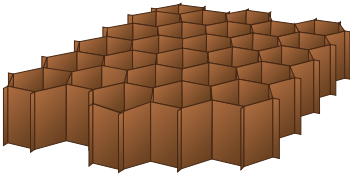


PN2 Aerospace Grade Aramid Fiber Honeycomb



Description:

PN2 aerospace grade aramid fiber honeycomb exhibits outstanding flammability properties. It is manufactured from DuPont Nomex[®] paper (or equivalent) and coated with a heat resistant phenolic resin.

Applications:

PN2 honeycomb uses include aircraft galleys, flooring, partitions, aircraft leading and trailing edges, missile wings, radomes, antennas, military shelters, fuel tanks, helicopter rotor blades and navy bulkhead joiner panels.

Features:

- Fire resistant (self extinguishing)
- 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 1.5 lb/ft³ (24 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:

PN2 honeycomb is available in sheets, blocks or cut to size pieces in both regular hexagonal and over expanded (OV) cell configurations.

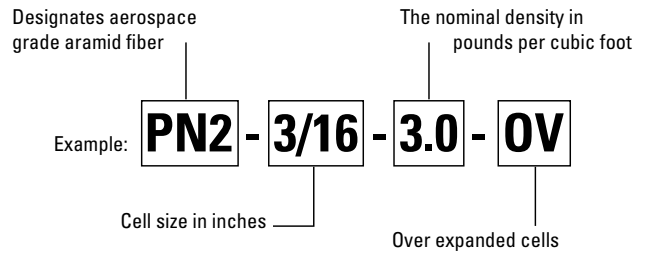
| | |
|--------------------------------|-------------------------------------|
| Cell Sizes: | 1/8" - 3/8" |
| Densities: | 1.8 pcf - 9.0 pcf |
| Sheet "Ribbon" (L): | 48" typical |
| Sheet "Transverse" (W): | 96" typical |
| Tolerances: | Length: + 3", - 0" (60" for OV) |
| | Width: + 6", - 0" |
| | Thickness: ± .006" (under 2" thick) |
| | Density: ± 10% |
| | Cell Size: ± 10% |

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

PN2 aerospace 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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| PN2 Mechanical Properties | | | | | | | | | | | | | | | | | | |
|--|--------------------|-------------------|--------------------|-------|------|-------|---------------------------|------|-----|------|-------------------|-------|---------------------------|------|-----|------|-------------------|-------|
| PLASCORE® Honeycomb Designation | DENSITY | | COMPRESSIVE (BARE) | | | | PLATE SHEAR "L" DIRECTION | | | | | | PLATE SHEAR "W" DIRECTION | | | | | |
| | | | STRENGTH (psi/MPa) | | | | STRENGTH (psi/MPa) | | | | MODULUS (ksi/GPa) | | STRENGTH (psi/MPa) | | | | MODULUS (ksi/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 |
| PN2-1/8-1.8 | 1.8 | 29 | 85 | 0.59 | 74 | 0.51 | 75 | 0.52 | 60 | 0.41 | 3.8 | 0.026 | 45 | 0.31 | 32 | 0.22 | 1.7 | 0.012 |
| PN2-1/8-3.0 | 3.0 | 48 | 290 | 2.00 | 200 | 1.38 | 205 | 1.41 | 140 | 0.97 | 6.7 | 0.046 | 105 | 0.72 | 74 | 0.51 | 3.5 | 0.024 |
| PN2-1/8-4.0 | 4.0 | 64 | 515 | 3.55 | 350 | 2.41 | 275 | 1.90 | 215 | 1.48 | 8.6 | 0.059 | 150 | 1.04 | 108 | 0.74 | 4.7 | 0.032 |
| PN2-1/8-5.0 | 5.0 | 80 | 700 | 4.83 | 540 | 3.72 | 325 | 2.24 | 265 | 1.83 | 10.8 | 0.074 | 215 | 1.48 | 130 | 0.90 | 6.2 | 0.042 |
| PN2-1/8-6.0 | 6.0 | 96 | 930 | 6.41 | 700 | 4.83 | 360 | 2.48 | 320 | 2.21 | 12.9 | 0.089 | 245 | 1.69 | 150 | 1.03 | 7.5 | 0.052 |
| PN2-1/8-8.0 | 8.0 | 128 | 1700 | 11.72 | 1170 | 8.07 | 420 | 2.90 | 400 | 2.76 | 16.7 | 0.115 | 295 | 2.03 | 200 | 1.38 | 10.6 | 0.073 |
| PN2-1/8-9.0 | 9.0 | 144 | 2145 | 14.79 | 1450 | 10.00 | 445 | 3.07 | 425 | 2.93 | 18.7 | 0.129 | 315 | 2.17 | 240 | 1.65 | 11.2 | 0.077 |
| PN2-3/16-1.8 | 1.8 | 29 | 90 | 0.62 | 74 | 0.51 | 70 | 0.48 | 50 | 0.34 | 3.3 | 0.023 | 45 | 0.31 | 30 | 0.21 | 1.8 | 0.013 |
| PN2-3/16-2.0 | 2.0 | 32 | 125 | 0.86 | 93 | 0.64 | 95 | 0.66 | 70 | 0.48 | 4.5 | 0.031 | 55 | 0.38 | 40 | 0.28 | 2.5 | 0.017 |
| PN2-3/16-3.0 | 3.0 | 48 | 300 | 2.07 | 200 | 1.38 | 185 | 1.28 | 140 | 0.97 | 6.1 | 0.042 | 110 | 0.76 | 67 | 0.46 | 4.1 | 0.028 |
| PN2-3/16-4.0 | 4.0 | 64 | 515 | 3.55 | 350 | 2.41 | 235 | 1.62 | 215 | 1.48 | 8.2 | 0.056 | 165 | 1.14 | 112 | 0.77 | 5.5 | 0.038 |
| PN2-1/4-1.5 | 1.5 | 24 | 70 | 0.48 | 54 | 0.37 | 55 | 0.38 | 45 | 0.31 | 2.8 | 0.019 | 35 | 0.24 | 23 | 0.16 | 1.7 | 0.012 |
| PN2-1/4-2.0 | 2.0 | 32 | 130 | 0.90 | 93 | 0.64 | 90 | 0.62 | 70 | 0.48 | 3.8 | 0.026 | 55 | 0.38 | 36 | 0.25 | 2.4 | 0.017 |
| PN2-3/8-3.0 | 3.0 | 48 | 287 | 1.98 | 217 | 1.5 | 194 | 1.34 | 145 | 1.0 | 6.8 | .047 | 126 | .87 | 73 | .50 | 4.4 | .030 |
| PN2-1/8-3.0-OV | 3.0 | 48 | 270 | 1.86 | 200 | 1.38 | 165 | 1.14 | 100 | 0.69 | 5.0 | 0.035 | 115 | 0.79 | 80 | 0.55 | 4.0 | 0.027 |
| PN2-3/16-1.8-OV | 1.8 | 29 | 95 | 0.66 | 75 | 0.52 | 60 | 0.41 | 35 | 0.24 | 2.2 | 0.015 | 60 | 0.41 | 36 | 0.25 | 3.3 | 0.023 |
| PN2-3/16-2.0-OV | 2.0 | 32 | 115 | 0.79 | 90 | 0.62 | 70 | 0.48 | 50 | 0.34 | 2.4 | 0.016 | 70 | 0.48 | 40 | 0.28 | 3.9 | 0.027 |
| PN2-3/16-3.0-OV | 3.0 | 48 | 280 | 1.93 | 250 | 1.72 | 115 | 0.79 | 75 | 0.52 | 3.3 | 0.023 | 135 | 0.93 | 75 | 0.52 | 6.6 | 0.045 |
| PN2-3/16-4.0-OV | 4.0 | 64 | 495 | 3.41 | 350 | 2.41 | 160 | 1.10 | 100 | 0.69 | 4.1 | 0.028 | 195 | 1.34 | 120 | 0.83 | 9.4 | 0.065 |
| PN2-3/8-3.0-OV | 3.0 | 48 | 250 | 1.72 | 200 | 1.38 | 105 | 0.72 | 60 | 0.41 | 2.8 | 0.020 | 135 | 0.93 | 80 | 0.55 | 6.5 | 0.045 |

NOTE: The above data is based on variable sample sizes and is subject to change with continued manufacturing and testing of PN2 honeycomb core blocks per MIL-C-81986 at room temperature.



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

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