

PP Polypropylene Honeycomb

PP Polypropylene Mechanical Properties							
PLASCORE® Honeycomb Designation			Typical Base Compression		Typical Plate Shear		Nonwoven Tensile Strength
Core Type	Cell Size	Density PCF	Strength PSI	Modulus KSI	Strength PSI	Modulus KSI	Strength PSI
PP50-5	0.50"	5.0	225	16.9	75	2.0	175
PP40-4	0.40"	4.0	140	7.2	40	1.3	125

*Values per MIL-DTL-8838 at room temperature

How to specify Plascore Honeycomb:

PP polypropylene honeycomb is specified as follows:

Material - Cell Size - Color - Thickness

Example: PP-20-5-2

Scoring up to 1.127" available with 25mm or 50mm grid pattern.

Where:

PP

20

5

2

- designates polypropylene
- is the cell size in inches (.20" or .5mm.)
- indicates the density in pcf
- indicates surface veil with film barrier (left blank indicates surface veil only, 1 indicates no surface veil)

Description:

PP polypropylene honeycomb exhibits a unique cell structure. The core has 3 orientations vs. the 2 orientations common with other honeycomb, making its properties more uniform. Each cell has a tubular form and is inherently stable.

PP polypropylene honeycomb is supplied with or without a non-woven polyester veil for better bonding. It is also supplied with or without a film barrier under the polyester veil to limit the amount of resin consumption.

Applications:

PP polypropylene honeycomb uses include sandwich panel cores, energy absorption and filtration media.

Features:

- High strength to weight ratio
- Corrosion, fungi, rot, chemical and moisture resistant
- Sound and vibration dampening
- Energy absorbing
- Thermoformable
- Temperature use to 180°F
- Recyclable

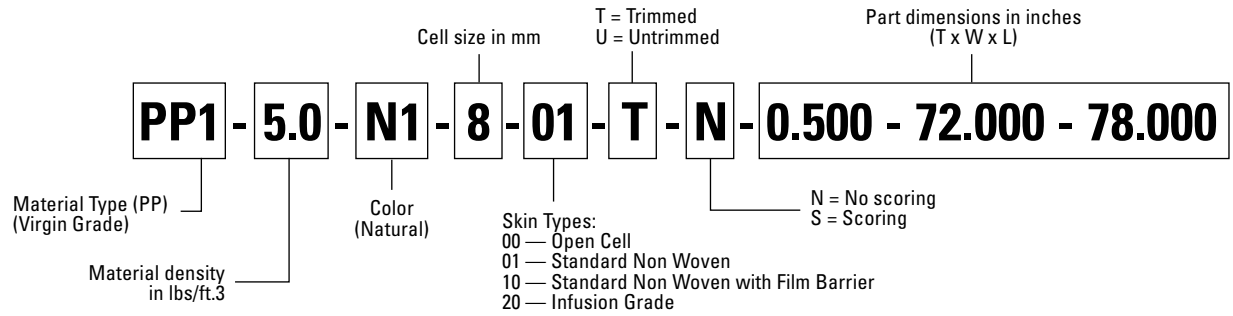
Availability:

PP polypropylene honeycomb is available in the following standard dimensions.

- Densities:** 3.5 to 20.0 pcf
- Thickness:** ¼" to 6" Laminated; up to 24" open cell
- Sheet Length:** Up to 50'
- Sheet Width:** 72" max.
- Tolerances:**
 - Length: ± .125"
 - Width: ± .125"
 - Thickness: ± .02"
 - Open Cell: ± .03"
 - w/reinforced PP facings ± .03"
 - Density: ± 10%

PP polypropylene honeycomb is specified as follows:

Material - Cell Size - Color - Thickness



PP Honeycomb Core Mechanical Properties

CORE	CELL SIZE		DENSITY				FLATWISE TENSILE ¹		BARE COMPRESSION ²						PLATE SHEAR ³									
			TYPICAL		MINIMUM				STRENGTH		STRENGTH		MODULUS		STRENGTH		MODULUS							
	(in)	(mm)	lb/ft ³	kg/m ³	lb/ft ³	kg/m ³	psi	MPa	psi	MPa	psi	MPa	ksi	GPa	ksi	GPa	psi	MPa	psi	MPa	ksi	GPa	ksi	GPa
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



Plascore, Inc., employs a quality management system that is AS/EN/JISQ 9100, ISO 9001:2008 and ISO 14001:2004 certified.

IMPORTANT NOTICE: The information contained in these materials regarding Plascore's products, processes, or equipment, is intended to be up to date, accurate, and complete. However, Plascore cannot warrant that this is always the case. Accordingly, it is a purchaser's or user's responsibility to perform sufficient testing and evaluation to determine the suitability of Plascore's products for a particular purpose. Information in these materials and product specifications does not constitute an offer to sell. Your submission of an order to Plascore constitutes an offer to purchase which, if accepted by Plascore, shall be subject to Plascore's terms and conditions of sale. **PLASCORE MAKES NO WARRANTIES OF ANY KIND REGARDING THESE MATERIALS OR INFORMATION, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.** Plascore owns and shall retain all worldwide rights in its intellectual property, and any other trademarks used in these materials are the property of their respective owners. The information in these materials shall not be construed as an inducement, permission, or recommendation to infringe any patent or other intellectual property rights of any third parties.



Corporate Headquarters

Plascore Incorporated
 615 N. Fairview St.
 Zeeland, MI 49464-0170
 Phone (616) 772-1220
 Toll Free (800) 630-9257
 Fax (616) 772-1289
 Email sales@plascore.com
 Web www.plascore.com

Europe

Plascore GmbH&CoKG
 Feldborn 6
 D-55444 Waldlaubersheim
 Germany
 Phone +49(0) 6707-9143 13
 Fax +49(0) 6707-9143 40
 Email sales.europe@plascore.com
 Web www.plascore.de