



Hexcel Composite Materials for Winter Sports



HexPly® Prepregs



HexForce® Reinforcements



Polyspeed® Laminates



Modipur® PUR systems



Hexcel's Composite Materials for Winter Sports

A Reliable Partner in Winter Sports



When the large scale production of commercial skis began in the early 1970's Hexcel produced and sold its own brand of skis for over a decade. Hexcel skis had a great reputation remembered by consumers to this day. Since then the industry has undergone an evolution, not only with Hexcel's increasing specialisation as a leading supplier of materials to the industry, but also in terms of the technologies and products supplied.

For more than 40 years, Hexcel has been engaged in the development of materials for the construction of winter sports equipment and has remained in very close contact with the market and the special requirements of the industry.

Every year we deliver millions of linear metres of fibre-reinforced laminates and prepreps with a quality and consistency that has endured throughout the decades. With the groundbreaking development of Polyurethanes for resin injection Hexcel was able to introduce and establish this material for the construction of winter sports equipment and ultimately help customers to reduce their production costs.

As a specialist in composite technologies Hexcel has established Research and Technology centres to serve our customers in various sectors including aerospace, wind energy and automotive markets. This established knowledge base also leads to the future development of materials for the production of winter sports equipment.

Our skilled technical support team helps with the selection of materials and processing techniques. The team also provides training for beginners in the fields of Composites and Polyurethane Technologies.

An aerial photograph of a vast, snow-covered mountain slope. The terrain is marked with numerous ski tracks and several dark, rocky outcrops. A lone skier is visible in the middle of the slope, providing a sense of scale to the immense landscape. The lighting creates soft shadows, highlighting the contours of the snow.

Reinforcing
Material – for
the toughest
challenges



HexPly® Prepregs

High strength to weight performance

Prepregs are fibre-reinforced (glass or carbon) resin matrix systems, which are supplied to customers as a rolled sheet, cured under pressure and at high temperature. The cure process transforms the prepreg into a high-quality composite which is highly durable, exceptionally stiff and extremely lightweight. Hybrid reinforcements combining glass and carbon are possible.

To help our customers achieve short production cycles and continuous throughput Hexcel has developed a range of resins and products to meet the requirements of the ski industry.

Benefits of using prepreg:

- Clean working area
- Constant fibre-volume ratio
- High stiffness and excellent fatigue properties
- Short processing and cure cycle
- Optimised design construction



Polyspeed® Laminates

For rapid, cost-effective production

Providing the lightness and strength of fibre-reinforced epoxies, without the time consuming lay-up and cure processes, Polyspeed® is Hexcel's range of laminates, used widely in the manufacture of skis and snowboards and for many industrial applications. Polyspeed® laminates are ideal wherever light, strong and durable materials are needed to resist high stresses and strains. The laminates are also suitable as skins for sandwich panels.

Polyspeed® laminates are fibre-reinforced epoxy resin impregnated materials, which are supplied pre-cured. Hexcel manufactures a range of pressed laminates with either woven or unidirectional reinforcements, for high performance.

Benefits of using laminates:

- R-Laminates: only UD-Glass fibres without fibre deflection
- R-Combi-Laminates: combine the benefits of UD-fibres and fabrics
- EV-Laminates: pressed fabric reinforcements with a minimum tolerance of thickness



Modipur® Polyurethanes

Cost effective technology

If you need to produce cost-effective high performance components, in medium to high production volumes, then Modipur® could be your solution. Modipur® polyurethane systems enable complex shapes to be achieved at low cure temperatures and in rapid production cycles.

Hexcel supplies a wide range of formulated two-component systems that are used for sports, automotive and other industrial applications. The Modipur® range includes rigid, semi-flexible and integral foams with closed or open cell structures. The products are used as core materials, as insulation and/or for their adhesive properties, in sports and industrial applications.

We don't sell from a catalogue – our strength is the creation of tailor made solutions for individual customers and partners.



HexForce® Reinforcements

For stiffness and strength

Hexcel has extensive in-house weaving capabilities for the manufacture of unidirectional and woven reinforcement fabrics in glass, carbon, aramid fibres and hybrids. The wide range of weave styles includes standard weaves, biaxials and multiaxials.

Hexcel also supplies peel ply fabrics in the form of finely woven lightweight polyamide. These are applied to the composite surface prior to curing the laminate and removed after cure.

Benefits of using peel ply:

- Provides a clean surface ready for adhesive bonding
- Eliminates the need for mechanical abrasion of the composite surface



For more information and the full range of data sheets for Hexcel's composite materials for winter sports please visit www.hexcel.com. To contact us please find our list of sales offices at: www.hexcel.com/OurCompany/sales-offices. Alternatively e-mail wintersport@hexcel.com.

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