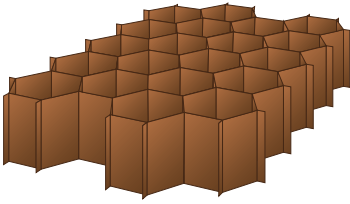


# PN1 Commercial Grade Aramid Fiber Honeycomb



## Description:

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

## Applications:

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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:

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- 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/ft<sup>3</sup> (32 kg/m<sup>3</sup>)
- Over expanded cell configuration suitable for forming simple curves
- Compatible with most adhesives used in sandwich composites

## Availability:

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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:**

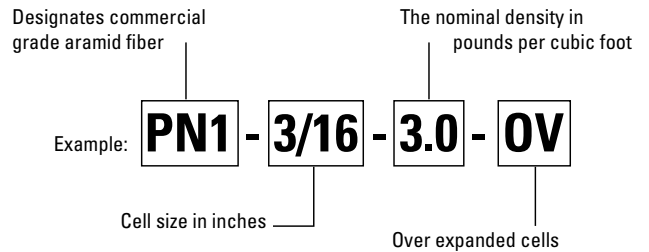
Length:	+ 3", - 0" (36" for OV)
Width:	+ 6", - 0"
Thickness:	± .006" (under 2" thick)
Density:	± 15%
Cell Size:	± 15%

**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.  
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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/ft³	kg/m³	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 AS/EN/JISQ 9100, ISO 9001:2008 and ISO 14001:2004 certified.

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