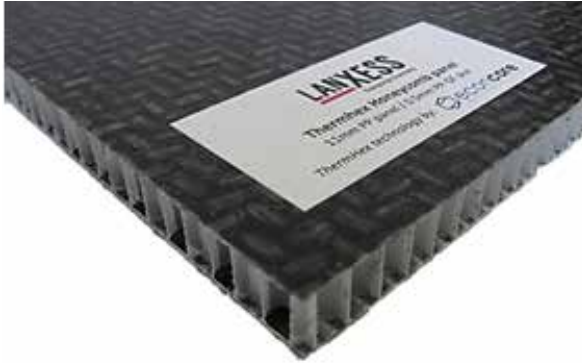


COMPOSITE HONEYCOMB SANDWICH PANELS THERMOPLASTIC SOLUTION FOR DEMANDING APPLICATIONS



ThermHex honeycombs combined with composite skins result in very strong and tough but lightweight sandwich panels. The skins can be made of different types of composites and today several companies already use EconCore's technology to produce sandwich panels with WPC skins in a continuous process or apply GRP thermoset composite layers onto ThermHex honeycombs. Panels made using glass fiber reinforced thermoplastics skins (referred often as to "organosheet" or, from German, "organoblech") offer a unique set of properties and are the latest development from EconCore in composite honeycomb sandwich panels.

Integration of the honeycomb core production with in-line lamination of composite skins allows producers to minimize handling operations and to reduce production costs of the sandwich panel. Furthermore, finishing (e.g. lamination of decorative or UV protection layers) and post-processing (e.g. thermoforming) operations can be integrated in the process of production of the final sandwich part. Features such as thermal insulation are inherent due to the honeycomb structure.

Sandwich panels with skins made of reinforced thermoplastics offer not only excellent rigidity at minimal weight but also toughness which is due to the thermoplastic material system. Thermoformability of this sandwich solution allows entering applications beyond flat parts. Depending on the needs of a specific application the composite skins are usually glass or carbon fiber based. However, for less demanding applications, EconCore has also developed sandwich panels with natural fiber composite skins.

Applications: transportation (including truck & trailers as well as rolling stock paneling), automotive (semi-structural parts), building and construction (e.g. scaffolding panels), heavy duty packaging, others.



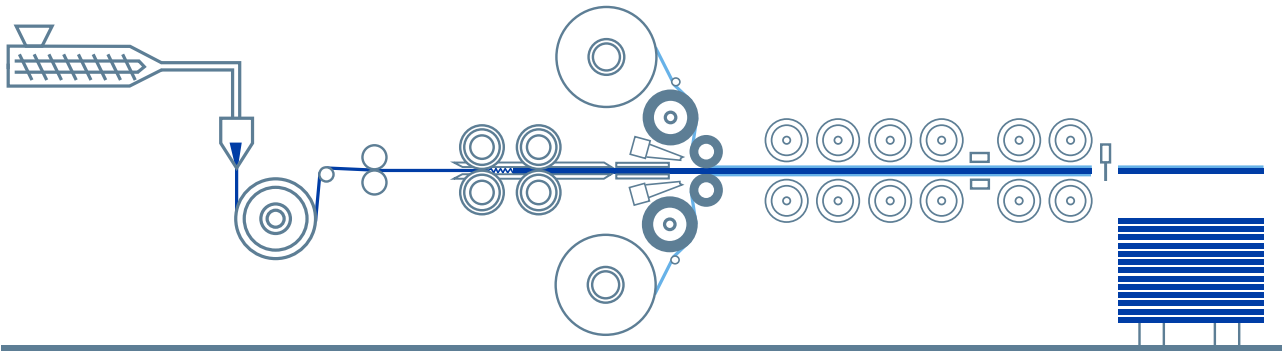
Key advantages:

- High rigidity and strength
- Excellent toughness
- Low weight
- Minimal cost
- Thermoformability
- Improved thermal insulation properties



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ThermHex technology allows users to produce honeycombs from different thermoplastic materials such as PP, PA, PC, PBT, PET, ABS and their blends or even PPS or PEI and many other. Honeycombs being produced on ThermHex lines are usually in-line welded with skins based on a similar material system to constitute a sandwich panels with compatible components, which is beneficial in terms of conversion (e.g. thermoforming) but also recyclability.



EconCore licenses technologies for continuous production of honeycomb sandwich panels. Excellent cost position of the product is achieved thanks to the fully integrated manufacturing process but also due to the fact that the honeycomb sandwich design allows to minimize the amount of otherwise expensive materials. In addition, for small and medium volumes EconCore is capable of producing and delivering sandwich panels with thermoplastic composite skins. Contact us for more information.

