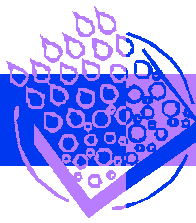


**Modipur®  
Polyurethane  
Systems**

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*Selector Guide*



# Modipur® Polyurethane Systems

## HOW TO USE THE CHART

HEXCEL COMPOSITES 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 Composites, and our technical personnel.

Type	Key Features	Benefits	Density Range kg/m <sup>3</sup>
<b>RIGID</b>	Closed cell structure; low to medium density	High compression, shear strength and insulation value	10 - 600
<b>SEMIFLEXIBLE</b>	Compact skin open cell internal structure; sandwich-like properties	Long term elasticity, variable hardness	60 - 800
<b>INTEGRAL</b>	Hard surface; high E-modulus	Good flow, high dimensional stability	200 - 800
<b>RIM (Reaction Injection Moulding)</b>	Compact flexible foam, high temperature stability	High impact resistance, excellent adhesion	1000 - 1200
<b>COATING</b>	Solvent-free thixotropic gel coat	UV-stable, weather resistant	1000 - 1200
<b>LAMINATING RESINS</b>	Low temperature cure; > 80°C	Short cure cycles; 80°C/6 mins - 120°C/1 min	-

## Notes

### Processing of Modipur Polyurethane Systems

#### 2 Component Systems

Component I Polyole  
Component II Isocyanate

#### Approximate Mixing Ratios

Type	Polyole	Isocyanate
Rigid	1	1
Semiflexible	1	0.5
Integral	1	1.4
Rim	1	1
Coating	1	0.9
Laminating resins	1	1.2

#### In Parts by Weight

Type	Polyole	Isocyanate
Rigid	1	1
Semiflexible	1	0.5
Integral	1	1.4
Rim	1	1
Coating	1	0.9
Laminating resins	1	1.2

#### Processing

The Polyole 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 Polyole  
250 kg drums Isocyanate  
or 800-1000 kg container  
or 18 tons tanker

#### Ecological Aspects

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

Wall Thickness mm	Flexural E-Modulus MPa	Shrinkage %	Application
10 - 150	Not important for standard applications	0.3 - 0.5	Insulation Packaging Snowboard Cores Bonding Foam
5 - 100	300 - 850	0.9 - 1.1	Spoilers Dashboards Buffers
1 - 100	500 - 1100	0.4 - 0.8	Skis, Snowboards, Technical Parts Window Profiles
1 - 10	1000	0.9 - 1.1	Skis Snowboards Automotive Parts
0.5 - 2	Resistance to tear - DIN 53575 124 N/mm <sup>2</sup>	N/A	In Mould Coat
-	-	N/A	Snowboards



# Modipur® Polyurethanes Selector Guide

## Important

All information is believed to be accurate but is given without acceptance of liability. Users should make their own assessment of the suitability of any product for the purposes required. All sales are made subject to our standard terms of sale which include limitations on liability and other important terms.

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## For More Information

Hexcel Composites is a leading worldwide supplier of composite materials to aerospace and other demanding industries. Our comprehensive product range includes:

- Carbon, glass, aramid and hybrid prepregs
- Honeycomb cores
- Structural film adhesives
- Honeycomb sandwich panels
- Special process honeycombs
- RTM materials

For further information, please contact your nearest sales office, or visit our website at [www.hexcelcomposites.com](http://www.hexcelcomposites.com)

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