Technical Data Sheet

Aquathene AQ120000

W&C Polyolefin Compound

Product Description

Aquathene AQ120000 is an ethylene vinylsilane copolymer selected by customers for use in power cable applications. This natural resin can be crosslinked by exposure to moisture after extrusion with an appropriate catalyst.

Regulatory Status

For regulatory compliance information, see Aquathene AQ120000 Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status

Commercial: Active

Availability

North America

Application

Wire & Cable

Market

Wire & Cable

Processing Method

Wire & Cable

Typical Properties

<table>
<thead>
<tr>
<th></th>
<th>Nominal Value</th>
<th>English Units</th>
<th>Nominal Value</th>
<th>SI Units</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Melt Flow Rate, (190 °C/2.16 kg)</td>
<td>1.5</td>
<td>g/10 min</td>
<td>1.5</td>
<td>g/10 min</td>
<td>ASTM D1238</td>
</tr>
<tr>
<td>Physical Density, (23 °C)</td>
<td>0.923</td>
<td>g/cm³</td>
<td>0.923</td>
<td>g/cm³</td>
<td>ASTM D1505</td>
</tr>
<tr>
<td>Mechanical Tensile Stress at Break</td>
<td>1920</td>
<td>psi</td>
<td>13.3</td>
<td>MPa</td>
<td>ASTM D638</td>
</tr>
<tr>
<td>Mechanical Tensile Elongation at Break</td>
<td>720</td>
<td>%</td>
<td>720</td>
<td>%</td>
<td>ASTM D638</td>
</tr>
</tbody>
</table>

Product Description

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Notes

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

Processing Techniques

Users should determine the conditions necessary to obtain optimum product properties and suitability of the product for the intended application.

AQ120000 may be combined with other Aquathene masterbatches to meet the requirements of UL listed and CSA certified designs and can be extruded onto wire using conventional extrusion equipment.

The total system crosslinks after the materials are mixed during extrusion and subsequently exposed to moisture. Crosslinking can be achieved by exposure to steam, immersion in water or storage at ambient conditions. Since cure time varies considerable with environmental conditions and cable constructions, contact your LyondellBasell sales or technical service representative for detailed cure conditions.

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

General Extrusion Conditions

A suggested temperature profile for use with a 2.5", 24:1 extruder equipped with a Maddock mixing screw follows:

<table>
<thead>
<tr>
<th>Extruder Zone</th>
<th>Temperature Range</th>
<th>Extruder Zone</th>
<th>Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed</td>
<td>130 - 140 °C (266 - 284 °F)</td>
<td>Zone 5</td>
<td>165 - 170 °C (329 - 338 °F)</td>
</tr>
<tr>
<td>Zone 2</td>
<td>140 - 150 °C (284 - 302 °F)</td>
<td>Adapter</td>
<td>165 - 170 °C (329 - 338 °F)</td>
</tr>
<tr>
<td>Zone 3</td>
<td>150 - 160 °C (302 - 320 °F)</td>
<td>Die / Head</td>
<td>165 - 170 °C (329 - 338 °F)</td>
</tr>
<tr>
<td>Zone 4</td>
<td>155 - 165 °C (311 - 329 °F)</td>
<td>Melt</td>
<td>175 - 185 °C (347 - 365 °F)</td>
</tr>
</tbody>
</table>

Material Handling

AQ120000 should be stored separately from the crosslinking catalyst masterbatch until extrusion.

Pre-drying is typically not required. For additional handling information see the material's safety data sheet (SDS).

Company Information

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

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