



Honeycomb Core

Structural Honeycomb Materials

H8PP

Technical Data

October, 2012

The mechanical properties of the 3M™ Honeycomb Core are controlled by the following specifications:

1. Physical properties of the thermoplastic
2. Cell diameter (8mm)
3. Wall gauge (thickness of the cell wall)
4. Core thickness
5. Facings applied to the core

Altering one or more of these specifications will produce different performance characteristics. 3M Honeycomb Core can be engineered to be a specific weight, absorb a specific load, rebound at a specific rate and possess the flexibility or stiffness by the end application.

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H8PP lightweight plastic honeycomb core material just doesn't look good on the lab charts. It can stand up to the tests of the real world. In laboratories the results can be controlled by highly skilled lab technicians, but when you are out in your boat on the water you need strength and resilience to meet the accidental bumps and grinds as well. Building with 3M Honeycomb Core assures you that your boat is built with a lightweight, durable, plastic honeycomb ready to handle all kinds of stresses. A core material with unique properties, 3M Honeycomb Core combines the strength and resilience of our special Honeycomb sheet design with excellent structure-born sound damping properties.

Features

- The honeycomb cell walls are fused into the non-woven polyester scrim. That coupled with the scrim's affinity for virtually any resin or adhesive system provides exceptional bond and peel strength.
- The honeycomb panels can be scored as a product option. Scoring is available 1" x 2" in length direction and width direction. Consult your sales rep or CSR for other scoring options.
- Panels can be cut with a saw and the best tooth spacing is 10 teeth per inch. A "Hawk bill" or Linoleum" Knife will also cut panels. Hot wire cutting can also be done with a 2mm tensioned wire heated to about 350°C (662°F).

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Typical Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Honeycomb Core	H8PP	
	English	Metric
Compressive Strength	188 psi	1.3 Mpa
Compressive Modulus	2175 psi	15 Mpa
Tensile Strength NFT56-130	72.5 psi	0.5 Mpa
Shear Strength ISO 1922	72.5 psi	0.5 Mpa
Shear Modulus ISO 1922-2	1160 psi	8 Mpa
Thermal Conductivity y Fourier Law	K=.03	K=.03
Water absorption in 24 hours	0.10%	0.10%
Dimensional Thermal Stability	-40°F to 230°F	-40°C to 110°C
Sound Attenuation	>22Db	>22Db
Density	5.0 lbs/ft ³	80 kg/m ³

Store material flat and horizontal.

Special Considerations

All tests carried out by independent laboratory. This information is provided in good faith and is subject to modifications without prior notification. It does not constitute a commitment, neither a contractual document. 3M/Nida-Core will not assume any liability from use or misuse of data presented herein. Assessment of suitability is the responsibility of the end user.

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Technical Information

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ISO 9001:2008

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2008 standards.



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