UDCarbon® 90 CF60-12K

Generic Information

Unidirectional moulding compound based on epoxy resin and reinforced with continuous carbon fibres designed for compression moulding technology. These material with a weight reduced potential and a high design freedom enter different areas for structural application where high mechanical properties are requested.

Code Description

UDCarbon 90 CF60-12K

- Carbon Fibre TowTex
- Carbon Fibre Content
- Carbon Fibre
- Resin Code

Packaging: roll
Material width: 500 mm
Shelf life at -18°C: 6 months
Shelf life at RT 23°C: 4 weeks

Fibre length: continuous
Fibre: 12K
Nominal fibre content w/w: 60 %
Areal weight: 800 g/m²
Typical cure temperature: 135-145 °C
Typical moulding pressure: 80-120 bar
Typical cure time: 90 sec/mm

Storage and Handling

Store the product in its original sealed packaging at -18°C. Leave product to reach room temperature before unrolling, to prevent condensation. The usual precautions when handling uncured synthetic resins and fine fibrous materials should be observed, and a Safety Data Sheet is available for this product. The use of clean disposable inert gloves provides protection for the operator and avoids contamination of material and components.
Mechanical Properties on cured material

Properties were determined on compression-moulded specimens according DIN EN 14598

<table>
<thead>
<tr>
<th>Properties</th>
<th>Method</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>ISO 1183 A</td>
<td>g/cm³</td>
<td>1.51</td>
</tr>
<tr>
<td>Shrinkage</td>
<td>ISO 2577</td>
<td>%</td>
<td>-0.14</td>
</tr>
<tr>
<td>Tensile Modulus</td>
<td>ISO 527-4</td>
<td>N/mm²</td>
<td>110000</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>ISO 527-4</td>
<td>N/mm²</td>
<td>1000</td>
</tr>
<tr>
<td>Flexural Modulus</td>
<td>ISO 14125</td>
<td>N/mm²</td>
<td>80000</td>
</tr>
<tr>
<td>Flexural Strength</td>
<td>ISO 14125</td>
<td>N/mm²</td>
<td>1050</td>
</tr>
<tr>
<td>Impact Strength</td>
<td>ISO 179</td>
<td>KJ/m²</td>
<td>130</td>
</tr>
<tr>
<td>Glass Transition Temperature</td>
<td>ISO 11357-2</td>
<td>°C</td>
<td>150</td>
</tr>
<tr>
<td>Glass Transition Temperature (post-curing)</td>
<td>ISO 11357-2</td>
<td>°C</td>
<td>200</td>
</tr>
</tbody>
</table>

Additional Info

Disclaimer: The information on this product data sheet is based on our most up-to-date knowledge. However, it is the user’s responsibility to determine the suitability of a product for their application. Information and recommendations contained in this document are given in good faith without warranty or guarantee, and it is the user that is responsible for the compliance with all legal requirements. The user is urged to carry out tests for themselves to determine the suitability of any product for their proposed applications. All the trademarks, trade names, logos and other indications of origin mentioned on the product data sheet are property rights of Polynt Composites Germany GmbH.

Contacts

Polynt Composites Germany GmbH
Kieselstrasse 2
D-56357 Miehlen
Tel. +49 (0)6772 93 21 0
Fax. +49 (0)6772 93 68 88
Email: carboninfo@polynt.com
Jurisdiktion Koblenz; HRB 20782
www.polynt.com