UL® Classified Acoustical Performance

Summary

Product Family	Sound Absorption Coefficient[A] – E-400 Mounting						Published Value: Sound Absorption[B]	Published Value: Sound Transmission[C]	Articulation Class[E]	Total Acoustics
	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC[D]	CAC[D]		
Soft Fiber										
Optima®/Lyra® Capz™ (J-Mount)	0.17	0.73	1.16	1.16	1.29	1.29	1.08	–	–	–
Lyra® Direct Apply (A-Mount)	0.12	0.34	0.81	1.06	1.07	0.98	0.80	–	–	–
Lyra® Direct Apply (D-40 Mount)	0.22	0.70	1.05	1.11	1.07	1.01	1.00	–	–	–
Lyra®	0.75	0.95	0.79	1.00	1.03	1.00	0.95	–	190	–
Lyra® Concealed	0.72	0.84	0.78	0.99	1.06	1.01	0.90	–	190	–
Lyra® Vector®	0.72	0.84	0.78	0.99	1.06	1.01	0.90	–	190	–
Optima® 3/4"	0.81	0.94	0.76	0.93	1.05	1.01	0.90	–	180	–
Optima® 1"	0.81	0.97	0.78	0.99	1.07	1.02	0.95	–	190	–
Optima® 1" w/ CAC Backing	0.44	0.60	0.79	1.09	1.08	0.89	0.90	26	200	–
Optima® 1.5"	0.73	0.95	0.92	10.60	1.03	0.94	1.00	–	200	–
Optima® 1.5" w/ CAC Backing	0.51	0.85	0.91	1.13	1.09	1.01	0.95	26	200	–
Optima® Concealed	0.70	0.84	0.78	0.99	1.06	1.01	0.90	–	190	–
Optima® Concealed w/ CAC Backing	0.52	0.49	0.81	0.89	1.03	0.90	0.80	26	190	–
Optima® Health Zone™	0.72	1.00	0.80	1.01	1.06	0.98	0.95	–	190	–
Optima® Health Zone™ w/ CAC Backing	0.72	1.00	0.80	1.01	1.06	0.98	0.95	–	190	–
Optima® Vector®	0.70	0.84	0.78	0.99	1.06	1.01	0.90	–	190	–
Optima® Vector® w/ CAC Backing	0.52	0.49	0.81	0.89	1.03	0.90	0.80	26	190	–
Painted Nubby™ 3/4"	0.73	0.94	0.70	0.90	0.99	1.01	0.85	–	180	–
Painted Nubby™ 1"	0.81	0.97	0.78	0.99	1.07	1.02	0.95	–	190	–
Pebble™ Perforated	0.59	0.70	0.56	0.84	0.89	0.71	0.70	–	–	–
Pebble™ Perforated High NRC	0.74	0.78	0.68	0.88	0.78	0.66	0.80	–	–	–
Random Fissured™ Unperforated	0.50	0.33	0.29	0.78	0.78	0.64	0.55	–	–	–
Random Fissured™ Perforated	0.59	0.70	0.56	0.84	0.89	0.71	0.70	–	–	–
Shasta® Unperforated	0.47	0.33	0.32	0.82	0.75	0.72	0.50	–	–	–
Shasta® Perforated	0.59	0.70	0.56	0.84	0.89	0.71	0.70	–	–	–

A = These are representative data for the product family. Sound absorption test data for specific item tested. Data and test reports for most products available upon request. Contact TechLine at techline@armstrongceilings.com

B = Sound Absorption Data and NRC rating obtained by ASTM Procedure C423, "Standard Test Method for Sound Absorption and Sound Absorption Coefficient by the Reverberation Room Method." Sample mountings follow procedures outlined in ASTM E795, "Standard Practices for Mounting Test Specimens During Sound Absorption Tests."

C = Sound Transmission loss data obtained by procedures outlined in AMA-1-II, "Test Method for Ceiling Sound Transmission Test by the Two-Room Method" or by the ASTM Procedure E1414, "Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum." CAC rating determined by following procedures outlined in ASTM Procedure E413, "Classification for Rating Sound Insulation."

D = NRC and CAC single number ratings comply with ASTM E1264 classification requirements.

E = AC is measured according to ASTM E1110 and E1111.

NOTE: For acoustical details for Tectum® products, contact TechLine at 877 276 7876

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UL® Classified Acoustical Performance
Summary

Product Family	Sound Absorption Coefficient[A] – E-400 Mounting						Published Value: Sound Absorption[B]	Published Value: Sound Transmission[C]	Articulation Class[E]	Total Acoustics
	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC[D]	CAC[D]		
Mineral Fiber										
AcoustiBuilt®	0.22	0.32	0.82	1.02	0.97	1.00	0.80	46	–	Best
Armatuff®	0.24	0.35	0.71	0.61	0.42	0.28	0.50	33-35	–	–
Backstage Noir®	0.50	0.54	0.68	0.91	0.98	0.97	0.75	30	–	–
Calla®	0.59	0.56	0.82	0.99	0.95	0.94	0.85	35	170	Best
Calla® High CAC	0.30	0.43	0.77	0.94	0.93	0.95	0.80	40	170	Best
Calla® High NRC	0.48	0.61	0.94	1.01	1.00	1.00	0.90	35	170	Best
Calla® Health Zone™	0.28	0.44	0.83	0.99	0.97	0.99	0.80	38	170	Best
Calla® Health Zone™ AirAssure®	0.28	0.44	0.83	0.99	0.97	0.99	0.80	40	170	Best
Calla® Vector®	0.29	0.41	0.86	0.99	0.98	1.02	0.80	33	170	–
Calla® PrivAssure® (CAC 45)	0.48	0.44	0.85	1.01	1.01	1.01	0.75	45	–	Better
Calla® PrivAssure® (CAC 50)	0.45	0.40	0.85	0.98	1.00	1.01	0.80	50	–	Best
Calla® for DynaMax®	0.59	0.56	0.82	0.99	0.95	0.94	0.85	35	170	Best
Canyon®	0.41	0.32	0.56	0.84	0.82	0.80	0.65	35	–	Good
Ceramaguard® Fine Fissured™	0.28	0.27	0.43	0.72	0.92	0.86	0.55	38-40	–	–
Ceramaguard® Unperforated	–	–	–	–	–	–	–	40	–	–
Cirrus®	0.32	0.31	0.59	0.93	1.00	0.99	0.70	35	–	Better
Cirrus® Fire Guard™	0.27	0.25	0.29	0.36	0.46	0.53	0.35	35	–	–
Cirrus® High CAC	0.36	0.37	0.71	0.90	0.96	0.95	0.70	40	–	Better
Cirrus® High NRC	0.33	0.39	0.85	1.00	0.96	0.96	0.75	35	170	Better
Cirrus® Profiles	0.23	0.31	0.59	0.83	0.95	0.95	0.65	35	–	Good
Cirrus® Second Look®	0.23	0.31	0.59	0.83	0.95	0.95	0.65	35	–	Good
Clean Room™ FL (border units)	–	–	–	–	–	–	–	35	–	–
Clean Room™ FL (field units)	0.25	0.24	0.59	0.90	0.75	0.51	0.55	35	–	–
Clean Room™ VL Perforated	0.22	0.24	0.53	0.90	0.78	0.47	0.55	35	–	–
Clean Room™ VL Unperforated	–	–	–	–	–	–	–	40	–	–
Cortega®	0.21	0.26	0.51	0.78	0.75	0.69	0.55	33-40	–	–
Cortega® Fire Guard™	0.22	0.26	0.46	0.78	0.92	0.82	0.55	33-35	–	–
Cortega® Second Look®	0.20	0.30	0.48	0.72	0.73	0.73	0.55	30-35	–	–
Cortega® Second Look® Fire Guard	0.23	0.31	0.56	0.87	0.85	0.82	0.55	40	–	–
Designer™	0.33	0.33	0.51	0.68	0.73	0.76	0.55	30-33	–	–
Dune™	0.39	0.35	0.60	0.60	0.51	0.34	0.50	30-35	–	–
Dune™ for DynaMax®	0.39	0.35	0.60	0.60	0.51	0.34	0.50	35	–	–
Dune™ Fire Guard™	0.21	0.28	0.51	0.74	0.60	0.42	0.50	35	–	–
Dune™ Second Look®	0.37	0.37	0.63	0.64	0.56	0.39	0.50	35	–	–

A = These are representative data for the product family. Sound absorption test data for specific item tested. Data and test reports for most products available upon request. Contact TechLine at techline@armstrongceilings.com

B = Sound Absorption Data and NRC rating obtained by ASTM Procedure C423, "Standard Test Method for Sound Absorption and Sound Absorption Coefficient by the Reverberation Room Method." Sample mountings follow procedures outlined in ASTM E795, "Standard Practices for Mounting Test Specimens During Sound Absorption Tests."

C = Sound Transmission loss data obtained by procedures outlined in AMA-1-II, "Test Method for Ceiling Sound Transmission Test by the Two-Room Method" or by the ASTM Procedure E1414, "Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum." CAC rating determined by following procedures outlined in ASTM Procedure E413, "Classification for Rating Sound Insulation."

D = NRC and CAC single number ratings comply with ASTM E1264 classification requirements.

E = AC is measured according to ASTM E1110 and E1111.

NOTE: For acoustical details for Tectum® products, contact TechLine at 877 276 7876

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UL® Classified Acoustical Performance
Summary

Product Family	Sound Absorption Coefficient[A] – E-400 Mounting						Published Value: Sound Absorption[B]	Published Value: Sound Transmission[C]	Articulation Class[E]	Total Acoustics
	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC[D]	CAC[D]		
Mineral Fiber (continued)										
Fine Fissured™	0.30	0.35	0.59	0.71	0.69	0.58	0.55	35	–	–
Fine Fissured™ Fire Guard™	0.20	0.27	0.52	0.89	0.82	0.75	0.55	35	–	–
Fine Fissured™ Fire Guard™ High NRC	0.20	0.30	0.74	0.95	0.87	0.78	0.70	35	–	Better
Fine Fissured™ High NRC	0.28	0.39	0.86	1.01	1.01	1.02	0.75	35	170	Better
Fine Fissured™ School Zone®	0.29	0.30	0.65	0.91	0.85	0.79	0.70	40	–	Better
Fine Fissured™ School Zone® AirAssure®	0.29	0.30	0.65	0.91	0.85	0.79	0.70-0.75	42-45	170	Better
Fine Fissured™ Second Look®	0.20	0.30	0.48	0.72	0.73	0.73	0.55	30-35	–	–
Fine Fissured™ Second Look® Fire Guard™	0.23	0.31	0.56	0.87	0.85	0.82	0.55	35	–	–
Fine Fissured™ Tile	0.43	0.31	0.42	0.66	0.79	0.70	0.55	35	–	–
Fissured™	0.25	0.25	0.46	0.74	0.82	0.81	0.55	30	–	–
Fissured™ Fire Guard™	0.22	0.26	0.46	0.78	0.92	0.82	0.55	35	–	–
Georgian™	0.21	0.26	0.51	0.78	0.75	0.69	0.55	33-35	–	–
Georgian™ High Washability	–	–	–	–	–	–	–	33	–	–
Graphis® Finetex™	–	–	–	–	–	–	–	35	–	–
Graphis® Rustex™	0.39	0.31	0.44	0.69	0.89	0.98	0.55	30	–	–
InvisAcoustics™ (A mount)	0.03	0.24	0.72	1.00	0.93	0.88	0.70	–	–	–
InvisAcoustics™ (D-20 mount)	0.09	0.59	0.78	0.96	0.94	0.90	0.80	–	–	–
Ledges®	–	–	–	–	–	–	–	35	–	–
Mesa™	0.35	0.40	0.67	0.78	0.76	0.67	0.60	33-35	–	Good
Mesa™ High CAC	0.30	0.32	0.69	0.84	0.73	0.62	0.60	40	–	Good
Mesa™ Second Look®	0.35	0.40	0.67	0.78	0.76	0.76	0.60	35	–	Good
Pueblo™	0.65	0.53	0.66	0.95	1.02	1.00	0.70	30	–	–
Pueblo™ HIgh NRC	0.49	0.56	0.84	1.06	1.08	1.03	0.90	30	–	–
Tincraft™	–	–	–	–	–	–	–	35	–	–
Tundra®	0.23	0.26	0.57	0.67	0.50	0.38	0.50	33-35	–	–

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C = Sound Transmission loss data obtained by procedures outlined in AMA-1-II, "Test Method for Ceiling Sound Transmission Test by the Two-Room Method" or by the ASTM Procedure E1414, "Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum." CAC rating determined by following procedures outlined in ASTM Procedure E413, "Classification for Rating Sound Insulation."

D = NRC and CAC single number ratings comply with ASTM E1264 classification requirements.

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NOTE: For acoustical details for Tectum® products, contact TechLine at 877 276 7876

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UL® Classified Acoustical Performance
Summary

Product Family	Sound Absorption Coefficient[A] – E-400 Mounting						Published Value: Sound Absorption[B]	Published Value: Sound Transmission[C]	Articulation Class[E]	Total Acoustics
	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC[D]	CAC[D]		
Mineral Fiber (continued) Cementitious Wood Fiber										
Ultima®	0.32	0.33	0.67	0.97	0.96	0.93	0.75	35	–	Better
Ultima® for DynaMax®	0.32	0.33	0.67	0.97	0.96	0.93	0.75	35	170	Better
Ultima® AirAssure® for DynaMax®	0.32	0.33	0.67	0.97	0.96	0.93	0.75	35	–	Better
Ultima® Fire Guard™	0.26	0.31	0.59	0.78	0.80	0.69	0.60	40	–	Good
Ultima® Health Zone™	0.30	0.32	0.71	0.92	0.90	0.89	0.70	38	–	Better
Ultima® Health Zone™ AirAssure®	0.30	0.32	0.71	0.92	0.90	0.89	0.70	40	–	Better
Ultima® Health Zone™ High NRC	0.33	0.36	0.76	1.00	0.98	0.98	0.80	35	170	Best
Ultima® High CAC	0.26	0.31	0.59	0.78	0.80	0.69	0.60	40	–	Good
Ultima® High NRC	0.28	0.39	0.79	0.98	0.96	0.90	0.80	35	170	Best
Ultima® Vector®	0.34	0.38	0.67	0.89	0.82	0.80	0.70	33	–	–
Cementitious Wood Fiber										
Tectum® Direct-Attach 1" (A-Mount)	0.06	0.13	0.24	0.45	0.82	0.64	0.40	–	–	–
Tectum® Direct-Attach 1" (D-20 Mount)	0.07	0.15	0.36	0.65	0.71	0.81	0.45	–	–	–
Tectum® Direct-Attach 1" (C-20 Mount)	0.16	0.43	1.00	1.05	0.79	0.98	0.80	–	–	–
Tectum® Direct-Attach 1" (C-40 Mount)	0.32	0.70	1.09	0.93	0.76	0.94	0.85	–	–	–
Tectum® Finale™ 1" (A-Mount)	0.16	0.43	1.00	1.05	0.79	0.98	0.95	–	–	–
Tectum® Finale™ 2" (A-Mount)	0.24	0.67	1.14	0.87	1.06	0.96	0.95	–	–	–

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B = Sound Absorption Data and NRC rating obtained by ASTM Procedure C423, "Standard Test Method for Sound Absorption and Sound Absorption Coefficient by the Reverberation Room Method." Sample mountings follow procedures outlined in ASTM E795, "Standard Practices for Mounting Test Specimens During Sound Absorption Tests."

C = Sound Transmission loss data obtained by procedures outlined in AMA-1-II, "Test Method for Ceiling Sound Transmission Test by the Two-Room Method" or by the ASTM Procedure E1414, "Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum." CAC rating determined by following procedures outlined in ASTM Procedure E413, "Classification for Rating Sound Insulation."

D = NRC and CAC single number ratings comply with ASTM E1264 classification requirements.

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Exposed Structure Acoustical Performance
Summary

Product Family	Mounting Method[1]	Sound Absorption (Sabin/SF)						Average Sound Absorption[2]
		125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	
Blades™ & Baffles								
5" SoundScapes® Blades 12" O.C.	Installed Array	0.09	0.22	0.63	0.64	0.57	0.43	0.50
10" SoundScapes Blades 12" O.C.	Installed Array	0.84	0.40	0.89	0.98	0.84	0.68	0.80
16" SoundScapes Blades 12" O.C.	Installed Array	0.30	0.55	1.24	1.16	0.96	0.75	1.00
22" SoundScapes Blades 12" O.C.	Installed Array	0.21	0.59	1.32	1.14	0.90	0.66	1.00
28" SoundScapes Blades 12" O.C.	Installed Array	0.42	0.77	1.74	1.55	1.34	1.07	1.35
6" FeltWorks® Blades Hook On 12" O.C.	Installed Array	0.05	0.17	0.35	0.32	0.53	0.72	0.35
8" FeltWorks Blades Hook On 12" O.C.	Installed Array	0.06	0.29	0.41	0.43	0.69	0.85	0.45
10" FeltWorks Blades Hook On 12" O.C.	Installed Array	0.11	0.38	0.45	0.54	0.79	0.96	0.55
6" FeltWorks Varaffix 12" O.C.	Installed Array	0.09	0.16	0.33	0.40	0.70	0.84	0.40
8" FeltWorks Varaffix 12" O.C.	Installed Array	0.07	0.25	0.38	0.50	0.80	0.88	0.50
10" FeltWorks Varaffix 12" O.C.	Installed Array	0.17	0.34	0.45	0.60	0.90	0.98	0.55
12" FeltWorks Varaffix 12" O.C.	Installed Array	0.24	0.44	0.48	0.72	1.04	1.14	0.65
4" × 1" MetalWorks™ Blades 12" O.C.	Installed Array	0.05	0.11	0.27	0.28	0.44	0.39	0.25
6" × 1" MetalWorks Blades 12" O.C.	Installed Array	0.06	0.37	0.33	0.41	0.61	0.53	0.45
6" × 2" MetalWorks Blades 12" O.C.	Installed Array	0.09	0.53	0.38	0.46	0.59	0.50	0.50
Clouds & Canopies								
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
Direct-to-Structure Ceiling & Wall panels								
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	0.70
FeltWorks® Panels	A-Mount (Glue-up)	0.13	0.30	0.61	0.92	1.07	1.07	0.75
	D-Mount (Mount Magnets)	0.13	0.35	0.79	1.13	1.14	1.08	0.85
Optima®/Lyra® 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	0.80
	D-40 Mount	0.22	0.70	1.05	1.11	1.07	1.01	1.00
1" Tectum® Direct-Attach	A-Mount	0.06	0.13	0.24	0.45	0.82	0.64	0.40
	D-20 Mount	0.07	0.15	0.36	0.65	0.71	0.81	0.45
	C-20 Mount	0.16	0.43	1.00	1.05	0.79	0.98	0.80
	C-40 Mount	0.32	0.70	1.09	0.93	0.76	0.94	0.85
1" Tectum® Finale™	A-Mount	0.16	0.43	1.00	1.05	0.79	0.98	0.95
2" Tectum® Finale™	A-Mount	0.24	0.67	1.14	0.87	1.06	0.96	0.95
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	1.00
	D-20 Mount	0.25	0.85	1.19	1.19	1.12	1.06	1.10

[1] Contact TechLine at 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.
[2] Averaged over the primary speech frequency range

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