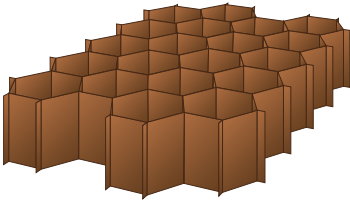


PN1 Commercial Grade Aramid Fiber Honeycomb



Description:

PN1 commercial grade aramid fiber honeycomb is manufactured from DuPont Nomex® paper (or equivalent) and coated with a heat resistant phenolic resin.

Applications:

PN1 honeycomb uses include boat hulls, auto racing bodies, train car panels, ship panels, ground transportation structures, military shelters, ground antennas and special purpose panels.

Features:

- High strength to weight ratio
- Corrosion resistant
- Excellent dielectric properties
- Thermally insulating
- High toughness
- Excellent creep and fatigue performance
- Good thermal stability
- Densities as low as 2.0 lb/ft³ (32 kg/m³)
- Over expanded cell configuration suitable for forming simple curves
- Compatible with most adhesives used in sandwich composites
- Long shelf life. The mechanical properties referenced are maintained for 10 years minimum if not exposed to moisture, weather or any normal hazard.

Availability:

PN1 honeycomb is available in sheets, blocks or cut to size pieces in both regular hexagonal and over expanded (OV) cell configurations.

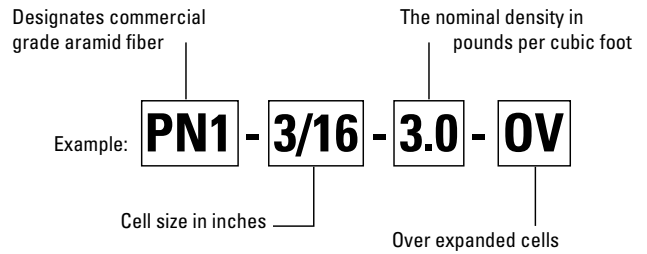
Cell Sizes:	1/8" - 1/4" (other cell sizes on request)
Densities:	2.0 pcf - 6.0 pcf
Sheet "Ribbon" (L):	48" typical
Sheet "Transverse" (W):	96" typical
Tolerances:	Length: + 3", - 0" (36" for OV) Width: + 6", - 0" Thickness: ± .006" (under 2" thick) Density: ± 15% Cell Size: ± 15%

NOTE: Special dimensions, sizes and tolerances can be provided upon request.

PN1 commercial grade aramid fiber honeycomb is specified as follows:

Material - Cell Size - Density - Cell Configuration

Note: 1/8" OV core can be over expanded only to a maximum of 20% over nominal cell size.
 ©Nomex is a registered trademark of E.I. DuPont de Nemours, Wilmington, Delaware.



PN1 Mechanical Properties																		
PLASCORE® Honeycomb Designation	DENSITY		COMPRESSIVE (BARE)				PLATE SHEAR "L" DIRECTION						PLATE SHEAR "W" DIRECTION					
			STRENGTH (psi/MPa)				STRENGTH (psi/MPa)				MODULUS (psi/GPa)		STRENGTH (psi/MPa)				MODULUS (psi/GPa)	
			TYP		MIN		TYP		MIN		TYP		TYP		MIN		TYP	
	lb/ft ³	kg/m ³	psi	MPa	psi	MPa	psi	MPa	psi	MPa	ksi	GPa	psi	MPa	psi	MPa	ksi	GPa
PN1-1/8-3.0	3.0	48	280	1.93	190	1.31	195	1.34	133	0.92	6.4	0.044	95	0.66	70	0.48	3.3	0.023
PN1-1/8-4.0	4.0	64	490	3.38	333	2.29	265	1.83	204	1.41	8.2	0.056	145	1.00	130	0.71	4.5	0.031
PN1-1/8-5.0	5.0	80	670	4.62	513	3.54	310	2.14	252	1.74	10.3	0.071	205	1.41	124	0.85	5.8	0.040
PN1-1/8-6.0	6.0	96	880	6.07	665	4.59	340	2.34	304	2.10	12.3	0.084	235	1.62	143	0.98	7.1	0.049
PN1-3/16-2.0	2.0	32	120	0.83	88	0.61	90	0.62	68	0.47	4.3	0.030	50	0.34	38	0.26	2.4	0.016
PN1-3/16-3.0	3.0	48	290	2.00	190	1.31	175	1.21	133	0.92	5.8	0.040	105	0.72	64	0.44	3.9	0.027
PN1-3/16-4.0	4.0	64	490	3.38	333	2.29	220	1.52	204	1.41	7.8	0.054	160	1.10	106	0.73	5.2	0.036
PN1-3/16-6.0	6.0	96	935	6.45	665	4.59	285	1.97	275	1.90	9.8	0.068	245	1.69	143	0.98	6.7	0.046
PN1-1/4-3.0*	3.0	48	270	1.86	190	1.31	170	1.17	133	0.92	5.4	0.037	105	0.72	64	0.44	4.8	0.033
PN1-1/4-4.0*	4.0	64	470	3.24	333	2.29	225	1.55	204	1.41	6.8	0.047	150	1.03	106	0.73	6.4	0.044
PN1-1/8-3.0-OV-20%	3.0	48	255	1.76	190	13.1	160	1.10	95	0.66	4.8	0.033	110	0.76	76	0.52	3.8	0.026
PN1-1/8-4.0-OV-20%*	4.0	64	480	3.31	333	2.30	225	1.55	150	1.03	6.7	0.046	185	1.28	125	0.86	6.8	0.047
PN1-3/16-2.0-OV	2.0	32	110	0.76	86	0.59	65	0.45	48	0.33	2.2	0.015	65	0.45	38	0.26	3.7	0.026
PN1-3/16-2.5-OV*	2.5	40	190	1.31	162	1.11	90	0.62	59	0.41	2.7	0.019	95	0.66	55	0.38	5.0	0.034
PN1-3/16-3.0-OV	3.0	48	270	1.86	238	1.64	110	0.76	71	0.49	3.2	0.022	130	0.90	71	0.49	6.3	0.043
PN1-3/16-4.0-OV	4.0	64	470	3.24	333	2.29	150	1.03	95	0.66	3.9	0.027	185	1.28	114	0.79	8.9	0.061

* Estimated or interpolated values based on limited testing per MIL-C-81968 at room temperature.

NOTE: The above data is based on variable sample sizes and is subject to change with continues manufacturing and testing of PN1 honeycomb core blocks.



Plascore, Inc., employs a quality management system that is Nadcap, AS9100, ISO 9001 and ISO 14001 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 0
 Fax +49(0) 6707-9143 40
 Email sales.europe@plascore.com
 Web www.plascore.de