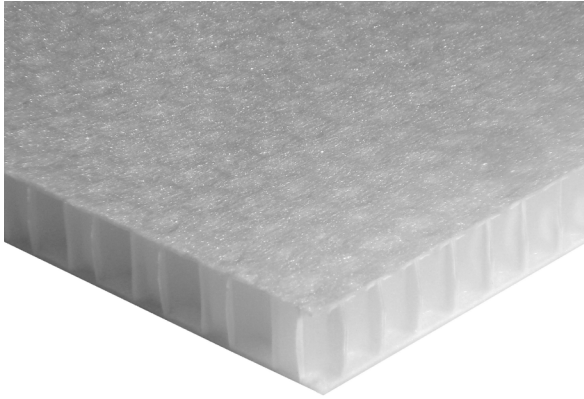


THE NEW GENERATION OF LIGHTWEIGHT CORE MATERIALS THERMHEX POLYPROPYLENE HONEYCOMBS



EconCore's ThermHex technology is successfully applied to produce polypropylene honeycomb cores for the composite market. These cores are used in a wide range of applications in industrial lightweight construction like the construction industry, vehicle and automobile production, shipbuilding, sport and leisure equipment and many more.

ThermHex processing

ThermHex polypropylene honeycomb cores are suitable as a core material for the manufacture of sandwich panels using different types of skin lamination and a choice of lamination methods such as manual lamination for the production of panels with glass-fibre skins, thermoplastic lamination or bonding with duromer adhesives

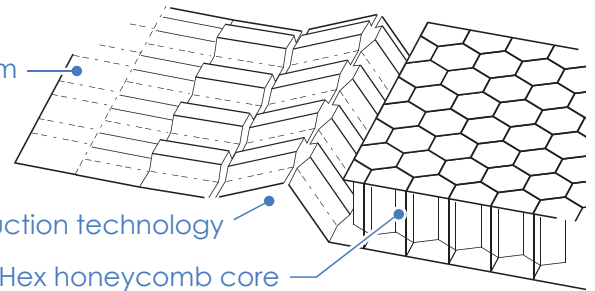
Vehicle and automobile production



Extruded
polypropylene film

Patented production technology

ThermHex honeycomb core



Yacht and boat construction



As a standard, ThermHex honeycomb cores use PP packaging film. This prevents the ingress of resin into the cells during processing, and therefore guarantees uniform mechanical characteristics of the finished product while, at the same time, requiring less adhesives. Finally, polyester flees layers on both sides of the core create a surface to allow perfect further bonding.

Wind and solar energy production

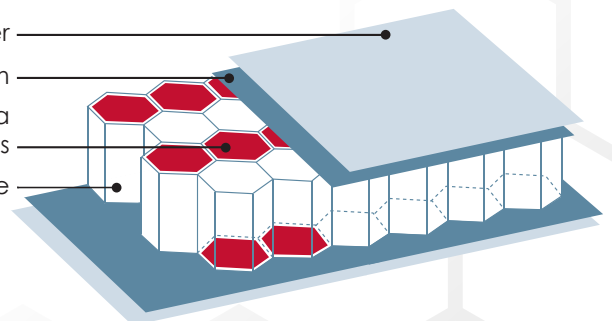


Polyester fleece layer

PP closure film

Extra bonding area
for skin materials

ThermHex core



Architecture and swimming pool



Key advantages:

- Significant weight saving
- Major cost reduction
- Superior surface quality
- Safe and simple processing
- Improved noise and temperature insulation



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TECHNICAL PARAMETERS

Material Nomenclature	THPP80FN								
Base material	Polypropylene								
Core thickness (mm) – standard dimensions	4	8	10	15	20	22	23	28	
Cell size (mm)	3.0	8.0	8.0	9.6	9.6	9.6	9.6	9.6	9.6
Nominal cell wall density (kg/m ³)	80								
Compression strength (MPa) * (ASTM C365-57)	1.2								
Compression modulus (MPa)* (ASTM C365-57)	40								
Shear strength L/W (MPa) (ASTM C273-61)	0.3/0.5								
Shear modulus L/W (MPa) (ASTM C273-61)	6/15								
Temperature range for processing and application (°C)	-30 to +80 short-term up to +140								
Thermal conductivity* (W/mK)	0.065								
Standard surface finish (both sides)	Polypropylene closure film and Polyester nonwoven								
Standard dimensions (mm)	2500 (length) x 1200 (width) Other dimensions upon request								

*data provided from testing of bare core

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