

# 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 transport 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 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"

**Densities:** 2.0 pcf - 6.0 pcf

**Sheet "Ribbon" (L):** 48" typical

**Sheet "Transverse" (W):** 96" typical

**Tolerances:** Length: + 3", - 0" (60" for OV)

Width: + 6", - 0"

Thickness: ± .006" (under 2" thick)

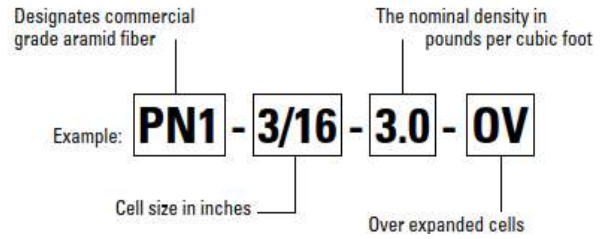
Density: ± 15%

Cell Size: ± 15%

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

# PN1 commercial grade Meta-Aramid fiber honeycomb is specified as follows:

Material - Cell Size - Density - Cell Configuration



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		Typical		Typical		Typical		Typical	
in	mm	lb/ft <sup>3</sup>	Kg/m <sup>3</sup>	psi	Mpa	psi	Mpa	ksi	Gpa	psi	Mpa	ksi	Gpa
1/8	3.2	3.0	48	293	2.02	186	1.28	7.1	0.05	91	0.63	3.6	0.02
1/8	3.2	4.0	64	581	4.01	235	1.62	8.7	0.06	121	0.83	4.9	0.03
1/8	3.2	5.0	80	836	5.76	279	1.93	10.1	0.07	150	1.03	6.0	0.04
1/8	3.2	6.0	96	1003	6.92	378	2.60	12.7	0.09	213	1.47	7.6	0.05
3/16	4.8	2.0	32	118	0.81	101	0.69	4.6	0.03	59	0.40	2.9	0.02
3/16	4.8	3.0	48	376	2.59	158	1.09	5.5	0.04	89	0.61	4.2	0.03
3/16	4.8	6.0	96	994	6.85	388	2.68	13.9	0.10	225	1.55	7.3	0.05
1/4	6.4	3.0	50	389	2.69	160	1.10	5.3	0.04	96	0.66	4.3	0.03
1/4	6.4	4.0	64	596	4.11	215	1.48	8.2	0.06	144	0.99	5.8	0.04
1/8 OV	3.2	3.0	48	329	2.27	121	0.84	5.2	0.04	129	0.89	6.7	0.05
3/16 OV	4.8	2.0	29	120	0.83	62	0.43	1.9	0.01	74	0.51	4.2	0.03
3/16 OV	4.8	3.0	48	287	1.98	100	0.69	2.7	0.02	133	0.92	6.9	0.05

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

The above data is based on various sample sizes and is for reference only.

Additional densities and configurations available upon request.



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

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