Divinycell® H

The Proven High Performance Sandwich Core

- High strength to weight ratio
- Excellent fatigue strength
- Good adhesion / peel strength
- Compatible with all main resin types
- High thermal stability
- Small cell size
- Thermoformable
- Low water absorption
- Good insulation values
- Ultra-wide density range

DIAB

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The Proven High Performance Sandwich Core

For more than 30 years Divinycell H has been the first choice of leading producers of sandwich composite structures around the world. During this time the properties of Divinycell H have been continuously enhanced and improved so that it continues to be ideal for the vast majority of sandwich composite applications.

Ideal for a Wide Range of Applications

Divinycell H has been widely used over many years in virtually every application area where sandwich composites are employed. These include the marine (leisure, military and commercial), land transportation, wind energy, civil engineering/infrastructure and general industrial markets.

Material & Process Compatibility

Divinycell H is compatible with virtually all commonly used resin systems (polyester, vinyl ester and epoxy) including those with high styrene contents. Its good temperature performance in

terms of withstanding high exothermic peaks and providing high dimensional stability, makes it the ideal choice for hand laminating, vacuum bagging and closed molding processing.

Mechanical Properties

In its application range Divinycell H has the highest strength to density ratio. It exhibits at both ambient and elevated temperatures impressive compression strength and shear properties (normally the most important for a sandwich core material).

In addition the ductile qualities of Divinycell H make it ideal for applications subject to fatigue, slamming or impact loads. Where a more brittle core material might well shatter or delaminate as a result of an impact, the ductile performance of H allows it to absorb energy when deflected without structural failure.

Other key features of Divinycell H include consistent high quality, good adhesion / peel strength, excellent chemical resistance, low water absorption and good thermal / acoustic insulation.

Full details of the core's properties are contained in the comprehensive Divinycell H Technical Manual which can be downloaded from our web site - www.diabgroup.com.

Widest Range of Densities

Divinycell H is available in an ultra-wide density range - 45-250 kg/m^3 (3-15.6 lb/ft^3). This enables designers to optimize the structure by choosing the correct density for their application.

Standard & Special Finishing

Divinycell H sandwich core can be supplied with probably the widest range of finishes available in the industry. The aim is to facilitate and speed core installation, enhance component quality / performance and to meet specific process requirements. These include grid-scored, double cut and 'infusion' grooved/ perforated forms.

Ready-Made Kits

For those involved in series production, Divinycell H can be supplied in ready-made construction kits where each piece is precut, shaped, as necessary, and numbered to fit exactly into its designated place in the mold. This substantially reduces build times, saves labor costs, improves quality and cuts waste.

Worldwide Supply

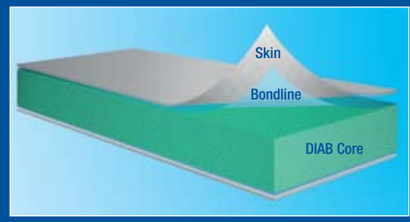
Divinycell H is a global material for today's global market. It is manufactured in two locations in Europe and one in the USA. DIAB also has its own finishing / kitting facilities in Australia, China, India, Italy, Lithuania, Sweden, Thailand and the USA plus a global network of 15 sales/technical support operations.

Global Product & Technology Support

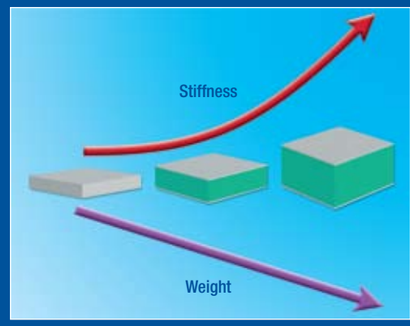
DIAB customers worldwide can take advantage of the company's unrivalled level of product support and the specialist skills offered by DIAB Technologies.

DIAB Technologies' role is to help our customers take full advantage of the benefits offered by the DIAB sandwich concept. Their aim is to maximize time, labor and materials savings and improve quality. With their long term experience and knowledge of sandwich composites, they can help with specific challenges or be involved in the complete product development cycle - laminate design, structural engineering, prototyping, process auditing, development and optimization, training, manufacture and testing.

The Sandwich Concept



The DIAB sandwich concept increases structural performance while optimizing weight. A sandwich consists of two high strength skins or facings separated by a core material. The skins take up the bending stresses and give the structure a hard wearing surface. The light DIAB core absorbs the shear stresses and distributes them over a larger area.



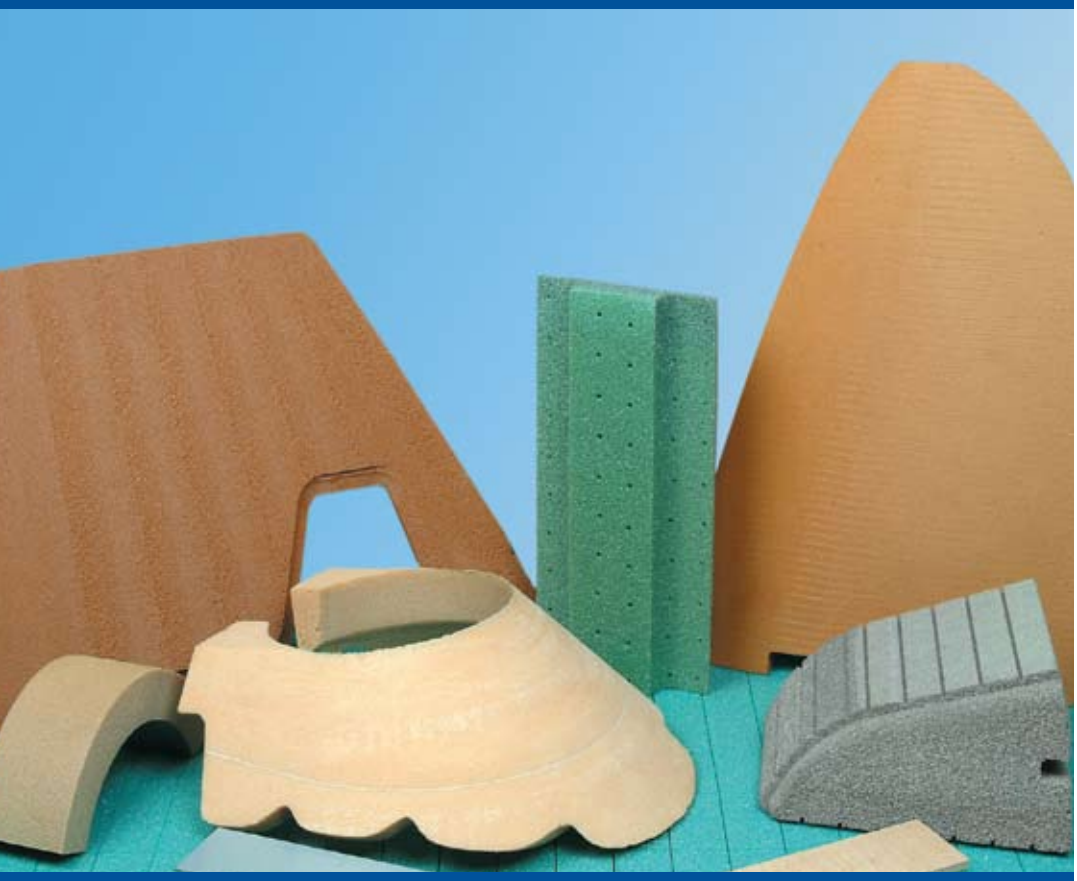
Compared to monolithic composite laminates or metals, the sandwich concept significantly reduces weight and increases stiffness while maintaining strength. Even higher strength and stiffness properties can be achieved by increasing the thickness of the core without a weight penalty.

The excellent strength-to-weight ratio of the sandwich concept can be used in a variety of ways - higher speeds, longer range, greater payload capacity or reduced power demand – all of which result in better operating economy. Divinycell sandwich composites require minimum maintenance and should any repairs be necessary, they can be carried out easily without any loss of structural integrity.

DIAB has pioneered the use of the sandwich concept to make structures that are significantly lighter and stronger than those made from steel, aluminum and wood.

The company is very much the technology leader. In addition to being the first company to introduce core kits, it has been in the vanguard of new environment-friendly processing developments such as DIAB Core Infusion Technology™.

We have always been much more than just a materials supplier. To this end we look to establish long-term partnerships with our customers by providing high performance composite materials and an extensive range of technical support services.



www.diabgroup.com

Australia
Tel +61 (0)2 9620 9999
E-mail: info@au.diabgroup.com

China
Tel +86 (0)512 5763 0666
E-mail: info@cn.diabgroup.com

Denmark
Tel +45 48 22 04 70
E-mail: info@dk.diabgroup.com

France
Tel + 33 (0)5 56 47 20 43
E-mail: info@fr.diabgroup.com

Germany
Tel +49 (0)511 42 03 40
E-mail: info@de.diabgroup.com

India
Tel +91 (0)44 42 31 67 68
E-mail: info@in.diabgroup.com

Italy
Tel +39 0119 42 20 56
E-mail: info@it.diabgroup.com

Norway
Tel +47 66 98 19 30
E-mail: info@no.diabgroup.com

Poland
Tel: +48 602 449 660
E-mail: info@pl.diabgroup.com

Spain
Tel +34 661 373 267
info@es.diabgroup.com

Sweden
Tel +46 (0)430 163 00
E-mail: info.se@se.diabgroup.com

Thailand
Tel +66 (0)38 465 388
E-mail: info@th.diabgroup.com

Taiwan
Tel +886-2-27576330
E-mail: info@tw.diabgroup.com

United Kingdom
Tel +44 (0)1452 50 18 60
E-mail: info@uk.diabgroup.com

USA
Tel +1 (972) 228-3500
E-mail: info@us.diabgroup.com

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Divinycell H SB-Eng-2.08- Rev.1.0