Modipur® polyurethane systems enable complex shapes to be achieved at low cure temperatures and in rapid production cycles.
Modipur® Polyurethane Systems
Selector Guide

How to use the chart
Hexcel offers a broad range of formulated
2 component polyurethane systems for sports and
industrial applications. After mixing the systems react
and solidify to form parts which range from very light
to relatively heavy, and from very flexible to rigid,
depending on the choice of raw materials.

This chart has been arranged to provide an overview
of our range of systems. To choose the most
appropriate system first refer to the mechanical
properties and applications. More information can be
obtained from data sheets, available from Hexcel, and
our technical personnel.

<table>
<thead>
<tr>
<th>Type</th>
<th>Key Features</th>
<th>Benefits</th>
<th>Density Range kg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semiflexible</td>
<td>Compact skin open cell internal structure; sandwich-like properties</td>
<td>Long term elasticity, variable hardness</td>
<td>400-800</td>
</tr>
<tr>
<td>Integral</td>
<td>Hard surface; high E-modulus</td>
<td>Good flow, high dimensional stability</td>
<td>200 - 800</td>
</tr>
<tr>
<td>RIM (Reaction Injection Moulding)</td>
<td>Compact flexible foam, high temperature stability</td>
<td>High impact resistance, excellent adhesion</td>
<td>1000 - 1200</td>
</tr>
<tr>
<td>HexFlow® Resins</td>
<td>Low temperature cure; &gt; 80°C</td>
<td>Short cure cycles; 80°C/6 mins - 120°C/1 min</td>
<td></td>
</tr>
</tbody>
</table>

Modipur® Polyurethane Systems are well suited for ski foam cores.
<table>
<thead>
<tr>
<th>Wall Thickness (mm)</th>
<th>Flexural E-Modulus (MPa)</th>
<th>Shrinkage (%)</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 - 100</td>
<td>300 - 850</td>
<td>0.9 - 1.1</td>
<td>Spoilers, Dashboards, Buffers</td>
</tr>
<tr>
<td>1 - 100</td>
<td>500 - 1100</td>
<td>0.4 - 0.8</td>
<td>Skis, Snowboards, Technical Parts, Window Profiles</td>
</tr>
<tr>
<td>1 - 10</td>
<td>1000</td>
<td>0.9 - 1.1</td>
<td>Skis, Snowboards, Automotive Parts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/A</td>
<td>Snowboards</td>
</tr>
</tbody>
</table>

**Notes**

**Processing of Modipur Polyurethane Systems**

2 Component Systems: Component I Polyol, Component II Isocyanate

**Processing**
The Polyol has to be homogenised prior to use.

**Storage**
Materials should be protected from moisture and stored in closed containers at room temperature.

**Form of Delivery**
- 215 kg drums Polyol
- 250 kg drums Isocyanate
- or 800-1000 kg container
- or 10 tons tanker

**Ecological Aspects**
After solidification the finished parts are ecologically harmless and easily recyclable.

**Modipur® Polyurethane Systems**
Offer intriguing possibilities for sports and leisure equipment such as the hockey stick toe shown above.
# Hexcel Product Family

<table>
<thead>
<tr>
<th>HexTow® Carbon Fiber</th>
<th>HexFlow® Resins</th>
<th>HexMC® Molding Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HexForce® Reinforcements</td>
<td>Polyspeed® Laminates</td>
<td>HexWeb® Honeycomb Core</td>
</tr>
<tr>
<td>HiTape® Advanced Reinforcements</td>
<td>Modipur® Polyurethane</td>
<td>HexWeb® Engineered Core</td>
</tr>
<tr>
<td>HexPly® Prepregs</td>
<td>Redux® Adhesives</td>
<td>HexTool® Tooling Material</td>
</tr>
<tr>
<td>HiMax™ Multiaxial Reinforcements</td>
<td>HexWeb® Engineered Products</td>
<td>Acousti-Cap® sound attenuating honeycomb</td>
</tr>
</tbody>
</table>

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
- HiMax™ multiaxial 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 1-866-601-5430. 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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