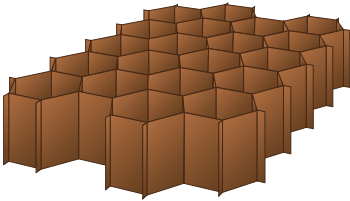


# PN1 Commercial Grade Meta-Aramid Fiber Honeycomb



## Description:

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PN1 commercial grade aramid fiber honeycomb is manufactured from Meta-Aramid paper 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
- Long shelf life. The mechanical properties referenced are maintained for 10 years minimum if not exposed to moisture, weather or any normal hazard.

## 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

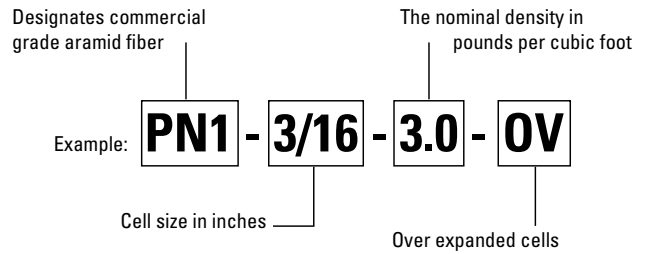
**Tolerances:**

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 Meta-Aramid fiber honeycomb is specified as follows:

Material - Cell Size - Density - Cell Configuration



## PN1 Meta-Aramid Commercial Mechanical Properties

CELL SIZE		NOMINAL DENSITY		COMPRESSIVE STRENGTH (BARE)				PLATE SHEAR STRENGTH "L" DIRECTION				PLATE SHEAR MODULUS "L" DIRECTION		PLATE SHEAR STRENGTH "W" DIRECTION				PLATE SHEAR MODULUS "W" DIRECTION			
				Typical		Minimum		Typical		Minimum		Typical		Typical		Minimum		Typical			
in	mm	lb/Ft <sup>3</sup>	Kg/m <sup>3</sup>	psi	Mpa	psi	Mpa	psi	Mpa	psi	Mpa	ksi	Gpa	psi	Mpa	psi	Mpa	psi	Mpa	ksi	Gpa
1/8	3.2	3.0	48	272.7	1.88	162	1.12	176.4	1.22	145.8	1.01	6.0	0.0416	90	0.6205	76.5	0.527	3.42	0.024		
1/8	3.2	4.0	64	489.6	3.38	297	2.05	239.4	1.65	202.5	1.40	8.1	0.0558	128.7	0.8873	90	0.62	4.5	0.031		
1/8	3.2	5.0	80	729	5.03	540	3.72	287.1	1.98	211.5	1.46	10.5	0.0726	157.5	1.0858	108	0.745	5.85	0.04		
1/8	3.2	6.0	96	1001.7	6.91	720	4.96	351	2.42	234	1.61	12.2	0.0838	223.2	1.5387	121.5	0.838	6.3	0.043		
3/16	4.8	2.0	32	117	0.81	81	0.56	95.4	0.66	64.8	0.45	4.0	0.0273	56.7	0.3909	36	0.248	2.25	0.016		
3/16	4.8	3.0	48	297	2.05	162	1.12	158.4	1.09	112.5	0.78	5.4	0.0372	106.2	0.7321	60.3	0.416	4.05	0.028		
3/16	4.8	4.0	64	508.5	3.51	288	1.99	216	1.49	202.5	1.40	7.4	0.0509	145.8	1.0051	100.8	0.695	5.13	0.035		
3/16	4.8	6.0	96	954.9	6.58	522	3.60	356.4	2.46	297	2.05	12.8	0.0881	225	1.5512	135	0.931	7.11	0.049		
1/4	6.4	3.0	48	229.5	1.58	162	1.12	160.2	1.10	121.5	0.84	5.7	0.0391	100.8	0.6949	54	0.372	3.15	0.022		
1/4	6.4	4.0	64	424.8	2.93	279	1.92	219.6	1.51	180	1.24	7.2	0.0496	135	0.9307	86.4	0.596	4.05	0.028		
1/8 OV-20%	3.2	3.0	48	255	1.76	190	1.31	160	1.10	95	0.65	4.8	0.0331	110	0.7583	76	0.524	3.8	0.026		
1/8 OV-20%	3.2	4.0	64	480	3.31	333	2.30	225	1.55	150	1.03	6.7	0.0462	185	1.2754	125	0.862	6.8	0.047		
3/16 OV	4.8	2.0	32	107.1	0.74	81	0.56	62.1	0.43	45	0.31	1.9	0.013	73.8	0.5088	36	0.248	3.87	0.027		
3/16 OV	4.8	2.5	40	145.8	1.01	100.8	0.69	71.1	0.49	49.5	0.34	2.1	0.0143	86.4	0.5956	39.6	0.273	4.68	0.032		
3/16 OV	4.8	3.0	48	284.4	1.96	225	1.55	103.5	0.71	85.5	0.59	2.7	0.0186	126	0.8686	85.5	0.589	6.12	0.042		
3/16 OV	4.8	4.0	64	468.9	3.23	315	2.17	139.5	0.96	108	0.74	3.6	0.0249	202.5	1.396	112.5	0.776	8.64	0.06		

Note: Additional densities and configurations available upon request.

Tested at 0.500" T per AMS STD 401 at room temperature.

Certificates of conformance are not provided. Values stated are for reference only.



Plascore, Inc., employs a quality management system that is Nadcap, AS9100, ISO 9001 and ISO 14001 certified.

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### 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