

# PK2 Para-Aramid Fiber Honeycomb



# **Description:**

PK2 para-aramid fiber honeycomb is an extremely lightweight, high strength, non-metallic honeycomb manufactured with para-aramid fiber paper impregnated with a heat resistant phenolic resin. This core material exhibits improved performance characteristics over Meta-Aramid in the areas of weight, strength, stiffness and fatique.

## **Applications:**

PK2 honeycomb is a high performance non-metallic core which can replace fiberglass and Meta-Aramid honeycomb core materials to achieve significant weight reductions without sacrificing performance in most applications. PK2 honeycomb uses include boat decks, aircraft galleys, flooring, partitions, aircraft leading and trailing edges, radomes, flaps, access panels and doors.

#### Features:

- Up to 40% higher properties than comparable density Nomex<sup>®</sup> honeycomb
- Extremely high strength to weight ratio
- Excellent thermal and moisture stability
- Improved shear strength and modulus
- Conforms to stringent smoke, toxicity and flammability standards
- High toughness
- Long shelf life. The mechanical properties referenced are maintained for 10 years minimum if not exposed to moisture, weather or any normal hazard.

### **Availability:**

PK2 honeycomb is available in sheets, blocks or cut to size pieces in regular hexagonal cell configurations. Selected densities available in high shear (HS) configuration for higher stiffness.

**Cell Sizes:** 1/8" - 3/16"

**Densities:** 2.0 pcf - 6.0 pcf

Sheet "Ribbon" (L): 48" typical
Sheet "Transverse" (W): 96" typical

**Tolerances:** Length: + 3", - 0"

Width: + 6", - 0"

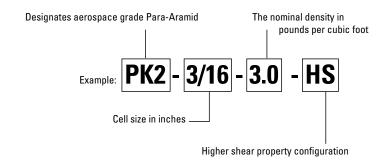
Thickness: ± .006" (under 2" thick)

Density:  $\pm 10\%$ Cell Size:  $\pm 10\%$ 

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

# PK2 Para-Aramid honeycomb is specified as follows:

Material - Cell Size - Density - Cell Configuration



PK2 Para-Aramid 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 Mi		imum Typical		ical	Minimum		Typical		Typical		Minimum		Typical	
in	mm	lb/Ft³	Kg/m³	psi	Мра	psi	Мра	psi	Мра	psi	Мра	ksi	Gpa	psi	Мра	psi	Мра	ksi	Gpa
1/8	3.2	2.5	40	278	1.92	156	1.08	214	1.48	164	1.13	17.6	0.12	122	0.84	81	0.56	8.2	0.06
1/8	3.2	3.0	48	414	2.85	225	1.55	235	1.62	215	1.48	16.2	0.11	140	.97	105	0.72	9.6	0.07
1/8*	3.2	3.0 HS	48	360	2.48	210	1.45	270	1.86	218	1.50	21.0	0.14	160	1.10	125	0.86	12.7	0.09
1/8	3.2	4.0	64	720	4.96	330	2.28	420	2.90	360	2.48	31.3	0.22	221	1.52	180	1.24	13.1	0.09
1/8	3.2	4.5	72	814	5.61	560	3.86	430	2.96	347	2.39	36.4	0.25	235	1.62	188	1.30	14.1	0.10
1/8*	3.2	4.5 HS	72	790	5.45	500	3.45	467	3.21	330	2.28	40.5	0.28	258	1.78	185	1.28	16.1	0.11
1/8	3.2	6.0	96	1320	9.10	840	5.79	536	3.70	430	2.96	39.6	0.27	310	2.14	300	2.07	16	0.11
1/8*	3.2	6.0 HS	96	1100	7.58	800	5.52	560	3.86	450	3.10	44.0	0.30	376	2.59	270	1.86	19	0.13
5/32*	4.0	2.5	40	218	1.50	170	1.17	190	1.31	150	1.03	12.7	0.09	100	0.69	80	0.55	8.7	0.06
5.32*	4.0	4.0	64	720	4.96	190	1.31	359	2.47	290	2.00	22.9	0.16	255	1.76	205	1.41	14.8	0.10
3/16*	4.8	2.0	32	150	1.03	110	0.76	145	1.00	115	0.79	10.2	0.07	90	0.62	72	0.50	6	0.04
3/16*	4.8	3.0	48	320	2.21	233	1.61	230	1.59	185	1.28	15.2	0.10	160	1.10	125	0.86	9	0.06
3/16 0V*	4.8	2.0	32	170	1.17	130	0.90	100	0.69	80	0.55	1.0	0.01	125	0.86	90	0.62	1.2	0.01

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.

\* Limited Testing or predicted values.





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