ThermHex

Thermoplastic Honeycomb Cores

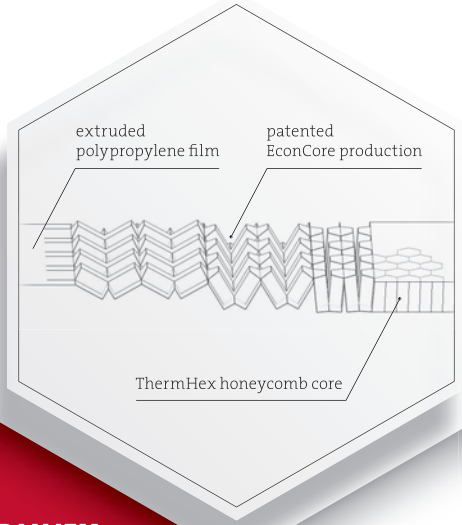
MARKETS & APPLICATIONS

> VEHICLE & AUTOMOBILE
> BOAT, YACHT & SHIP
> WIND & SOLAR ENERGY
> INTERIOR & FURNITURE
> BUILDING & CONSTRUCTION

THERMHEX PP HONEYCOMB CORES OFFER TO PRODUCERS OF SANDWICH ELEMENTS A NEW GENERATION OF THE APPROVED CORE MATERIAL.

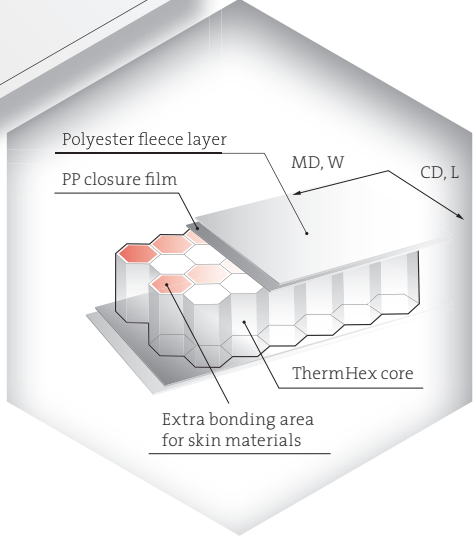
The innovative ThermHex technology for the continuous production of PP honeycomb cores supports the production of highly cost efficient sandwich structures. Different to traditional production processes, the patented EconCore process allows for a production of PP honeycomb sheets in theoretically endless lengths. The low consumption of raw materials helps to save on resources and to reduce the CO_2 foot print.

ThermHex honeycomb cores are finished with a polypropylene barrier film. This film avoids the resins to ingress into the open cells during converting and in this way assures stable mechanical properties in the finished part. At the same time, the quantity of resin needed for processing is reduced to a minimum. The second standard surface finish is a PET non-woven material, which enables an easy bonding of various types of skin materials with all common adhesives.



YOUR THERMHEX ADVANTAGES:

> Major cost reduction
> Significant weight saving
> High compression and shear strength
> Energy absorbent
> Resistant to moisture, acids and bases
> Easy resource-friendly converting
> 100 % recyclable



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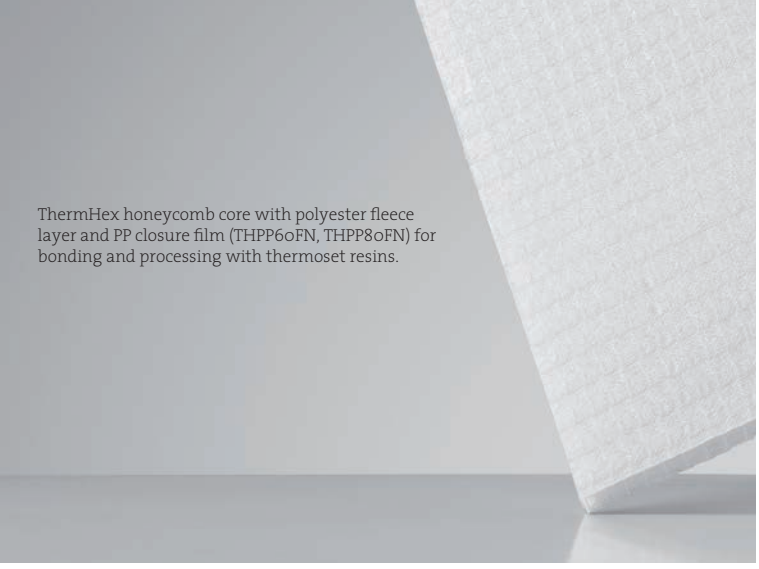
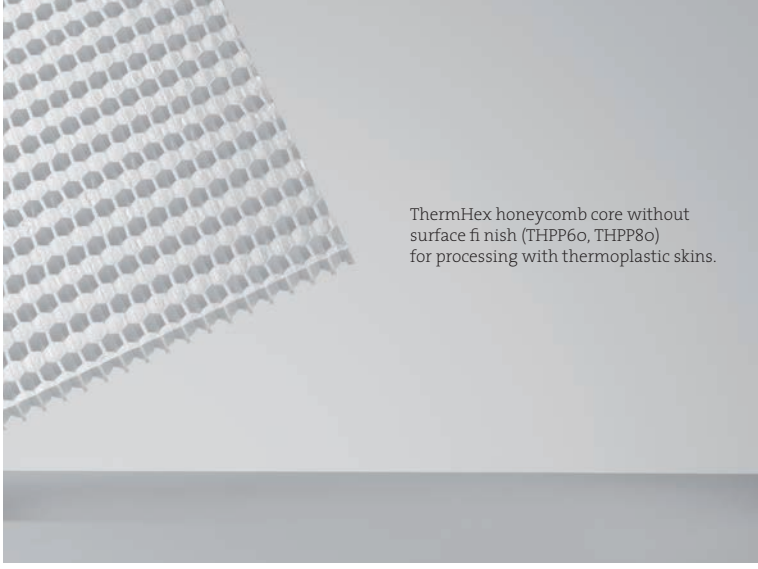
OK POWER GÜTESIEGEL



ThermHex honeycomb core with polyester fleece layer and PP closure film (THPP60FN, THPP80FN) for bonding and processing with thermoset resins.

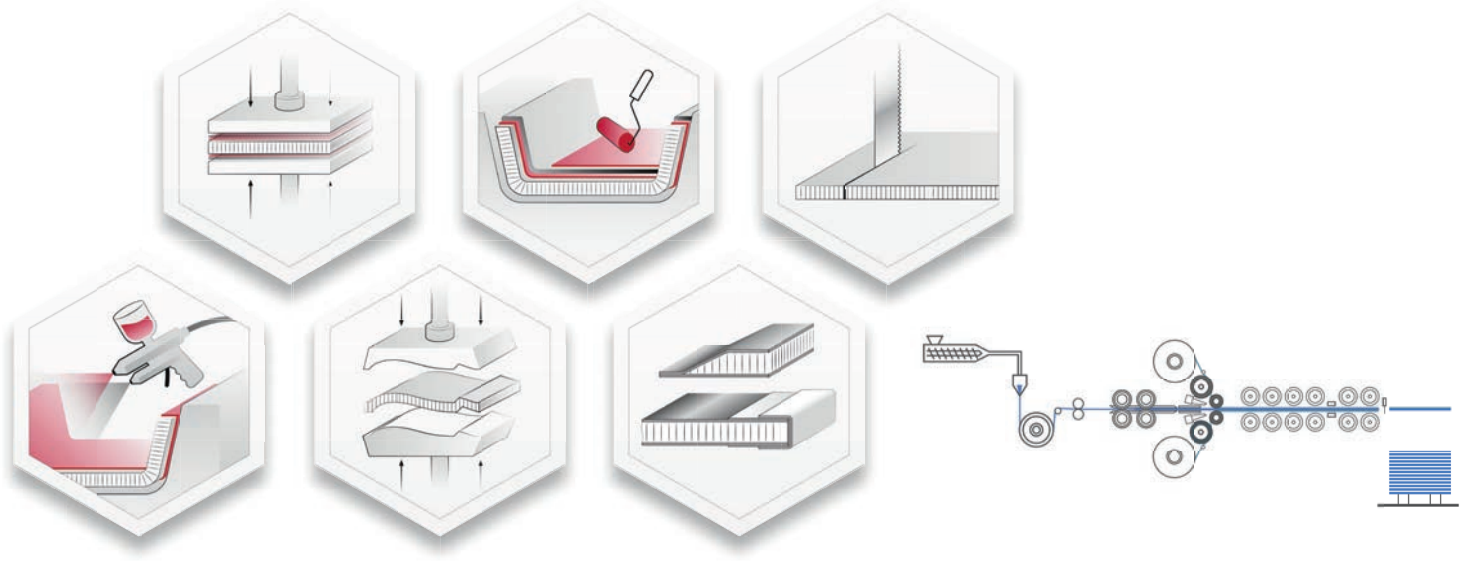


ThermHex honeycomb core without surface finish (THPP60, THPP80) for processing with thermoplastic skins.

TECHNICAL DATA

PRODUCT DESCRIPTION	THPP60-FN	THPP80-FN
Core material	Polypropylen	Polypropylen
Core thickness (mm)	5,0 | 8,0 | 10,0 | 12,0 | 15,0 | 20,0 | 23,0 | 28,0	3,5 | 5,0 | 6,0 | 8,0 | 10,0 | 12,0 | 15,0 | 20,0 | 23,0 | 28,0
Cell diameter (mm)	4,0 | 8,0 | 8,0 | 5,0 | 5,0 | 9,6 | 9,6 | 9,6	3,0 | 4,0 | 4,0 | 8,0 | 8,0 | 5,0 | 5,0 | 9,6 | 9,6 | 9,6
Density (kg / m³)	60 – 70	80 – 90
Compressive strength (MPa)*	0,6	1,2 **(ASTM C365–57)**
Compressive modulus (MPa)*	15	40 **(ASTM C365–57)**
Shear strength (CD, L / MD, W) (MPa)	0,4 / 0,2	0,5 / 0,3 **(ASTM C273–61)**
Shear modulus (CD, L / MD, W)(MPa)	14 / 5	15 / 6 **(ASTM C273–61)**
Temperature range for processing and application (°C)	– 30 to + 80 short-term up to + 140	– 30 to + 80 short-term up to + 140
Thermal conductivity* (W/mK)	0,060	0,065
Surface finish	50 µm Polypropylen Film 40 g/m² Polyester non-woven	50 µm Polypropylen Film 40 g/m² Polyester non-woven
Standard dimensions (mm)	2.500 (MD, W) x 1.200 (CD, L)	2.500 (MD, W) x 1.200 (CD, L)

* data provided from testing of bare core



LIABILITY FOR DEFECTS

All information provided herein is based on our current knowledge and experience. Due to the high number of possible influences during processing and application, the information does not release the processor from the necessity of carrying out his own investigations and tests. Information contained herein and explanations provided by ThermHex Waben GmbH In connection with this printed matter does not represent acceptance of a guarantee. Guarantee statements require special explicit written declarations on behalf of ThermHex Waben GmbH to be effective. The constitutions stated in this datasheet determine the properties of the delivery item extensively and conclusively. Application suggestions do not establish assurance of suitability for the recommended application.

We reserve the right to adapt the product to satisfy technical progress and new developments. We would be pleased to help with any enquiries including those related to special application issues. If the application for which our products are used is subject to statutory approval, the user is responsible for the procurement of such approval. Our recommendations do not release the user from the obligation of taking the possibility of impairments to third-party rights into account and of clarifying these if necessary. Furthermore we refer to our General Terms and Conditions, especially with regard to any possible liability for defects. If you are not in possession of our General Terms and Conditions we would be pleased to supply these on request.

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