



Product Description

Manufactured using advanced technology, our High Strength Carbon Fibre Foam Core Panel achieves the ultimate combination of strength, light weight and stunning appearance making the panel ideal for a wide range of uses from structural engineering applications through to exhibition systems and architectural use.

This specially developed foam-cored carbon fibre panel is available in 6mm and 11mm thickness and uses a combination of genuine 2/2 twill 3k carbon fibre combined with a layer of woven E-glass either side of a light-weight closed-cell PVC foam core create a light-weight panel with excellent deflection strength. For maximum strength-to-weight ratio the sheets are manufactured without any gelcoat or surface coating but our propriety resin technology ensures a glossy, pin-hole free 'class-A' surface.

Resin matrix is epoxy throughout with a high temperature post-cure for maximum mechanical performance.

The panel has a smooth carbon fibre finish on both sides however the reverse side of the sheet is not designed to be a cosmetic face and as such some light scratches or imperfections from pressing, handling and cutting are to be expected.

Typical Uses

- Lightweight Structural/Engineering Projects
- Vehicle Panelling / Undertrays
- Universal Carbon Fibre Splitters
- Marine Panelling
- Exhibition Systems / Displays
- Architectural Use

Advantages

The foam core allows us to make a panel of satisfactory thickness to be very stiff for the minimum possible weight. Conventional panels (made without a core material) are significantly heavier for the same deflection strength.

Specification

Balanced Layup

To create a more uniform distribution of strength, all our foam cored panels are manufactured using a balanced laminate layup each side of the foam core. This helps prevent warping and gives a flatter finished panel.

Key Features

- Foam Cored panel for light weight and stiffness
- Balanced laminate both sides of the core
- High Gloss finish on top, satin on back

Available Sizes and Thickness

The panel is available in 6mm and 11mm overall thickness. Panels are available cut to the following sizes: 1980x980mm, 980x980mm, 980x480mm and 480x480mm.

Layup Schedule

The Layup Schedule of the Panels are as follows:

200gsm 3k 2x2 Twill Carbon Fibre
290gsm Plain Weave Woven Glass Fibre
5mm or 10mm EasyCell 75 PVC Foam Core
290gsm Plain Weave Woven Glass Fibre
200gsm 3k 2x2 Twill Carbon Fibre

Mechanical Properties

The Following Data was measured from testing our 6mm thick production panel.

Property	Units	Value
Sheet Thickness	mm	6.0
Weight	kg/m ²	2.71
Density	g/cm ³	2.71
Tensile Strength 0/90°	MPa	71.4
Tensile Strength 45°	MPa	36.7
Tensile Modulus 0/90°	GPa	66.1
Tensile Modulus 45°	GPa	20.6
Youngs Modulus 0/90°	GPa	9.52
Compressive Strength	MPa	1.33
Compressive Modulus	GPa	72.5
Core Sheer Strength	MPa	1.09
Core Sheer Modulus	MPa	27.75
Elongation at Break at 0/90°	%	2.64
Elongation at Break at 45°	%	24.2
Tg Onset (DMA)	°C	70
Core Thermal Conductivity at Room Temp	W/mK	0.033
Maximum Water Absorption	g/m ²	37.5

Disclaimer

This data is not to be used for specifications. Values listed are for typical properties and should not be considered minimum or maximum.

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