

Divinycell[®] H

The Proven High Performance Sandwich Core



High strength to weight ratio

Excellent fatigue strength

Good styrene resistance

Very good 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

Divinycell® H

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 with



high residual strength and good dimensional stability, makes Divinycell H ideal for hand laminating, vacuum bagging, RTM (resin transfer molding) and other closed molding processes.

Mechanical Properties

In its application range Divinycell H has the highest strength to density ratio. It exhibits at both ambient and elevated temperatures impressive compressive 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 ductility of Divinycell H allows it to absorb energy when deflected without structural failure.

Other key features of Divinycell H include consistent high quality, excellent 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 that can be downloaded from the DIAB web site - www.diabgroup.com.



Widest Range of Densities

Divinycell H is available in an ultra-wide density range - 38 to 250 kg/m³ (2.4-15.6 lb/ft³). 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 pre-cut, 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, cuts waste and saves storage space.

Worldwide Supply

Divinycell H is a global material for today's global market. It is manufactured in Sweden, Italy, the USA and India.

DIAB also has its own finishing / kitting facilities in Australia, China, India, Italy, Lithuania, Sweden and the USA plus a global network of 16 sales/technical support operations.

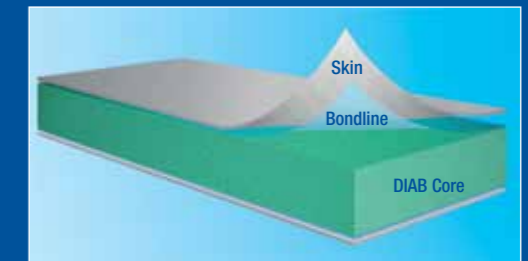


Global Product & Technology Support

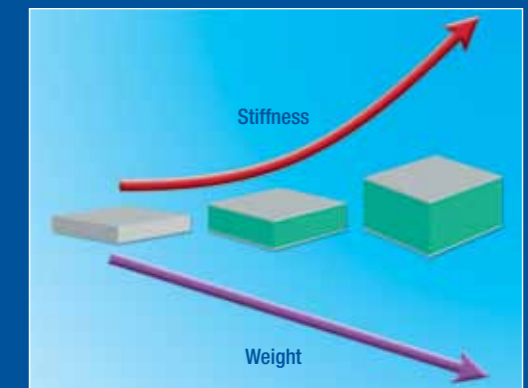
DIAB customers worldwide can take advantage of the company's unrivalled level of product support and the specialist skills offered by the Composites Consulting Group.

The Composites Consulting Group is a DIAB Group affiliate that provides composites engineering services. CCG assists our customers to cost-effectively meet objectives such as: increased service life, decreased environmental impact, higher payloads or reduced energy usage by providing services within design, engineering, testing tooling, process optimization & training.

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.

We are a world leader in the provision of innovative sandwich composite solutions that make our customers products light, strong and competitive.

DIAB's offerings include high performance core materials, cost effective kits and a comprehensive range of engineering and process support services.

We provide composite solutions to a wide range of markets including: wind energy; commercial, military and pleasure marine; transportation; aerospace; industry and construction.

With personnel located throughout the world via 16 sales and technical support operations, we are able to offer worldwide support to our global customer base. We have manufacturing units in Australia, China, Ecuador, India, Italy, Lithuania, Sweden and the USA.

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