

Product Data Sheet: Lauan Veneer Skinned Panels

Due to anisotropic properties of honeycombs, MIL handbook 17B does not recommend ASTM C393, or 3 point bend test as a valid indicator of honeycomb cored panel behavior. It is viewed as a possible quality control test but not indicative of the real attributes of the structure. It is generally felt that a better indicator would be the ASTM D 6146-99 (Standard Test Method for Two-dimensional Flexural Properties of Simply Supported Sandwich Composite Plates Subjected to a Distributed Load) or also known as "The Hydramat test". These tests have produced results that validate the accompanying Strength of Materials Data. The viscoelastic behavior of Nida-Core Polypropylene Honeycomb will typically permit far greater deflections without structural failures so the Deflection at Load is supplied for comparison but this does not imply a Load to fail. Deflection values based on 200lb point load centrally with support on 4 edges. **(Test specimen 1" wide X 6" long,)**



Core Thickness	Panel weights per sq. foot and per 4X8 panel								
Panel	5 mm	7 mm	10 mm	13 mm	16 mm	20 mm	25 mm	30 mm	38 mm
H8PP +	.676 psf	.713 psf	.763 psf	.813 psf	.863 psf	.93 psf	1.017 psf	1.104 psf	1.241 psf
2.7 mm	21.63 lb	22.82 lb	24.42 lb	26.02 lb	27.62 lb	29.76 lb	32.5 lb	35.33 lb	39.71 lb

Deflection Values	Span	Span	Span
Core Thickness MM	24"	36"	48"
10	0.073"	0.166"	0.295"
13	0.048"	0.108"	0.192"
20	0.022"	0.051"	0.091"
25	0.015"	0.034"	0.060"
38	0.007"	0.016"	0.028"
50	0.004"	0.010"	0.017"

Material	Total thickness of sandwich inches	Modulus (MSI)	Max Ply Stress (PSI)	% of each ply's ultimate strength	Bending Stiffness Lb/sq.inch	Total weight Lb/ft2	Flatwise compression Fmax/Area (PSI)
Nida-Core H8PP 10 mm + 2.7mm Lauan both sides	0.602	1.6 0 1.6	1000 0 1000	100 0 100	21180	0.763	188
Nida-Core H8PP 13 mm + 2.7mm Lauan both sides	0.722	1.6 0 1.6	1000 0 1000	100 0 100	32495	0.813	188
Nida-Core H8PP 20 mm + 2.7mm Lauan both sides	1.002	1000 0 1000	100 0 100	68396	0.930	0.930	188
Nida-Core H8PP 25 mm + 2.7mm Lauan both sides	1.196	1000 0 1000	100 0 1000	104048	1.017	1.017	188