

POLYCARBONATE HONEYCOMB PANELS FOR TRANSLUCENT APPLICATIONS

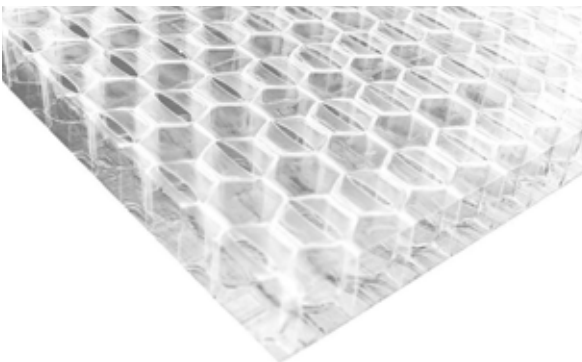


The versatile EconCore ThermHex technology is able to efficiently produce honeycomb core sandwich panels with various core and skin material combinations. By applying ThermHex technology to produce polycarbonate honeycomb panels EconCore introduces a new generation of translucent panels for building applications having performance advantages over conventional solutions including high thermal insulating and aesthetically appealing honeycomb structure.



High translucency is becoming more important for many building applications. This is driven not only by personal taste and design, but also by the environmental need for more natural lighting in place of artificial lighting. Structures such as verandas, stadiums, shopping centers, libraries, office buildings and factories benefit from translucent building elements that meet functional and environmental needs while being aesthetically appealing. In many cases for these applications glass is too heavy, too brittle and difficult to install. Building elements based on polymer materials are often preferred over glass due to ease of installation and impact resistance.

Using the continuous ThermHex process to produce polycarbonate honeycomb sandwich panels results in outstanding mechanical performance-to-weight ratio with considerable cost saving potential compared to traditional PC or PMMA multiwall sheets (MWS).



Key advantages:

- Improved mechanical performance
- Bidirectional performance over traditional MWS
- Weight and cost saving
- High speed cost efficient continuous process
- Product customization flexibility
- High thermal insulation due to honeycomb structure
- Aesthetically appealing

Applications: building and construction (including roofing, daylighting panels, interior walls, semi-structural panels for design, greenhouses) and other applications requiring lightweight translucent panel solutions.

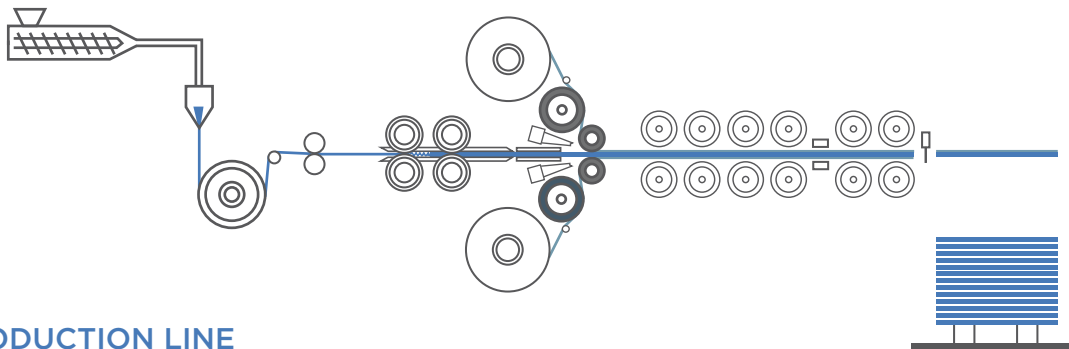


POLYCARBONATE HONEYCOMB PANELS FOR TRANSLUCENT APPLICATIONS

ThermHex polycarbonate honeycomb panels exceed traditional polycarbonate multiwall sheets (PC MWS)

Light transmission	75%. (Better compared to PC MWS)
U value	< 2,5 W/m ² K. Thermal insulation at a level of 3-wall MWS
Rigidity	Loaded panel shows significantly lower bending deflection compared to MWS, even at 30% lower panel weight. Higher isotropy over MWS enabling larger spans in construction.
Impact resistance	Better than MWS, outperforms glass
Weight savings potential	More than 30% compared to MWS
Cost savings potential	More than 30% compared to MWS

ThermHex process for polycarbonate honeycomb panels.



PRODUCTION LINE

- Output speed up to 10m/min. (factor of 2 higher than for MWS)
- Line capacity up to 5 million m² per annum
- Easy change over regarding colors, finish, and even material type
- High ROI

About EconCore

EconCore provides technology for the continuous production of honeycomb sandwich materials. The fast, versatile, continuous ThermHex process allows users to produce sandwich materials for various applications including automotive, transportation, building and construction, industrial packaging/graphical displays, furniture and many others at minimal cost, weight and environmental impact.