



Infusion Grade
PP Honeycomb

Closed Molding Lite RTM and Vacuum Infusion

Lower Weight

Less Resin

Lower Cost

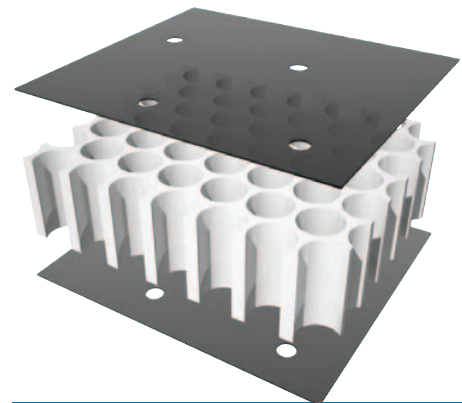
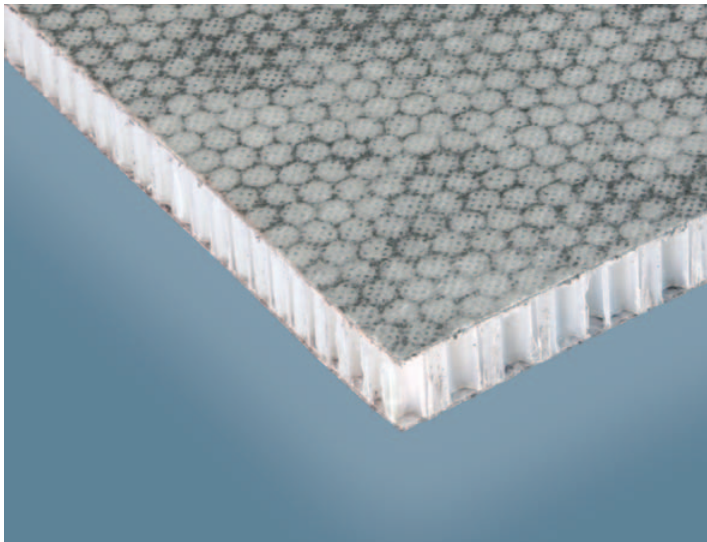
Easy to Use



PLASCORE®

Designed for Closed Molding

Lite RTM and Vacuum Infusion



Infusion Grade PP Honeycomb features a composite surfacing material that is compatible with most laminating resins.

The growing demand for lighter structures, together with environmental concerns, is propelling a migration to Lite RTM and Vacuum Infusion Processes as a more advantageous composite manufacturing methods. These closed molding processes eliminate VOC emissions, while reducing employee turnover and material costs, increasing cycle times and production output, and producing higher quality, better finished parts with closer tolerances.

Infusion Grade PP Honeycomb is designed specifically for optimum performance in Lite RTM and Infusion Processes. Playing a significant role in composite products for the marine, wind energy and transportation markets, Infusion Grade PP Honeycomb is a preferred core in incredibly strong and stiff sandwich structures made with resin and reinforcing fibers. Lightweight, low in density and very cost-effective, Infusion Grade PP Honeycomb gives composite manufacturers the ability to deliver cost-effective sandwich structures to customers where high stiffness and low weight are design priorities.

With the same shear and compression properties of Plascor PP Honeycomb, Infusion Grade PP Honeycomb offers the performance benefits of toughness, lightweight, acoustical and vibration dampening.

Faced for Maximum Adhesion, Minimal Resin Use

Utilizing a composite surfacing material, the open cell structure in Infusion Grade PP Honeycomb is sealed, thereby allowing the flow of resin during processing to remain at the bond line with minimal penetration into the honeycomb core. The veil provides a continuous substrate for 100% adhesion to the panel skin material. The core does not incorporate any flow paths, so a careful selection of glass reinforcements that have a resin flow path capability is required. To help facilitate a uniform flow of resin through the sandwich structure, additional pass through holes are added to the honeycomb that pierce the surfacing material at one cell and allow resin flow from top to bottom of the sandwich. Spacing of these holes is typically 4" on center.

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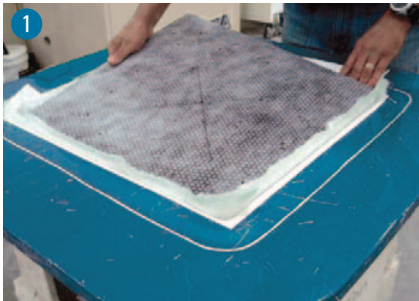
- **Cost Effective**
- **Lightweight**
- **Easy to Use**
- **Vibration Dampening**

An Easier Process

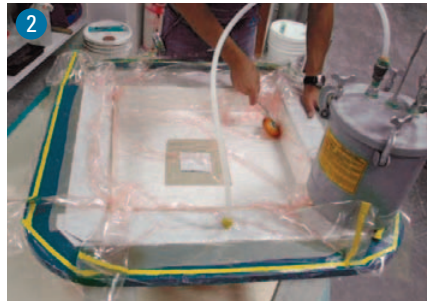


For Higher Quality Parts

Infusion Grade PP Honeycomb is easily cut to mold configurations. The following is a representative step-by-step process:



1 Install reinforcements and Infusion Grade PP Honeycomb



2 Close and seal mold



3 Inject room temperature curing infusion grade resin



4 Demold after resin cures



5 Trim part



6 Finish trim and assemble part as required

Process Recommendations

Resin:

Infusion Grades

Polyester, Vinylester, Epoxy
Viscosity: < 200cps
Gel Time: 45-60 minutes
maximum or depending
on flow distance

Reinforcements:

Infusion Grades

Straight or Stitched Fabrics
Continuous Strand or Flow Mat

Pressure:

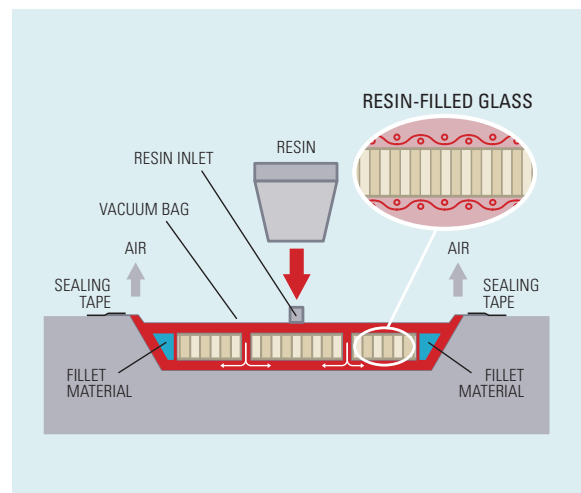
Up to 1.0 bar both for Resin
Injection and Flow

Temperature:

Process up to 150° F

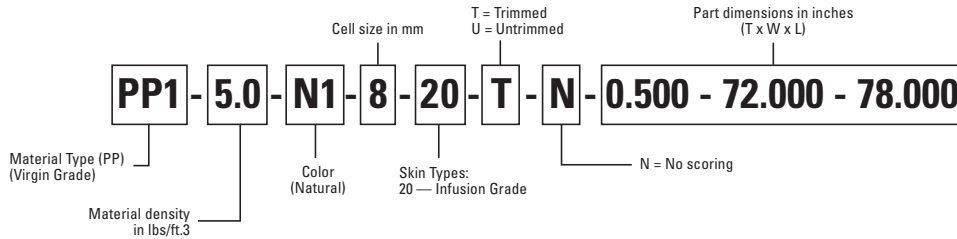
Flow Distance:

24"-36" maximum with through
core holes on 4" centers.
Equidistance from Resin Inlets
to Vacuum Outlets. Additional
flow holes can be added as
required.



You Can Do More with Plascore

How to Specify Infusion Grade PP Honeycomb



PP Honeycomb Core Mechanical Properties

CORE	CELL SIZE		DENSITY			FLATWISE TENSILE ¹		BARE COMPRESSION ²						PLATE SHEAR ³					
								STRENGTH			MODULUS			STRENGTH			MODULUS		
	TYPICAL	MINIMUM	STRENGTH	TYPICAL	MINIMUM	TYPICAL	MINIMUM	TYPICAL	MINIMUM	TYPICAL	MINIMUM	TYPICAL	MINIMUM	TYPICAL	MINIMUM				
	(in)	(mm)	lb/ft ² kg/m ²	lb/ft ² kg/m ²	psi MPa	psi MPa	psi MPa	psi MPa	ksi MPa	ksi MPa	psi MPa	psi MPa	psi MPa	psi MPa	ksi MPa	ksi MPa			
PP1-5.0-N1-8	0.315	8	5 80.0	4.75 75.0	130 0.89	275 1.89	255 1.55	11.5 79.2	9.5 65.4	85 0.58	75 0.52	2.2 15.2	1.7 11.7						
PP1-4.0-N1-10	0.395	10	4 64.0	3.8 60.0	120 0.83	180 1.24	140 0.96	10.5 72.3	8.5 58.5	60 0.41	55 0.38	2.0 13.8	1.5 10.3						

The data provided is based on the testing of -01 (veil only) version of each core type.

¹ Flatwise Tensile
Tested per ASTM C 297

² Bare Compression
Tested per ASTM C 365

³ Plate Shear
Tested per ASTM C 273

Availability:

Thickness: ¼" - 6"
Length: Up to 144"
Width: Up to 48"
 Pre-punctured resin holes available on 24" x 48" sheet sizes only.

Tolerances: Length: ± .125"
 Width: ± .125"
 Thickness: ± .02"
 Density: ± 10%

Storage:

Store material flat and horizontal.
 Store material in a dry and covered area, protected from UV sunlight and extreme temperatures.
 Material may need to be dried prior to use if surface moisture is present.

ISO-9001 Quality

Plascore manufacturing standards meet or exceed North American and international industry requirements. Plascore, Inc. is ISO-9001 registered, employing Lean Principles throughout design, manufacturing and administration. In addition to our proprietary honeycomb manufacturing process, our value-added capabilities include adhesive development, CNC machining, powder coating, welding, thermoset and thermoplastic laminating and assembly. This extensive capability, along with Plascore JIT, Kanban and sequencing programs, allows us to maintain rigid quality standards on all components, control project scheduling and delivery in the manner best suited to the client's specific needs.



Plascore, Inc., employs a quality management system that is AS/EN/JISQ 9100 and ISO 9001:2008 certified.

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