% Wt</td>
<td>FTIR (internal method)</td>
</tr>
<tr>
<td>Melt Index (190°C / 2.16 kg)</td>
<td>7</td>
<td>g/10min</td>
<td>ISO 1133 / ASTM D1238</td>
</tr>
<tr>
<td>Melting point</td>
<td>65</td>
<td>°C</td>
<td>ISO 11357-3</td>
</tr>
<tr>
<td>Density</td>
<td>0.94</td>
<td>g/cm³</td>
<td>ISO 1183 / ASTM D1505</td>
</tr>
<tr>
<td>Vicat Softening Temperature (10N)(1)</td>
<td>&lt;40</td>
<td>°C</td>
<td>ISO 306 / ASTM D1525</td>
</tr>
<tr>
<td>Flexural modulus (1)</td>
<td>&lt;30</td>
<td>MPa</td>
<td>ISO 178 / ASTM D790</td>
</tr>
<tr>
<td>Elongation at break (1)</td>
<td>800</td>
<td>%</td>
<td>ISO 527-2 / ASTM D638</td>
</tr>
<tr>
<td>Tensile strength at break (1)</td>
<td>5</td>
<td>MPa</td>
<td>ISO 527-2 / ASTM D638</td>
</tr>
</tbody>
</table>

(1) On compression molded samples.

APPLICATIONS

Due to its properties (softness, reactivity), LOTADER® 4700 is suitable as modifier to improve the impact strength of polyamides (PA6, PA66, PA12 etc.). It can also be used as a compatibilizer for polyamides / polyolefins blends.

For more detailed information and recommendations regarding your specific application, please contact your local ARKEMA technical representative.
**PROCESSING**

Heat stability of acrylate comonomers allows processing temperatures as high as for polyamides, which is the main material using LOTADER® 4700 as impact modifier. However, to minimize the generation of gels, it is recommended to purge the equipment with LDPE after a run is completed. LOTADER® 4700 is not corrosive.

**STORAGE, HANDLING AND SAFETY**

LOTADER® 4700 is usually packed in waterproof bags or rigid containers with waterproof liner. It should be stored in dry conditions and be kept out of moisture in an aerated building. Improper storage conditions may cause degradation and could have consequences on physical properties of the product. It is recommended to reseal the bag or the liner after use to protect LOTADER® 4700 against moisture.

Due to its physical properties (Vicat temperature <40°C), it may be possible that the LOTADER® 4700 shows some caking. This is particularly true during summer time.

Safety data sheet as well as information on handling and storage of the LOTADER® 4700 is available upon request to your ARKEMA representative or on the web site LOTADER.com.

**SHELF LIFE**

Two years from the date of delivery, in unopened packaging. For any use above this limit, please refer to our technical services.

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