Description
HexPly® 1454 is a self-extinguishing epoxy resin system with very high self adhesion properties. It has good handling and is tolerant of a wide range of processing conditions. HexPly® 1454 is ideal for the fabrication of honeycomb sandwich structures when high peel strength and good impact properties are required. HexPly® 1454 prepregs are only available with fabric reinforcements.

Benefits and Features
- Controlled flow matrix
- Good tack life
- Very tacky
- Self extinguishing
- Self adhesive on honeycomb and foam
- Suitable for a range of pressure (0.8 to 5 bar)
- Versatile cure cycle 100 - 150°C
- Good impact resistance

Resin Matrix Properties

**Rheology**

![Viscosity/poise vs Temperature](image)

Rheometrics dynamic spectrometer. Heat up rate 2°C/min

**Gel Time**

![Gel Time vs Temperature](image)
**Cured Matrix Properties** (cured at 125°C)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile strength</td>
<td>65 MPa</td>
<td>ISO R527 type 1</td>
</tr>
<tr>
<td>Tensile modulus</td>
<td>3.06 GPa</td>
<td>ISO R527 type 1</td>
</tr>
<tr>
<td>Tensile strain</td>
<td>3.3%</td>
<td>DMA</td>
</tr>
<tr>
<td>Glass transition temperature</td>
<td>110 - 120°C</td>
<td></td>
</tr>
<tr>
<td>Cured resin density</td>
<td>1.26 g/cm³</td>
<td></td>
</tr>
<tr>
<td>Fire behaviour</td>
<td>Pass</td>
<td>FAR 25 853 apd F part 1</td>
</tr>
<tr>
<td>Typical glass prepreg</td>
<td>300 g/m²</td>
<td>NF T 16.101</td>
</tr>
</tbody>
</table>

**Prepreg Curing Conditions**

The standard cure cycle is 90 min at 125°C, at a pressure between 0.8 and 5 bar. The following alternative cure cycles can be used:

<table>
<thead>
<tr>
<th>Temperature °C</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>6 hours</td>
</tr>
<tr>
<td>110</td>
<td>4 hours</td>
</tr>
<tr>
<td>125</td>
<td>90 min</td>
</tr>
<tr>
<td>130</td>
<td>60 min</td>
</tr>
<tr>
<td>140</td>
<td>45 min</td>
</tr>
<tr>
<td>150</td>
<td>20 min</td>
</tr>
</tbody>
</table>

Performance testing should accompany alternative cure cycles to ensure suitability for the particular application.

**Prepreg Storage Life**

- Shelf Life @ 23°C 30 days
- Guaranteed Shelf Life @ -18°C 18 months

**Precautions for Use**

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.

**For more information**

Hexcel is a leading worldwide supplier of composite materials to aerospace and industrial markets. Our comprehensive range includes:

- HexTow® carbon fibers
- HexForce® reinforcements
- HexPly® prepregs
- HexMC® molding compounds
- HexFlow® RTM resins
- Redux® adhesives
- HexTool® tooling materials
- HexWeb® honeycombs
- Acousti-Cap® sound attenuating honeycomb
- Engineered core
- Engineered products

For US quotes, orders and product information call toll-free 1-800-688-7734. For other worldwide sales office telephone numbers and a full address list, please go to:

http://www.hexcel.com/contact/salesoffice

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