

# Klegecell<sup>®</sup>

The High Performance Sandwich Core



**High Strength to Weight Ratio**

**High Ductility**

**Good Dimensional Stability**

**Small Cell Size**

**High Insulation Properties**

**Good Chemical Resistance**

**Low Water Absorption**

**Simple to Use**

**DIAB**



# Klegecell

## ◆ THE HIGH PERFORMANCE CORE

For over fifty years the Klegecell name has been synonymous with high performance cores for structural and insulation applications. Throughout this time Klegecell has been steadily improved and enhanced. Today Klegecell offers cost-effective performance for the vast majority of sandwich applications where there is a need for a lightweight/high strength core material.

It offers an outstanding strength to weight ratio, high ductility properties, good dimensional stability, excellent moisture resistance and good thermal properties. It is available in a particularly wide range of densities (45 to 200 kg/m<sup>3</sup>) to enable designers, engineers and builders to choose the most appropriate material for their specific application.

## ◆ EASY TO USE

Despite its high strength in service, Klegecell is particularly easy to work using conventional woodworking tools. It can be drilled, milled, turned and sawn to close tolerances.

## ◆ READY-MADE KITS

For series production Klegecell kits can be supplied. Here each piece is pre-cut and shaped as necessary so that it will fit exactly into its designated place. This substantially reduces build times, waste and working capital while improving the quality and competitiveness of the final product.

## ◆ STANDARD & SPECIAL FINISHING

In addition to being available in plain sheets, Klegecell can be supplied with a wide range of standard and custom finishes to further facilitate installation, enhance component quality and facilitate processing operations such as infusion. These include grooving, perforating, grid scoring and double contouring.

## ◆ WORLDWIDE SUPPORT & SERVICE

Klegecell is available throughout the world via an extensive network of operating subsidiaries, agents and distributors.

In addition Klegecell is fully supported by unrivalled technical support. Our technical services personnel can help you to maximize time, labour and materials savings and improve quality while at the same time foresee and eliminate potential problems.

We can help you with specific challenges or be involved in the complete product development cycle - design, engineering, prototyping, process development, training and manufacture.



## The Sandwich Concept

The sandwich concept increases structural performance while optimizing weight. A sandwich consists of two high strength skins or facings separated by a core material. It operates in much the same way as an 'I-beam'.

The skins take up the bending stresses and give the structure a hard wearing surface. The light Klegecell 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.

Klegecell sandwich composites require the minimum of maintenance and should any repairs be necessary, they can be carried out easily without any loss of structural integrity.

*DIAB manufactures and markets products and services based on advanced polymer and composite technologies.*

*Over thirty years of experience, together with continuous research and development, have made DIAB an international market leader, with its products being the primary elements in sandwich structures.*

*We supply core materials and solutions for sandwich composite components that make our customers' products light, strong and competitive.*

*DIAB also provides a range of support services so that a customer can maximize the benefits of sandwich composites technology and take full advantage of the most cost-effective processing techniques.*

*Klegecell is approved\* by:*



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\*Please see individual data sheets for specific approvals.

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