



Acoustical  
Performance  
Summary

EXPOSED  
STRUCTURE

Inspiring Great Spaces®

**Armstrong**®  
CEILING & WALL SOLUTIONS

# REDUCE REVERBERATION TIME & IMPROVE ACOUSTIC COMFORT

For each of the products featured below and in the Acoustical Design for Exposed Structure brochure (BPCS-5680), here are recommendations for the square foot coverage and product quantities suggested to reduce reverberation times in open spaces at three different levels, to create quieter spaces.

Average sound absorption shown is over the primary speech frequency range. Full frequency test data can be found on the back page.

Contact TechLine for acoustical test reports for any solution in the Armstrong Ceilings portfolio, including other mounting methods for products within these families, at [techline@armstrongceilings.com](mailto:techline@armstrongceilings.com) or 877-276-7876 option #2.



## BLADES & BAFFLES

	Model Room 1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	Reverberation Time (RT)		
		GOOD RT=1.4s	BETTER RT=1.0s	BEST RT=0.6s
FeltWorks® Blades	Area of Blades	333 SF	653 SF	1,380 SF
	# of 10 x 96 x 3/8" Blades	50	98	207
	% of Deck Coverage	1%	2%	5%
SoundScapes® Blades	Area of Blades	141 SF	281 SF	604 SF
	# of 22 x 46 x 2" Blades	20	40	86
	% of Deck Coverage	1%	3%	6%
Soundsoak® Baffles	Area of Baffles (Sailcloth)	112 SF	216 SF	464 SF
	# of 24 x 48 x 2" Baffles	14	27	58
	% of Deck Coverage	1%	2%	4%
Tectum® Blades	Area of Blades	600 SF	1,184 SF	2,496 SF
	# of 24 x 48 x 1" Blades	75	148	312
	% of Deck Coverage	3%	5%	10%
Tectum® Baffles	Area of Baffles	600 SF	1,184 SF	2,496 SF
	# of 24 x 48 x 1" Baffles	75	148	312
	% of Deck Coverage	3%	5%	10%
MetalWorks™ Blades	Area of Blades	240 SF	477 SF	1,005 SF
	# of 4 x 96 x 1" Blades	90	179	377
	% of Deck Coverage	6%	12%	25%

## CLOUDS & CANOPIES

ACOUSTIBuilt™ Clouds	Area of Clouds	248 SF	483 SF	N/A
	% of Deck Coverage	25%	48%	N/A
FeltWorks® Open Cell Panels	Area of FeltWorks Cloud Material	384 SF	768 SF	1,792 SF
	# of 96" x 96" Clouds	3	6	14
	% of Coverage (vert. face vs. floor)	1%	2%	4%
SoundScapes® Shapes	Area of Shapes	192 SF	368 SF	784 SF
	# of 48" x 48" Shapes	12	23	49
	% of Deck Coverage	19%	37%	78%
SoundScapes® Canopies	Area of Canopies	216 SF	408 SF	888 SF
	# of 72" x 48" Canopies	9	17	37
	% of Coverage (horz. face vs. floor)	22%	41%	88%





## CLOUDS & CANOPIES (CONTINUED)

	Model Room 1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	Reverberation Time (RT)		
		GOOD RT=1.4s	BETTER RT=1.0s	BEST RT=0.6s
Tectum® Shapes & Clouds	Area of Clouds	368 SF	704 SF	N/A
	# of 48 x 48 x 1-1/2" Clouds	23	44	N/A
	% of Deck Coverage	37%	70%	N/A
Formations™ Clouds & DesignFlex™ for Formations™ Clouds	Area of Clouds	256 SF	512 SF	N/A
	# of 96" x 96" Ultima®	4	8	N/A
	% of Deck Coverage	26%	51%	N/A
MetalWorks™ Canopies	Area of Canopies (P2)	168 SF	336 SF	720 SF
	# of 72" x 48" Canopies	7	14	30
	% of Deck Coverage	17%	34%	72%
WoodWorks® Canopies	Area of Canopies	384 SF	736 SF	N/A
	# of 72" x 48" Canopies	12	23	N/A
	% of Deck Coverage	38%	74%	N/A
Serpentina® Waves™	Area of Clouds (R062 w/infill)	192 SF	384 SF	768 SF
	# of 96" x 96" Clouds	3	6	12
	% of Deck Coverage	19%	38%	77%

## DIRECT-TO-STRUCTURE CEILING & WALL PANELS



SoundScapes® Shapes	Area of Wall Panels	266 SF	505 SF	1,090 SF
	# of 48 x 48 Hexagon Panels	20	38	82
	% of Wall Coverage	14%	26%	56%
Tectum® Direct-Attach Panels	Area of 1" thick Tectum® Panels (C-20 Mount)	222 SF	435 SF	928 SF
	% of Wall Coverage	14%	28%	59%
Tectum® Finale	Area of 2" thick Tectum® Finale Panels (A Mount)	210 SF	410 SF	890 SF
	% of Deck Coverage	21%	41%	89%
Lyra® PB Direct-Apply	Area of Ceiling Panels (A Mount)	240 SF	470 SF	1,000 SF
	# of 24 x 48 x 1" Panels	30	59	125
	% of Deck Coverage	24%	47%	100%
FeltWorks® Acoustical Panels	Area of 1" thick FeltWorks Panels (7/8" Hat Channel with Magnets)	256 SF	480 SF	992 SF
	# of 48 x 96 x 1" Panels	8	15	31
	% of Deck Coverage	26%	48%	99%
InvisAcoustics™ Panels	Area of Ceiling Panels (D-40)	280 SF	550 SF	N/A
	# of 24 x 48 x 1" Panels	35	69	N/A
	% of Deck Coverage	28%	56%	N/A
Optima® Capz™ Panels	Area of Ceiling Panels	190 SF	370 SF	800 SF
	% of Coverage (horz. face vs. floor)	19%	37%	80%
Metalworks™ Capz™ Panels	Area of Ceiling Panels	200 SF	400 SF	850 SF
	% of Deck Coverage	20%	40%	85%
Soundsoak® Acoustical Wall Panels	Area of Wall Panels (Fabric)	256 SF	512 SF	1,088 SF
	# of 24 x 96 x 1" Panels	16	32	68
	% of Wall Coverage	13%	26%	56%
WoodWorks® Wall Panels	Area of W4 Wall Panels	214 SF	424 SF	920 SF
	% of Wall Coverage	11%	22%	47%

# EXPOSED STRUCTURE ACOUSTICAL PERFORMANCE SUMMARY

Product Family <sup>1</sup>	Mounting Method	Sound Absorption (Sabins/SF)						Average Sound Absorption <sup>2</sup>
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	
<b>BLADES™ &amp; BAFFLES</b>								
FeltWorks® Blades	J-Mount	0.50	2.20	3.90	5.00	7.40	9.30	0.69
SoundScapes® Blades	J-Mount	0.26	0.69	1.35	1.76	1.68	1.50	1.38
MetalWorks™ Blades	J-Mount	0.09	0.18	0.71	1.23	1.55	1.26	0.92
Tectum® Blades and Baffles (1")	J-Mount	0.12	0.20	0.29	0.49	0.65	0.91	0.41
Soundsoak® Baffles - Fabric	J-Mount	0.18	0.84	1.75	2.33	2.31	2.23	1.81
Soundsoak® Baffles - Sailcloth	J-Mount	0.15	0.63	1.19	1.74	1.18	0.71	1.18
<b>CLOUDS &amp; CANOPIES</b>								
ACOUSTIBuilt™ Clouds	J-Mount	0.18	0.40	0.78	1.02	0.99	1.12	0.80
ACOUSTIBuilt™ Clouds w/ Infill	J-Mount	0.12	0.62	1.38	1.68	1.66	1.55	1.33
FeltWorks® Open Cell Cloud	J-Mount	0.05	0.20	0.53	0.66	0.83	1.04	0.56
SoundScapes® Shapes	J-Mount	0.32	0.60	1.00	1.42	1.69	1.74	1.18
SoundScapes® Basics	J-Mount	0.31	0.65	1.17	1.56	1.46	1.26	1.21
Tectum® Shapes & Clouds (1-1/2")	J-Mount	0.44	0.43	0.33	0.49	0.66	0.93	0.48
MetalWorks™ Canopies (P2)	J-Mount	0.48	0.86	1.12	1.41	1.54	1.28	1.23
WoodWorks™ Canopies	J-Mount	0.33	0.59	0.63	0.49	0.38	0.52	0.52
SoundScapes® Canopies	J-Mount	0.42	0.41	0.71	1.00	1.17	1.22	0.82
Serpentina® R062 Fleece Only	J-Mount	0.63	0.64	0.74	0.86	0.85	0.69	0.77
Serpentina® R062 w/Infill	J-Mount	0.64	0.83	1.08	1.37	1.28	0.81	1.14
<b>DIRECT-TO-STRUCTURE CEILING &amp; WALL PANELS</b>								
InvisAcoustics™ to Deck, I-Beam, or Wall	D-20	0.09	0.59	0.78	0.96	0.94	0.90	0.80
InvisAcoustics™ to Deck	A-Mount (Glue-up)	0.03	0.24	0.72	1.00	0.93	0.88	0.72
FeltWorks® Panels	A-Mount (Glue-up)	0.13	0.30	0.61	0.92	1.07	1.07	0.75
	D-Mount (Magnet)	0.13	0.35	0.79	1.13	1.14	1.08	0.85
Optima® Capz™	J-Mount	0.17	0.73	1.16	1.16	1.29	1.29	1.08
Lyra® Direct-Apply	A-Mount (Glue-up)	0.12	0.34	0.81	1.06	1.07	0.98	0.82
	D-40 Mount	0.22	0.70	1.05	1.11	1.07	1.01	0.98
1" Tectum® Direct-Attach	A-Mount	0.06	0.13	0.24	0.45	0.82	0.64	0.41
	D-20 Mount	0.07	0.15	0.36	0.65	0.71	0.81	0.47
	C-20 Mount	0.16	0.43	1.00	1.05	0.79	0.98	0.82
	C-40 Mount	0.32	0.70	1.09	0.93	0.76	0.94	0.87
1" Tectum® Finale™	A-Mount	0.16	0.43	1.00	1.05	0.79	0.98	0.82
2" Tectum® Finale™	A-Mount	0.24	0.67	1.14	0.87	1.06	0.96	0.94
1" Soundsoak® Wall Panels	A-Mount	0.06	0.30	0.79	1.03	1.06	0.97	0.80
	D-20 Mount	0.10	0.44	0.92	1.14	1.08	1.00	0.90
2" Soundsoak® Wall Panels	A-Mount	0.18	0.76	1.17	1.20	1.09	1.07	1.06
	D-20 Mount	0.25	0.85	1.19	1.19	1.12	1.06	1.09

<sup>1</sup> Contact TechLine at [techline@armstrongceilings.com](mailto:techline@armstrongceilings.com) for acoustical performance data on other mounting methods or items within these families, and for product families not shown in the chart.

<sup>2</sup> Averaged over the primary speech frequency range

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Tectum® Direct-Attach ceiling panels  
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