P109 high performance e-glass
multi-end roving for aeronautic applications

**DESCRIPTION**
- **P109** multi-end rovings are made from E-Glass basic strands (or ends), assembled with no intentional twist.
- P109 Rovings are coated with a silane based sizing which makes it compatible with most commonly used thermoset resins, typically epoxy ones.
- P109 Rovings are intended for production of composites structures with exceptional static and fatigue strengths for aeronautic end-used.

**BENEFITS**
- High fatigue resistance
- Excellent mechanical and thermal properties
- Easy unwinding
- Very good wet-out and impregnation
- High strand integrity

**APPLICATIONS**
P109 Rovings can be used in a large variety of textile processes:
- Filament winding (dry and wet process)
- Unidirectional pre-pregging (dry and wet process)
- Pultrusion
- Weaving (woven or knitted fabrics)
P109 HIGH PERFORMANCE E-GLASS
MULTI-END ROVING FOR AERONAUTIC APPLICATIONS

TECHNICAL CHARACTERISTICS (NOMINAL VALUES)

<table>
<thead>
<tr>
<th>Product</th>
<th>Filament Ø (µm)</th>
<th>Linear weight of roving (Tex)</th>
<th>Loss on Ignition (%) ISO 1887</th>
<th>Moisture content (%) ISO 3344</th>
</tr>
</thead>
<tbody>
<tr>
<td>P109 09E 756</td>
<td>9</td>
<td>756</td>
<td>0.48</td>
<td>&lt; 0.20</td>
</tr>
</tbody>
</table>

PRODUCT AVAILABILITY (STANDARD REFERENCE)

Roving are supplied on a cardboard tube with int. Ø 76.6 mm (ext. Ø 82 mm), 270 mm long for external unwinding.

<table>
<thead>
<tr>
<th>Manufacturing region</th>
<th>Product</th>
<th>Roving internal Ø (mm)</th>
<th>Roving external Ø (mm)</th>
<th>Height (mm)</th>
<th>Net weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>P109 09E 756</td>
<td>76.6</td>
<td>190</td>
<td>255</td>
<td>9.14</td>
</tr>
</tbody>
</table>

PACKAGING

Manufactured from a collection of continuous glass fibers which are gathered, without mechanical twist, into a single strand or roving. Each P109 roving is protected by a polythene bag and identified by an individual label. Customer specific packaging requirement may be available upon request. Packaging system is not designed for stacking.

<table>
<thead>
<tr>
<th>Manufacturing region</th>
<th>Tex (g/km)</th>
<th>Doff Ø (mm)</th>
<th>Pallet dimensions L x W x H (cm)</th>
<th>Layers/pallet</th>
<th>Doff/layers</th>
<th>Total # of doffs</th>
<th>Pallet weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>756</td>
<td>190</td>
<td>120 x 100 x 104</td>
<td>3</td>
<td>20</td>
<td>60</td>
<td>731.2</td>
</tr>
</tbody>
</table>

LABELING

Each doff has a self-adhesive identification label, showing the product reference and the production date.

STORAGE

The P109 Rovings should be stored dry in their original packaging. Optimal conditions are temperatures between 15°C and 35°C and humidity between 35% and 65%. If the product is stored at low temperature (below 15°C), it is advisable to condition it in the workshop for at least 24 hours before use, to prevent condensation.

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