

# ACOUSTICAL/THERMAL PANEL PERFORMANCE

A panel's acoustical performance is two fold.

- 1) It absorbs sound through the perforated interior (Table 2)
- 2) It blocks noise with its mass (Table 1)

The transmission losses are the actual noise reduction (dB) you get from inside to outside of the panel. The absorption coefficient represents the panel's ability to absorb noise with 100% technically being the maximum amount that can be absorbed.

Table 1

Panel type	2 125	3 250	4 500	5 1000	6 2000	7 4000	STC
4"	26	31	41	50	58	63	40
2"	26	29	34	44	50	60	37

Table 2

Panel type	2 125	3 250	4 500	5 1000	6 2000	7 4000	
4"	0.76	1.41	1.32	1.15	1.11	1.00	NRC*.95
2"	0.56	0.90	1.15	1.11	1.04	0.96	NRC*.95

\* Manually reduced to .95 to reflect less than 100% absorption

## FIRE SAFETY

Table 3

ASTM E-84 ratings for acoustical fill	
Flame spread	15
Smoke developed	5

Table 4

Thermal performance		
Panel U factor		
	4"	0.06
	2"	0.10

The 4pcf density insulation is vermin proof, moisture and mold resistance, and non-combustible. The fire safety ratings are far below the 25/50 recommended by NFPA-90A.

# ACOUSTICAL/THERMAL PANEL STRUCTURAL PERFORMANCE

Maximum Length of Non-Perforated Panel (inches)								
Static Water Pressure (inches)	Roof Panels				Wall Panels			
	2"Thick		4"Thick		2"Thick		4"Thick	
	Positive (+)	Negative (-)	Positive (+)	Negative (-)	Positive (+)	Negative (-)	Positive (+)	Negative (-)
2	175	140	216	216	155	161	216	216
4	127	115	216	205	120	125	216	216
6	107	101	202	180	104	107	193	191
8	96	91	179	162	93	95	174	171
10	88	83	164	149	86	86	160	155
12	82	77	153	138	80	80	149	143

Maximum Length of Perforated Panel (inches)								
Static Water Pressure (inches)	Roof Panels				Wall Panels			
	2"Thick		4"Thick		2"Thick		4"Thick	
	Positive (+)	Negative (-)	Positive (+)	Negative (-)	Positive (+)	Negative (-)	Positive (+)	Negative (-)
2	165	133	216	216	150	151	216	216
4	122	110	216	191	117	117	216	206
6	104	96	199	169	101	101	191	178
8	93	88	177	154	91	91	172	160
10	85	81	162	143	84	84	157	148
12	79	77	147	135	77	78	142	138

Structural load conversions			
Inches of w.g.	Wind load m.p.h.	Snow load lbs/sq.ft.*	Live load lbs/sq.ft.*
2	60	10	10
3	80	16	16
4	90	21	21
5	100	26	26
6	110	31	31
7	120	36	36
8	130	42	42
9	135	47	47
10	140	52	52

\*5.2 pounds of snow or live load is equal to 1" w.g.

NOTE: All AeroSonic panels have been certified by an independent licensed professional engineer