



**E9775.01.01-113-11-R0
ACOUSTICAL PERFORMANCE TEST REPORT
ASTM C423**

Rendered to

BURCH FABRICS

Type: Fabric Over Fiberglass Board

Summary of Test Results									
Data File No.	Description	1/3 Octave Sound Absorption Coefficients at the Octave Band Frequencies						NRC	SAA
		125	250	500	1000	2000	4000		
E9775.01	Owens Corning Type 475-FRK 1" duct board	0.03	0.21	0.62	0.91	0.97	1.01	0.70	0.68
E9775.01A	Traction Chrome	0.06	0.25	0.74	1.02	1.06	1.12	0.75	0.78
E9775.01B	Collaborate Moon Rock	0.05	0.25	0.72	1.00	1.09	1.29	0.75	0.78
E9775.01C	Century Dew	0.06	0.27	0.88	1.06	1.03	1.14	0.80	0.82
E9775.01D	Alliance Taupe	0.06	0.26	0.77	1.03	1.06	1.19	0.80	0.79
E9775.01E	Collective Pearl	0.06	0.26	0.74	1.02	1.08	1.21	0.80	0.78
E9775.01F	Unison Suede	0.06	0.26	0.75	1.02	1.07	1.20	0.80	0.78
E9775.01G	Coalition Soft Bronze	0.05	0.25	0.72	1.01	1.08	1.21	0.75	0.78
E9775.01H	Midway Mineral	0.06	0.24	0.70	0.99	1.10	1.44	0.75	0.78
E9775.01I	Dayton Straw	0.06	0.22	0.67	0.97	1.04	1.26	0.75	0.74
E9775.01J	Columbus Silver	0.03	0.24	0.77	1.04	1.07	1.25	0.80	0.79

Reference should be made to Intertek-ATI Report No. E9775.01-113-11 for complete test specimen description. This page alone is not a complete report.



Acoustical Performance Test Report

BURCH FABRICS
4200 Brockton Dr. SE
Grand Rapids, Michigan 49512

Report	E9775.01-113-11
Test Date	08/03/15
Report Date	08/17/15

Project Scope

Architectural Testing, Inc., an Intertek company (Intertek-ATI), was contracted to conduct a sound absorption test. The complete test data is included as Appendix B of this report. The client provided the test specimen.

Test Methods

Testing for this project was conducted in accordance with the following standards. The equipment listed in the attachments meets the requirements of the following standards.

ASTM C423-09a, *Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method*

ASTM E795-05 (2012), *Standard Practices for Mounting Test Specimens During Sound Absorption Tests*

Test Procedure

All measurements were conducted in the HT test chamber receive room at Intertek-ATI located in York, Pennsylvania. The sensitivity of the microphones was checked before measurements were conducted. Empty room sound absorption measurements were conducted before the specimen was installed. Full room sound absorption measurements were conducted after the specimen was installed.

For the empty and full room measurements, ten decay measurements were conducted at each of the five microphone positions. Data was obtained at 1/3 octave band frequencies ranging from 80 to 5000 hertz. The air temperature and relative humidity conditions were monitored and recorded during the measurements.

Specimen Mounting

For the Type A mounting, the test specimen was placed directly against the floor of the reverberation room with the absorptive side facing the sound field. The perimeter of the specimen was sealed to the floor with aluminum angle and duct tape.

Test Calculations

The Sound Absorption Coefficient is the full room absorption minus the empty room absorption divided by the area of the sample in m². The Sound Absorption Coefficient is dimensionless.

The Noise Reduction Coefficient (NRC) rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000 and 2000 hertz. The average is rounded to the nearest multiple of 0.05.

The Sound Absorption Average (SAA) rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500 hertz. The average is rounded to the nearest multiple of 0.01.

Specimen Description

Two, 1.22 m by 2.74 m panels, were arranged to produce the 2.44 m by 2.74 m test specimen. Photographs are included in Appendix C.

Description	Thickness	Density	Weight
Owens Corning Type 475-FRK 1" duct board	25.18 mm	82.21 kg/m ³	2.07 kg/m ²
Traction Chrome	0.57 mm	350.87 kg/m ³	0.20 kg/m ²
Collaborate Moon Rock	0.46 mm	413.04 kg/m ³	0.19 kg/m ²
Century Dew	0.58 mm	379.31 kg/m ³	0.22 kg/m ²
Alliance Taupe	0.55 mm	345.45 kg/m ³	0.19 kg/m ²
Collective Pearl	0.53 mm	339.62 kg/m ³	0.18 kg/m ²
Unison Suede	0.58 mm	327.58 kg/m ³	0.19 kg/m ²
Coalition Soft Bronze	0.60 mm	316.66 kg/m ³	0.19 kg/m ²
Midway Mineral	0.71 mm	309.86 kg/m ³	0.22 kg/m ²
Dayton Straw	0.57 mm	315.79 kg/m ³	0.18 kg/m ²
Columbus Silver	0.54 mm	352.94 kg/m ³	0.18 kg/m ²

* - Stated per Client/Manufacturer

Comments

The client did not supply a report drawing of the test specimen. Intertek-ATI will store samples of test specimens for four years.

Intertek-ATI will service this report for the entire test record retention period. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained by Intertek-ATI for the entire test record retention period. The test record retention period ends four years after the test date.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen tested. This report is intended to help in the client's quality assurance program, but it does not represent a continuous or exhaustive evaluation of the specimen tested or of other products or materials that were not evaluated. The statements and data provided herein do not constitute approval, disapproval, certification, or acceptance of performance or materials.

This report may not be reproduced, except in full, without the written approval of Intertek-ATI.

For INTERTEK-ATI:


Digitally Signed by: Eric Thompson

Eric A. Thompson
Technician - Acoustical Testing


Digitally Signed by: Todd D. Kister

Todd D. Kister
Laboratory Supervisor – Acoustical Testing

EAT:jmc

Attachments (pages): This report is complete only when all attachments listed are included.

- Appendix-A: Equipment description (1)
- Appendix-B: Complete test results (22)
- Appendix-C: Photographs (6)



Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
R0	08/17/15	N/A	Original Report Issue



E9775.01 -113-11

Appendix A

Instrumentation:

Instrument	Manufacturer	Model	Description	ATI Number	Date of Calibration
Data Acquisition Unit	National Instruments	PXI-1033	Data Acquisition card	65127	04/14 *
Receive Room Microphone	PBC Piezotronics	378B20	Microphone and Preamplifier	64907	11/14
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64908	11/14
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64909	11/14
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64910	11/14
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64911	11/14
Receive Room Environmental Indicator	Comet	T7510	Receive Room	64915	02/15
Microphone Calibrator	Norsonic	1251	Pistonphone Calibrator	65105	04/15

*- Note: The calibration frequency for this equipment is every two years per the manufacturer's recommendation.

Test Chamber:

	Volume	Description
Receive Room	234 m ³ (8291.3 ft ³)	Rotating vane and stationary diffusers Temperature and humidity controlled Isolation pads under the floor



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Appendix B

Complete Test Results



SOUND ABSORPTION
ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01	
Client	Burch Fabrics	
Specimen	Series/Model: Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	22	22
RH %	51	50
B.P. (mb)	1010	

Freq (Hz)	Empty Room Absorption (m ²)	Uncertainty	Full Room Absorption (m ²)	Uncertainty	Absorption Coefficient	Relative Uncertainty
80	4.34	0.395	4.54	0.496	0.03	0.095
100	4.52	0.351	4.68	0.337	0.02	0.073
125	4.62	0.236	4.84	0.406	0.03	0.070
160	4.13	0.082	4.69	0.123	0.08	0.022
200	4.21	0.124	5.12	0.048	0.14	0.020
250	4.65	0.065	6.06	0.022	0.21	0.010
315	4.91	0.041	7.12	0.038	0.33	0.008
400	5.07	0.046	8.17	0.028	0.46	0.008
500	5.03	0.047	9.19	0.273	0.62	0.041
630	4.58	0.032	9.69	0.010	0.76	0.005
800	4.56	0.032	10.19	0.030	0.84	0.007
1000	4.65	0.020	10.76	0.028	0.91	0.005
1250	5.18	0.030	11.51	0.021	0.95	0.005
1600	5.21	0.008	11.72	0.013	0.97	0.002
2000	5.11	0.014	11.58	0.037	0.97	0.006
2500	5.38	0.008	12.40	0.119	1.05	0.018
3150	6.00	0.010	12.75	0.011	1.01	0.002
4000	6.43	0.004	13.22	0.011	1.01	0.002
5000	7.14	0.012	13.96	0.006	1.02	0.002

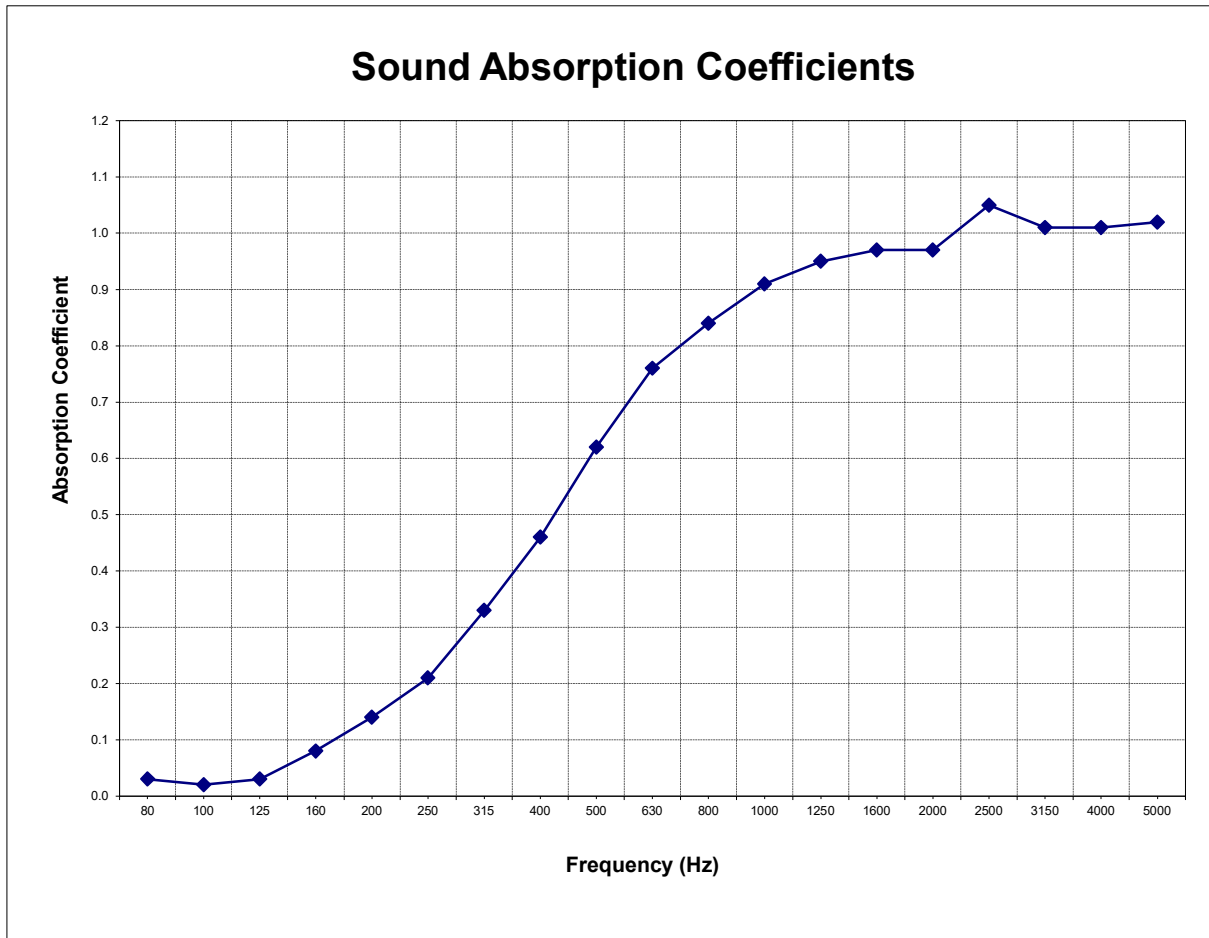
NRC Rating **0.70** *(Noise Reduction Coefficient)*
SAA Rating **0.68** *(Sound Absorption Average)*

- Notes:**
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
 - 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500 hertz. The average is rounded to the nearest multiple of 0.01.



SOUND ABSORPTION ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01	
Client	Burch Fabrics	
Specimen	Series/Model: Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	21.9	21.7
RH %	51	50
B.P. (mb)	1010	





SOUND ABSORPTION
ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01A	
Client	Burch Fabrics	
Specimen	Series/Model: Traction Chrome over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	22	22
RH %	51	49
B.P. (mb)	1010	

Freq (Hz)	Empty Room Absorption (m ²)	Uncertainty	Full Room Absorption (m ²)	Uncertainty	Absorption Coefficient	Relative Uncertainty
80	4.34	0.395	4.63	0.398	0.04	0.084
100	4.52	0.351	4.74	0.374	0.03	0.077
125	4.62	0.236	5.01	0.310	0.06	0.058
160	4.13	0.082	4.79	0.212	0.10	0.034
200	4.21	0.124	5.31	0.111	0.17	0.025
250	4.65	0.065	6.33	0.077	0.25	0.015
315	4.91	0.041	7.65	0.036	0.41	0.008
400	5.07	0.046	8.95	0.033	0.58	0.009
500	5.03	0.047	9.99	0.259	0.74	0.039
630	4.58	0.032	10.54	0.030	0.89	0.007
800	4.56	0.032	11.02	0.027	0.96	0.006
1000	4.65	0.020	11.48	0.027	1.02	0.005
1250	5.18	0.030	12.21	0.027	1.05	0.006
1600	5.21	0.008	12.34	0.008	1.07	0.002
2000	5.11	0.014	12.22	0.038	1.06	0.006
2500	5.38	0.008	12.97	0.122	1.13	0.018
3150	6.00	0.010	13.37	0.013	1.10	0.002
4000	6.43	0.004	13.94	0.009	1.12	0.001
5000	7.14	0.012	15.07	0.007	1.19	0.002

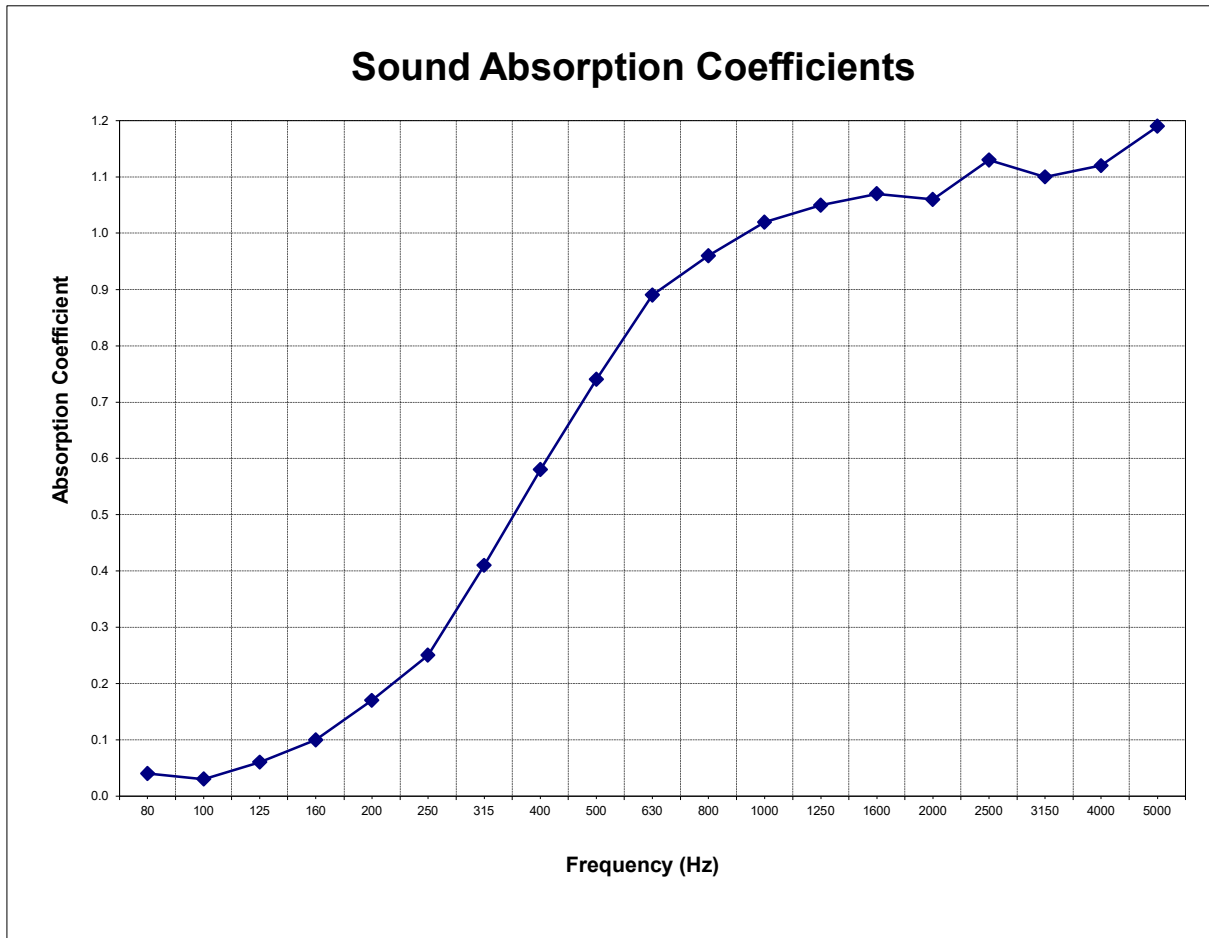
NRC Rating **0.75** *(Noise Reduction Coefficient)*
SAA Rating **0.78** *(Sound Absorption Average)*

- Notes:**
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
 - 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500 hertz. The average is rounded to the nearest multiple of 0.01.



SOUND ABSORPTION ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01A	
Client	Burch Fabrics	
Specimen	Series/Model: Traction Chrome over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	21.9	21.8
RH %	51	49
B.P. (mb)	1010	





SOUND ABSORPTION
ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01B	
Client	Burch Fabrics	
Specimen	Series/Model: Collaborate Moon Rock over Owens Corning Type 475-FRK 1" duct	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	22	22
RH %	51	48
B.P. (mb)	1010	

Freq (Hz)	Empty Room Absorption (m ²)	Uncertainty	Full Room Absorption (m ²)	Uncertainty	Absorption Coefficient	Relative Uncertainty
80	4.34	0.395	4.66	0.376	0.05	0.081
100	4.52	0.351	4.70	0.417	0.03	0.081
125	4.62	0.236	4.95	0.376	0.05	0.066
160	4.13	0.082	4.82	0.137	0.10	0.024
200	4.21	0.124	5.29	0.132	0.16	0.027
250	4.65	0.065	6.31	0.024	0.25	0.010
315	4.91	0.041	7.63	0.043	0.41	0.009
400	5.07	0.046	8.91	0.012	0.57	0.007
500	5.03	0.047	9.87	0.236	0.72	0.036
630	4.58	0.032	10.32	0.046	0.86	0.008
800	4.56	0.032	10.86	0.038	0.94	0.007
1000	4.65	0.020	11.36	0.019	1.00	0.004
1250	5.18	0.030	12.17	0.015	1.04	0.005
1600	5.21	0.008	12.46	0.007	1.08	0.002
2000	5.11	0.014	12.42	0.041	1.09	0.006
2500	5.38	0.008	13.46	0.133	1.21	0.020
3150	6.00	0.010	14.10	0.008	1.21	0.002
4000	6.43	0.004	15.08	0.007	1.29	0.001
5000	7.14	0.012	16.68	0.010	1.43	0.002

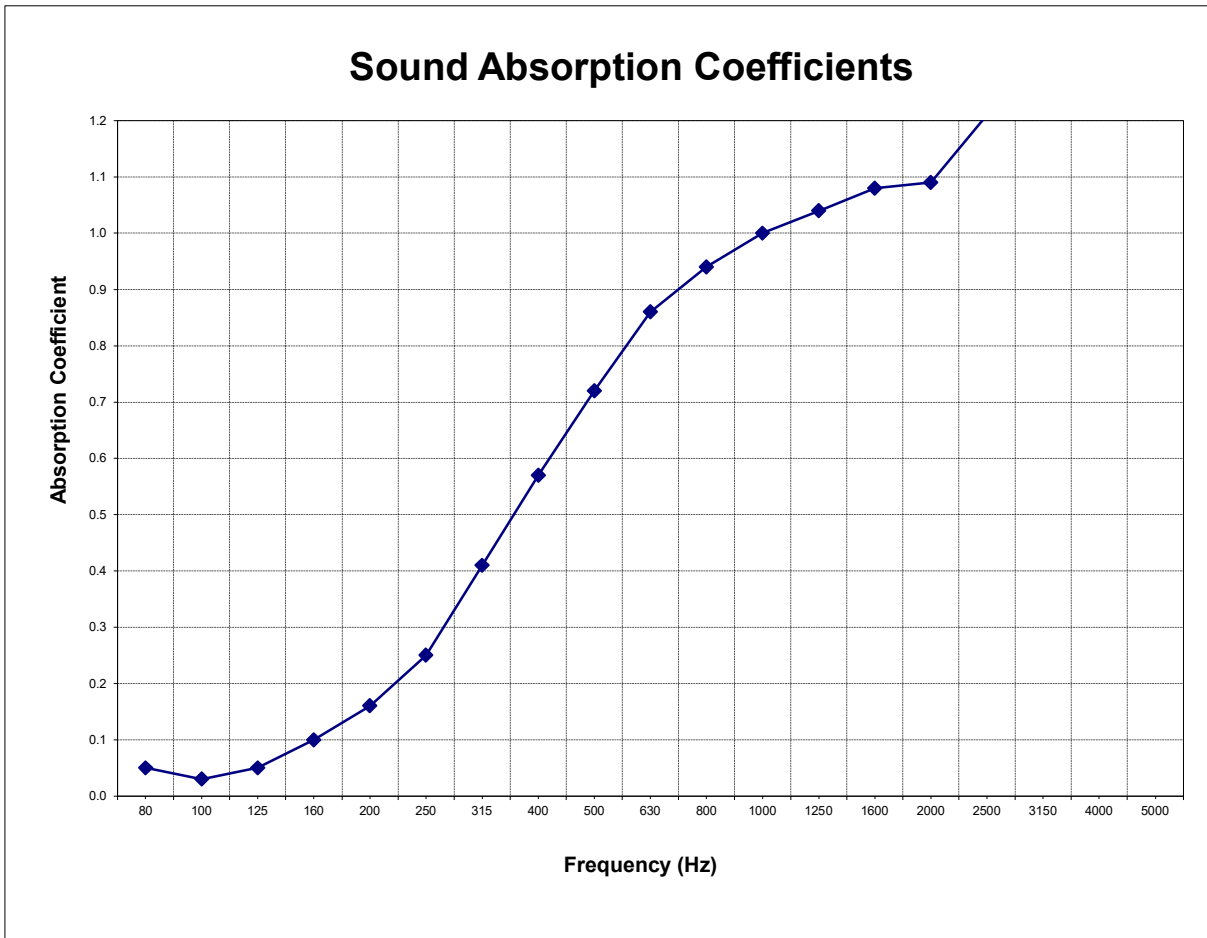
NRC Rating **0.75** *(Noise Reduction Coefficient)*
SAA Rating **0.78** *(Sound Absorption Average)*

- Notes:**
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
 - 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500 hertz. The average is rounded to the nearest multiple of 0.01.



SOUND ABSORPTION
ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01B	
Client	Burch Fabrics	
Specimen	Series/Model: Collaborate Moon Rock over Owens Corning Type 475-FRK 1" duct	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	21.9	22.4
RH %	51	48
B.P. (mb)	1010	





SOUND ABSORPTION
ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01C	
Client	Burch Fabrics	
Specimen	Series/Model: Century Dew over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	22	22
RH %	51	46
B.P. (mb)	1010	

Freq (Hz)	Empty Room Absorption (m ²)	Uncertainty	Full Room Absorption (m ²)	Uncertainty	Absorption Coefficient	Relative Uncertainty
80	4.34	0.395	4.57	0.426	0.03	0.087
100	4.52	0.351	4.68	0.368	0.02	0.076
125	4.62	0.236	5.03	0.339	0.06	0.062
160	4.13	0.082	4.84	0.222	0.11	0.035
200	4.21	0.124	5.31	0.131	0.17	0.027
250	4.65	0.065	6.47	0.041	0.27	0.012
315	4.91	0.041	8.04	0.030	0.47	0.008
400	5.07	0.046	9.75	0.032	0.70	0.008
500	5.03	0.047	10.90	0.239	0.88	0.036
630	4.58	0.032	11.30	0.029	1.00	0.006
800	4.56	0.032	11.63	0.014	1.06	0.005
1000	4.65	0.020	11.76	0.023	1.06	0.005
1250	5.18	0.030	12.18	0.026	1.05	0.006
1600	5.21	0.008	12.18	0.010	1.04	0.002
2000	5.11	0.014	11.98	0.038	1.03	0.006
2500	5.38	0.008	12.82	0.120	1.11	0.018
3150	6.00	0.010	13.24	0.006	1.08	0.002
4000	6.43	0.004	14.09	0.007	1.14	0.001
5000	7.14	0.012	15.51	0.004	1.25	0.002

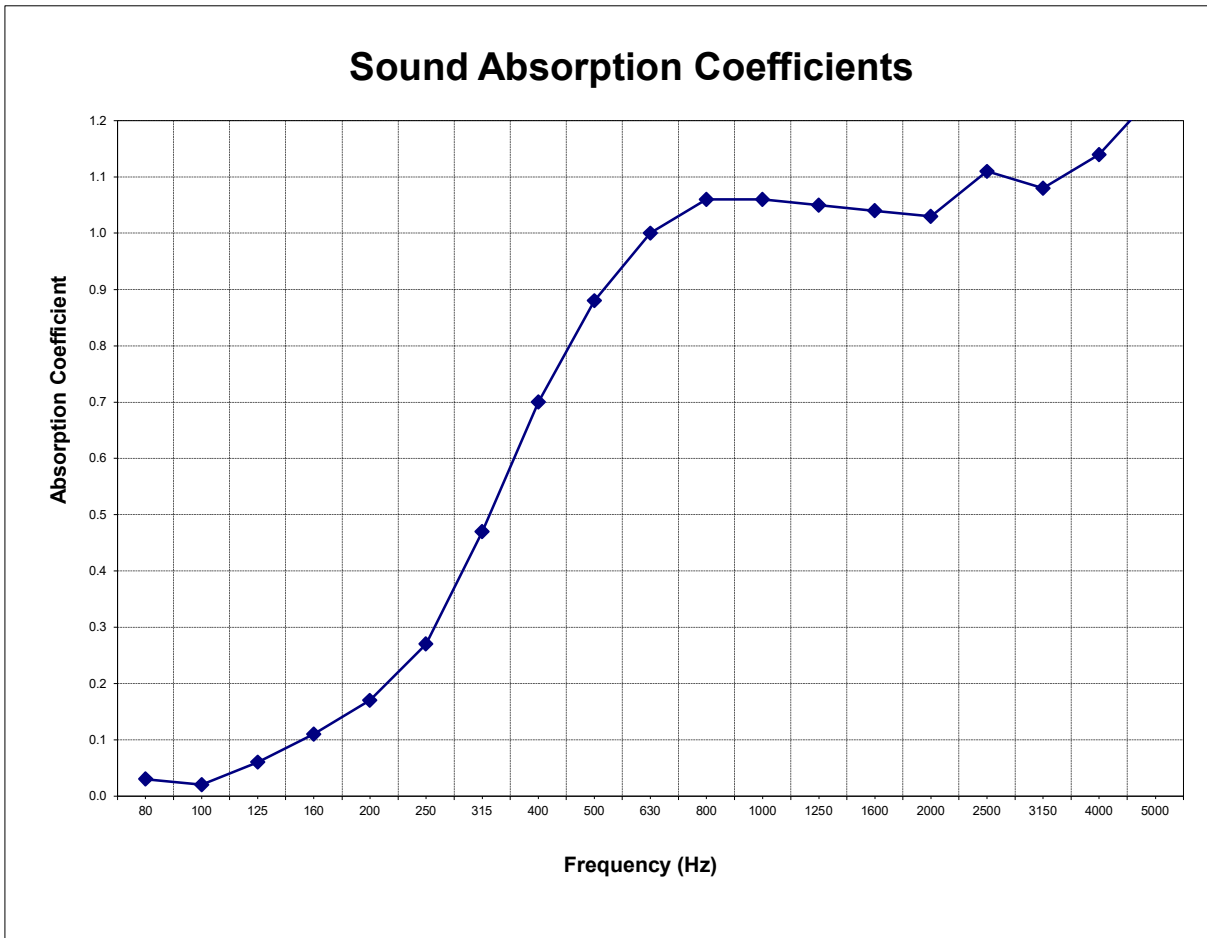
NRC Rating **0.80** *(Noise Reduction Coefficient)*
SAA Rating **0.82** *(Sound Absorption Average)*

- Notes:**
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
 - 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500 hertz. The average is rounded to the nearest multiple of 0.01.



SOUND ABSORPTION
ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01C	
Client	Burch Fabrics	
Specimen	Series/Model: Century Dew over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	21.9	21.9
RH %	51	46
B.P. (mb)	1010	





SOUND ABSORPTION
ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01D	
Client	Burch Fabrics	
Specimen	Series/Model: Alliance Taupe over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	22	22
RH %	51	47
B.P. (mb)	1010	

Freq (Hz)	Empty Room Absorption (m ²)	Uncertainty	Full Room Absorption (m ²)	Uncertainty	Absorption Coefficient	Relative Uncertainty
80	4.34	0.395	4.56	0.347	0.03	0.079
100	4.52	0.351	4.61	0.214	0.01	0.061
125	4.62	0.236	5.01	0.322	0.06	0.060
160	4.13	0.082	4.90	0.232	0.11	0.037
200	4.21	0.124	5.30	0.112	0.16	0.025
250	4.65	0.065	6.40	0.041	0.26	0.012
315	4.91	0.041	7.75	0.050	0.43	0.010
400	5.07	0.046	9.20	0.030	0.62	0.008
500	5.03	0.047	10.17	0.195	0.77	0.030
630	4.58	0.032	10.60	0.030	0.90	0.007
800	4.56	0.032	11.09	0.020	0.98	0.006
1000	4.65	0.020	11.52	0.025	1.03	0.005
1250	5.18	0.030	12.16	0.023	1.04	0.006
1600	5.21	0.008	12.34	0.009	1.07	0.002
2000	5.11	0.014	12.17	0.035	1.06	0.006
2500	5.38	0.008	13.04	0.133	1.15	0.020
3150	6.00	0.010	13.55	0.009	1.13	0.002
4000	6.43	0.004	14.42	0.007	1.19	0.001
5000	7.14	0.012	15.70	0.009	1.28	0.002

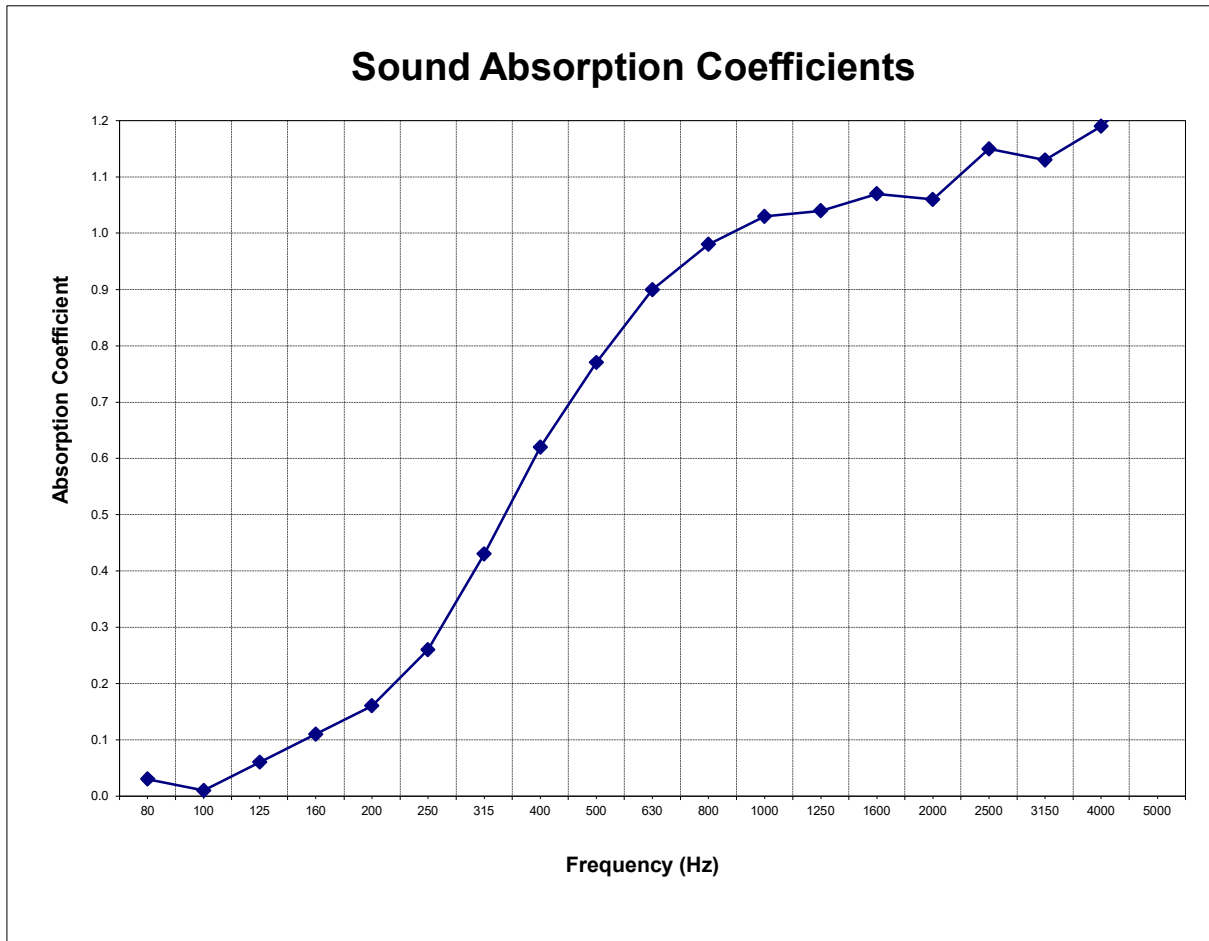
NRC Rating **0.80** *(Noise Reduction Coefficient)*
SAA Rating **0.79** *(Sound Absorption Average)*

- Notes:**
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
 - 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500 hertz. The average is rounded to the nearest multiple of 0.01.



SOUND ABSORPTION ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01D	
Client	Burch Fabrics	
Specimen	Series/Model: Alliance Taupe over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	21.9	22.3
RH %	51	47
B.P. (mb)	1010	





SOUND ABSORPTION
ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01E	
Client	Burch Fabrics	
Specimen	Series/Model: Collective Pearl over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	22	22
RH %	51	49
B.P. (mb)	1010	

Freq (Hz)	Empty Room Absorption (m ²)	Uncertainty	Full Room Absorption (m ²)	Uncertainty	Absorption Coefficient	Relative Uncertainty
80	4.34	0.395	4.66	0.438	0.05	0.088
100	4.52	0.351	4.84	0.280	0.05	0.067
125	4.62	0.236	4.99	0.297	0.06	0.057
160	4.13	0.082	4.81	0.218	0.10	0.035
200	4.21	0.124	5.29	0.141	0.16	0.028
250	4.65	0.065	6.37	0.051	0.26	0.012
315	4.91	0.041	7.62	0.047	0.41	0.009
400	5.07	0.046	8.96	0.025	0.58	0.008
500	5.03	0.047	9.96	0.262	0.74	0.040
630	4.58	0.032	10.50	0.024	0.88	0.006
800	4.56	0.032	11.03	0.024	0.97	0.006
1000	4.65	0.020	11.46	0.011	1.02	0.003
1250	5.18	0.030	12.21	0.019	1.05	0.005
1600	5.21	0.008	12.40	0.020	1.07	0.003
2000	5.11	0.014	12.33	0.040	1.08	0.006
2500	5.38	0.008	13.16	0.121	1.16	0.018
3150	6.00	0.010	13.62	0.011	1.14	0.002
4000	6.43	0.004	14.50	0.008	1.21	0.001
5000	7.14	0.012	15.85	0.006	1.30	0.002

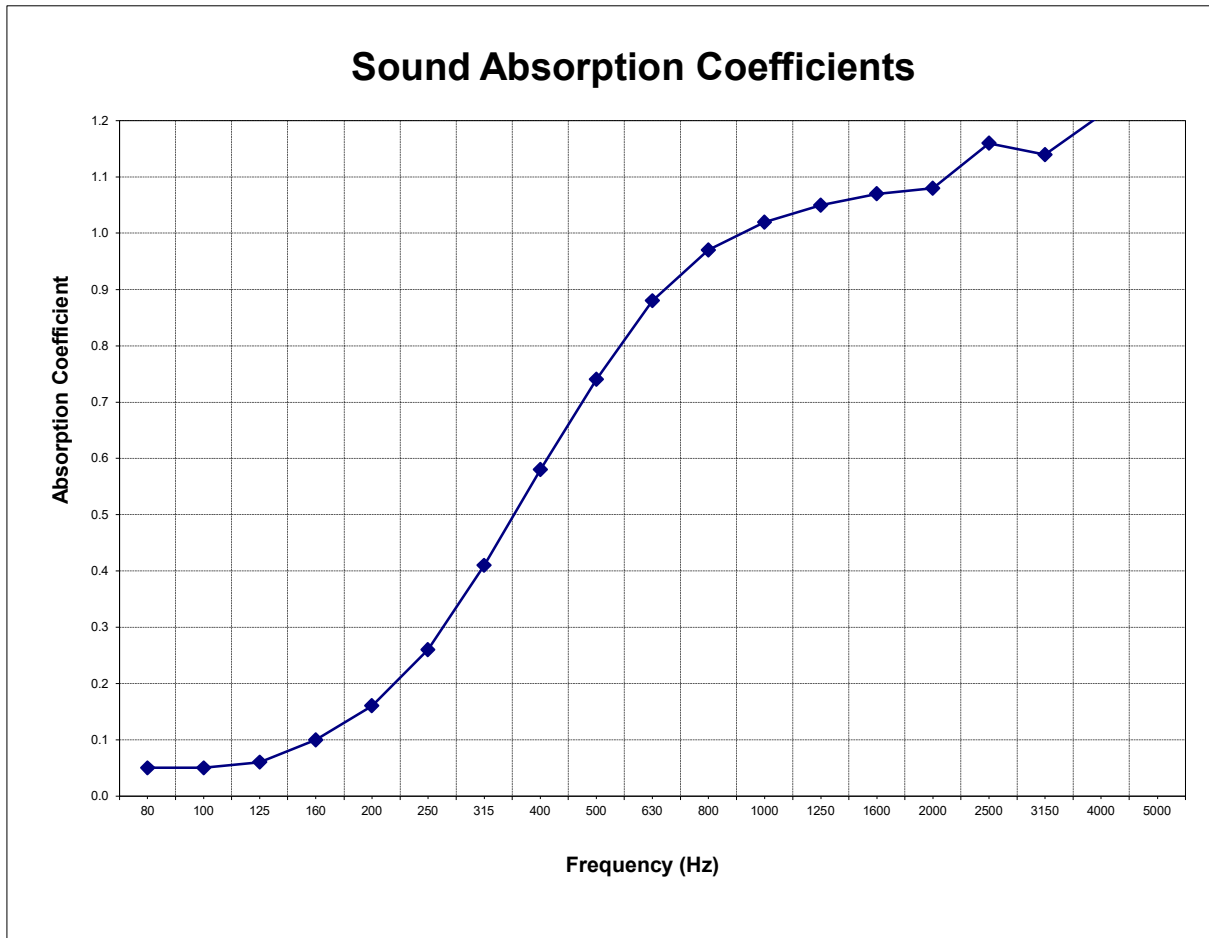
NRC Rating **0.80** *(Noise Reduction Coefficient)*
SAA Rating **0.78** *(Sound Absorption Average)*

- Notes:**
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
 - 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500 hertz. The average is rounded to the nearest multiple of 0.01.



SOUND ABSORPTION
ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01E	
Client	Burch Fabrics	
Specimen	Series/Model: Collective Pearl over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	21.9	21.8
RH %	51	49
B.P. (mb)	1010	





SOUND ABSORPTION
ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01F	
Client	Burch Fabrics	
Specimen	Series/Model: Unison Suede over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	22	21
RH %	51	49
B.P. (mb)	1010	

Freq (Hz)	Empty Room Absorption (m ²)	Uncertainty	Full Room Absorption (m ²)	Uncertainty	Absorption Coefficient	Relative Uncertainty
80	4.34	0.395	4.54	0.237	0.03	0.069
100	4.52	0.351	4.71	0.247	0.03	0.064
125	4.62	0.236	4.99	0.380	0.06	0.067
160	4.13	0.082	4.79	0.184	0.10	0.030
200	4.21	0.124	5.33	0.162	0.17	0.030
250	4.65	0.065	6.37	0.056	0.26	0.013
315	4.91	0.041	7.59	0.064	0.40	0.011
400	5.07	0.046	9.00	0.029	0.59	0.008
500	5.03	0.047	10.02	0.232	0.75	0.035
630	4.58	0.032	10.53	0.013	0.89	0.005
800	4.56	0.032	10.99	0.025	0.96	0.006
1000	4.65	0.020	11.44	0.008	1.02	0.003
1250	5.18	0.030	12.17	0.027	1.04	0.006
1600	5.21	0.008	12.43	0.013	1.08	0.002
2000	5.11	0.014	12.28	0.045	1.07	0.007
2500	5.38	0.008	13.13	0.118	1.16	0.018
3150	6.00	0.010	13.59	0.011	1.13	0.002
4000	6.43	0.004	14.44	0.011	1.20	0.002
5000	7.14	0.012	15.71	0.006	1.28	0.002

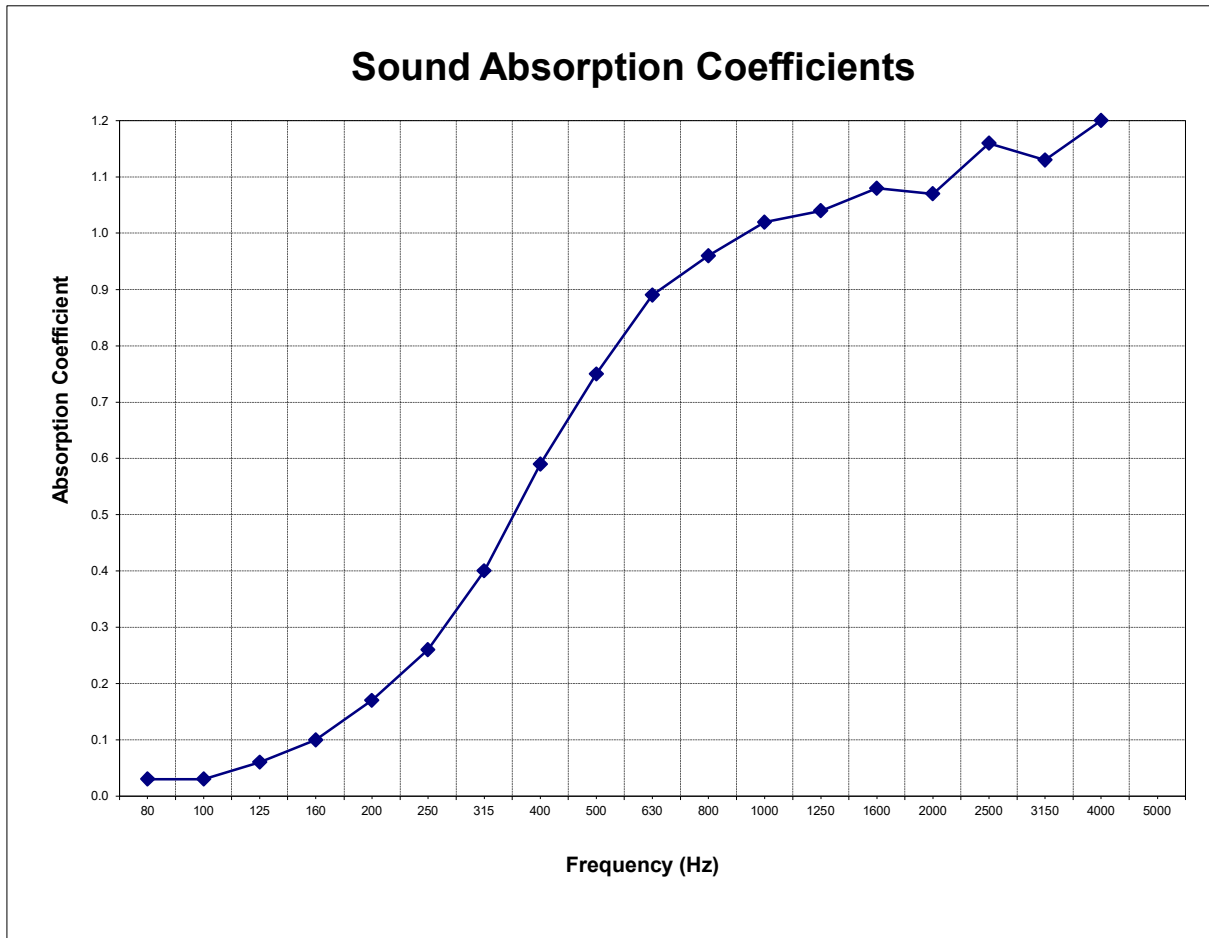
NRC Rating **0.80** *(Noise Reduction Coefficient)*
SAA Rating **0.78** *(Sound Absorption Average)*

- Notes:**
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
 - 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500 hertz. The average is rounded to the nearest multiple of 0.01.



SOUND ABSORPTION ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01F	
Client	Burch Fabrics	
Specimen	Series/Model: Unison Suede over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	21.9	21.3
RH %	51	49
B.P. (mb)	1010	





SOUND ABSORPTION
ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01G	
Client	Burch Fabrics	
Specimen	Series/Model: Coalition Soft Bronze over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	22	22
RH %	51	47
B.P. (mb)	1010	

Freq (Hz)	Empty Room Absorption (m ²)	Uncertainty	Full Room Absorption (m ²)	Uncertainty	Absorption Coefficient	Relative Uncertainty
80	4.34	0.395	4.57	0.337	0.03	0.078
100	4.52	0.351	4.72	0.327	0.03	0.072
125	4.62	0.236	4.96	0.324	0.05	0.060
160	4.13	0.082	4.78	0.170	0.10	0.028
200	4.21	0.124	5.31	0.152	0.16	0.029
250	4.65	0.065	6.31	0.041	0.25	0.012
315	4.91	0.041	7.57	0.043	0.40	0.009
400	5.07	0.046	8.88	0.027	0.57	0.008
500	5.03	0.047	9.86	0.254	0.72	0.039
630	4.58	0.032	10.44	0.020	0.87	0.006
800	4.56	0.032	10.92	0.015	0.95	0.005
1000	4.65	0.020	11.41	0.023	1.01	0.005
1250	5.18	0.030	12.14	0.019	1.04	0.005
1600	5.21	0.008	12.44	0.005	1.08	0.001
2000	5.11	0.014	12.32	0.038	1.08	0.006
2500	5.38	0.008	13.19	0.123	1.17	0.018
3150	6.00	0.010	13.74	0.007	1.16	0.002
4000	6.43	0.004	14.55	0.012	1.21	0.002
5000	7.14	0.012	15.95	0.009	1.32	0.002

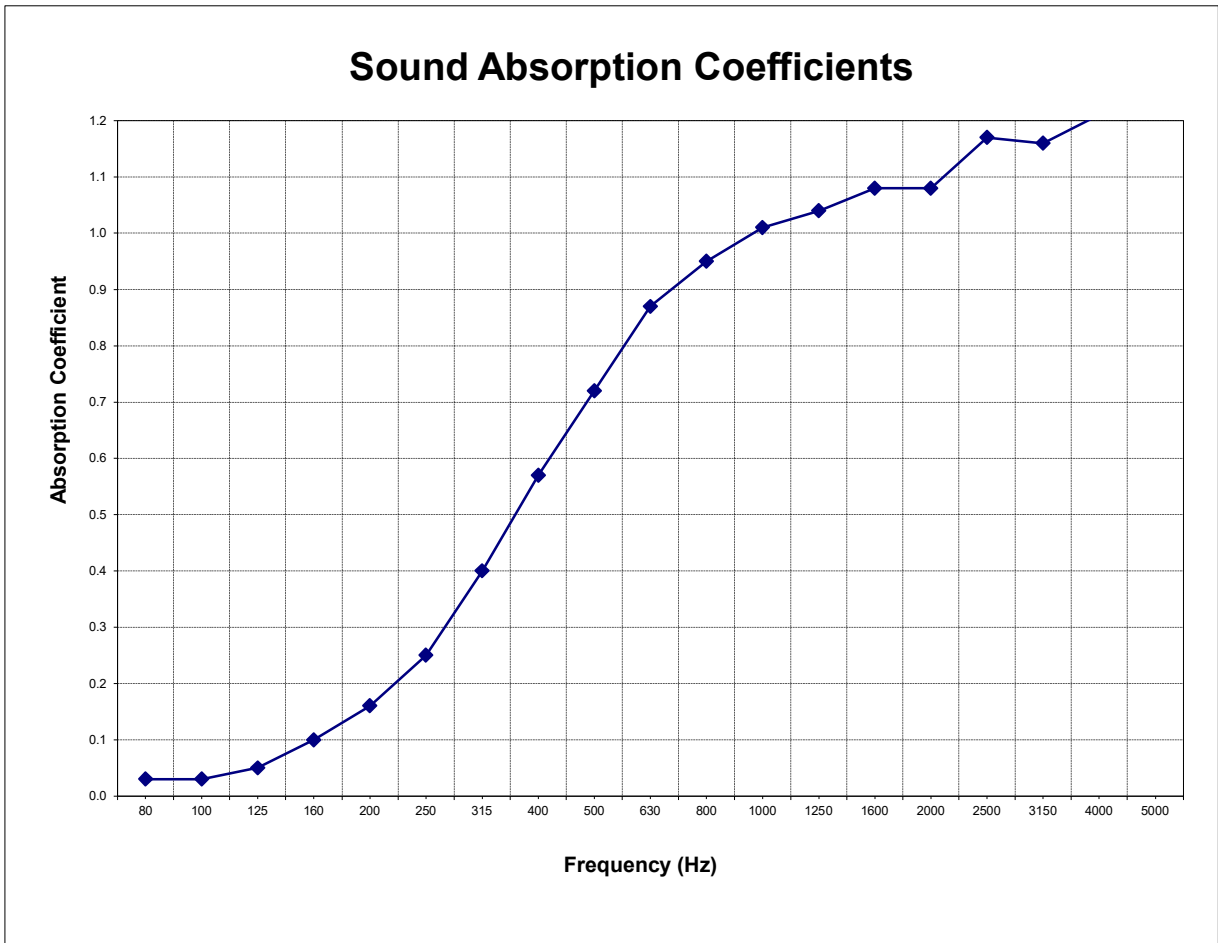
NRC Rating **0.75** *(Noise Reduction Coefficient)*
SAA Rating **0.78** *(Sound Absorption Average)*

- Notes:**
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
 - 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500 hertz. The average is rounded to the nearest multiple of 0.01.



SOUND ABSORPTION ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01G	
Client	Burch Fabrics	
Specimen	Series/Model: Coalition Soft Bronze over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	21.9	21.8
RH %	51	47
B.P. (mb)	1010	





SOUND ABSORPTION
ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01H	
Client	Burch Fabrics	
Specimen	Series/Model: Midway Mineral over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	22	22
RH %	51	49
B.P. (mb)	1008	

Freq (Hz)	Empty Room Absorption (m ²)	Uncertainty	Full Room Absorption (m ²)	Uncertainty	Absorption Coefficient	Relative Uncertainty
80	4.34	0.395	4.67	0.349	0.05	0.079
100	4.52	0.351	4.77	0.449	0.04	0.085
125	4.62	0.236	5.00	0.371	0.06	0.066
160	4.13	0.082	4.79	0.160	0.10	0.027
200	4.21	0.124	5.36	0.169	0.17	0.031
250	4.65	0.065	6.23	0.083	0.24	0.016
315	4.91	0.041	7.58	0.040	0.40	0.009
400	5.07	0.046	8.73	0.022	0.55	0.008
500	5.03	0.047	9.74	0.256	0.70	0.039
630	4.58	0.032	10.29	0.023	0.85	0.006
800	4.56	0.032	10.87	0.016	0.94	0.005
1000	4.65	0.020	11.29	0.037	0.99	0.006
1250	5.18	0.030	12.09	0.034	1.03	0.007
1600	5.21	0.008	12.42	0.017	1.08	0.003
2000	5.11	0.014	12.48	0.064	1.10	0.010
2500	5.38	0.008	13.73	0.145	1.25	0.022
3150	6.00	0.010	14.64	0.014	1.29	0.003
4000	6.43	0.004	16.06	0.012	1.44	0.002
5000	7.14	0.012	18.34	0.004	1.67	0.002

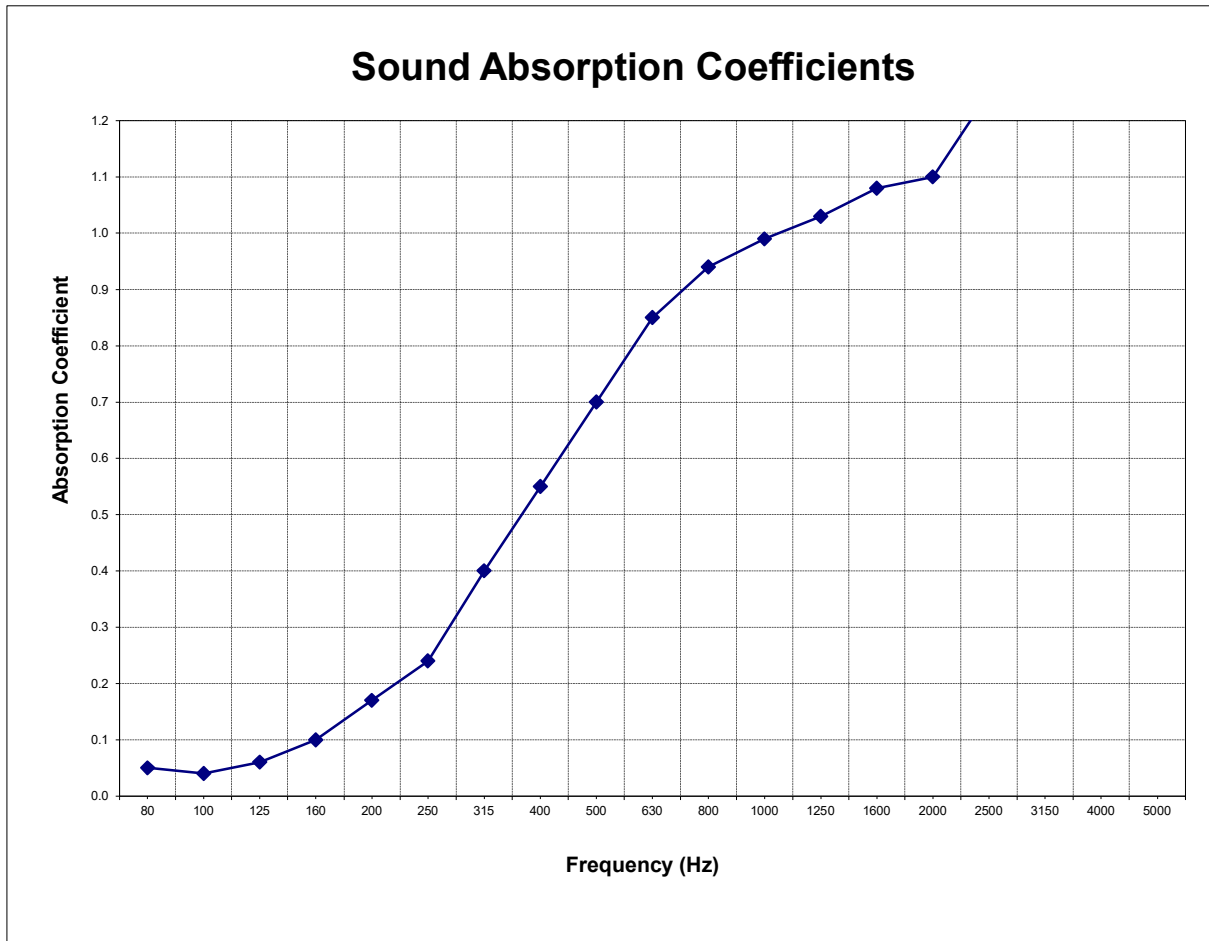
NRC Rating **0.75** *(Noise Reduction Coefficient)*
SAA Rating **0.78** *(Sound Absorption Average)*

- Notes:**
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
 - 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500 hertz. The average is rounded to the nearest multiple of 0.01.



SOUND ABSORPTION ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01H	
Client	Burch Fabrics	
Specimen	Series/Model: Midway Mineral over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	21.9	22.4
RH %	51	49
B.P. (mb)	1008	





SOUND ABSORPTION
ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.011	
Client	Burch Fabrics	
Specimen	Series/Model: Dayton Straw over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	22	22
RH %	51	49
B.P. (mb)	1008	

Freq (Hz)	Empty Room Absorption (m ²)	Uncertainty	Full Room Absorption (m ²)	Uncertainty	Absorption Coefficient	Relative Uncertainty
80	4.34	0.395	4.57	0.449	0.03	0.089
100	4.52	0.351	4.61	0.566	0.01	0.100
125	4.62	0.236	5.02	0.311	0.06	0.058
160	4.13	0.082	4.70	0.276	0.08	0.043
200	4.21	0.124	5.24	0.181	0.15	0.033
250	4.65	0.065	6.14	0.126	0.22	0.021
315	4.91	0.041	7.40	0.045	0.37	0.009
400	5.07	0.046	8.59	0.060	0.53	0.011
500	5.03	0.047	9.53	0.292	0.67	0.044
630	4.58	0.032	10.15	0.034	0.83	0.007
800	4.56	0.032	10.65	0.015	0.91	0.005
1000	4.65	0.020	11.12	0.021	0.97	0.004
1250	5.18	0.030	11.88	0.025	1.00	0.006
1600	5.21	0.008	12.14	0.008	1.04	0.002
2000	5.11	0.014	12.04	0.043	1.04	0.007
2500	5.38	0.008	13.20	0.129	1.17	0.019
3150	6.00	0.010	13.78	0.006	1.16	0.002
4000	6.43	0.004	14.87	0.009	1.26	0.001
5000	7.14	0.012	16.48	0.003	1.40	0.002

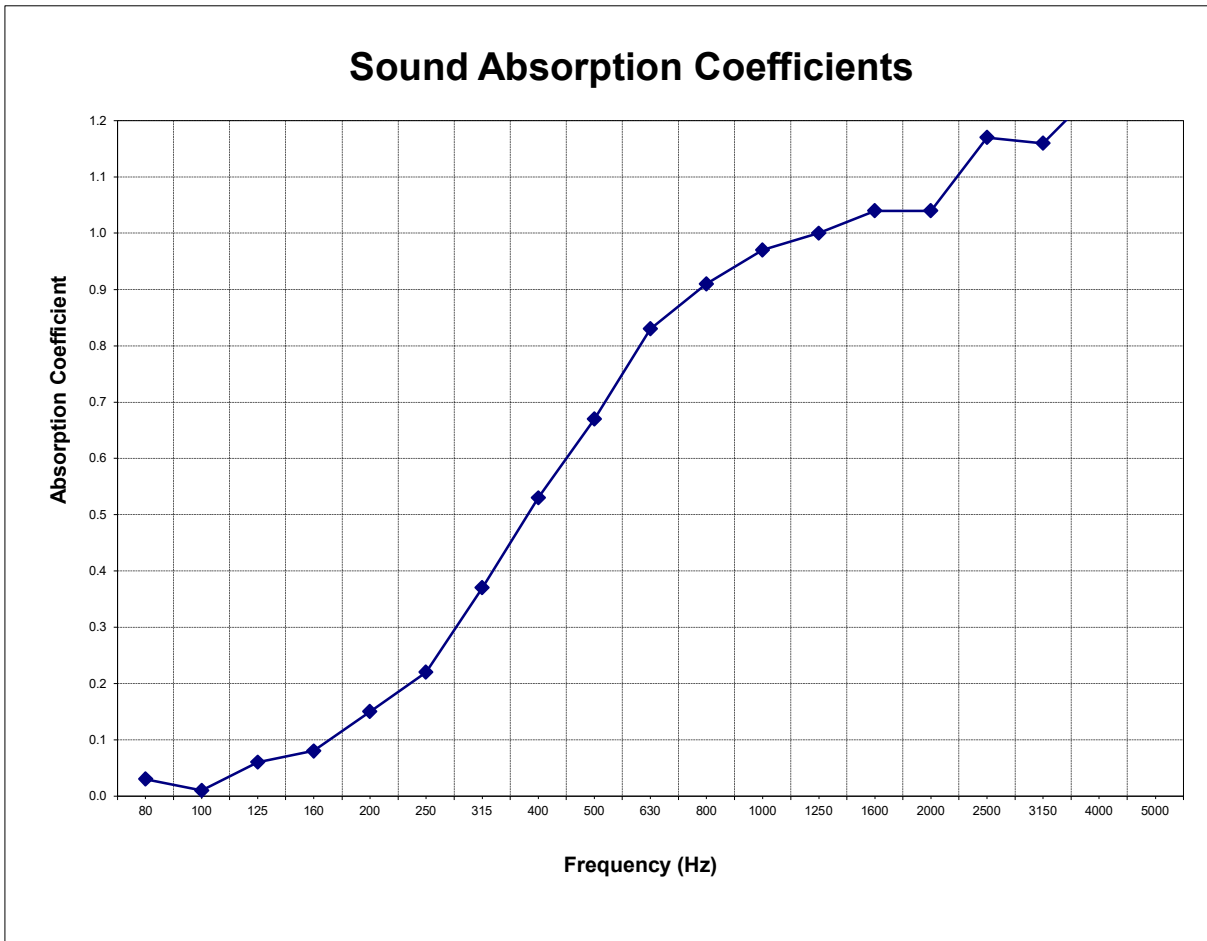
NRC Rating **0.75** *(Noise Reduction Coefficient)*
SAA Rating **0.74** *(Sound Absorption Average)*

- Notes:
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
 - 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500 hertz. The average is rounded to the nearest multiple of 0.01.



SOUND ABSORPTION ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01I	
Client	Burch Fabrics	
Specimen	Series/Model: Dayton Straw over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	21.9	22.4
RH %	51	49
B.P. (mb)	1008	





SOUND ABSORPTION
ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01J	
Client	Burch Fabrics	
Specimen	Series/Model: Columbus Silver over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	22	22
RH %	51	48
B.P. (mb)	1008	

Freq (Hz)	Empty Room Absorption (m ²)	Uncertainty	Full Room Absorption (m ²)	Uncertainty	Absorption Coefficient	Relative Uncertainty
80	4.34	0.395	4.68	0.236	0.05	0.069
100	4.52	0.351	4.82	0.331	0.04	0.072
125	4.62	0.236	4.82	0.417	0.03	0.072
160	4.13	0.082	4.78	0.196	0.10	0.032
200	4.21	0.124	5.38	0.225	0.18	0.038
250	4.65	0.065	6.27	0.085	0.24	0.016
315	4.91	0.041	7.64	0.083	0.41	0.014
400	5.07	0.046	9.08	0.038	0.60	0.009
500	5.03	0.047	10.16	0.246	0.77	0.037
630	4.58	0.032	10.74	0.033	0.92	0.007
800	4.56	0.032	11.23	0.026	1.00	0.006
1000	4.65	0.020	11.60	0.012	1.04	0.003
1250	5.18	0.030	12.23	0.026	1.05	0.006
1600	5.21	0.008	12.37	0.020	1.07	0.003
2000	5.11	0.014	12.29	0.037	1.07	0.006
2500	5.38	0.008	13.30	0.131	1.18	0.020
3150	6.00	0.010	13.95	0.003	1.19	0.002
4000	6.43	0.004	14.83	0.009	1.25	0.002
5000	7.14	0.012	16.51	0.007	1.40	0.002

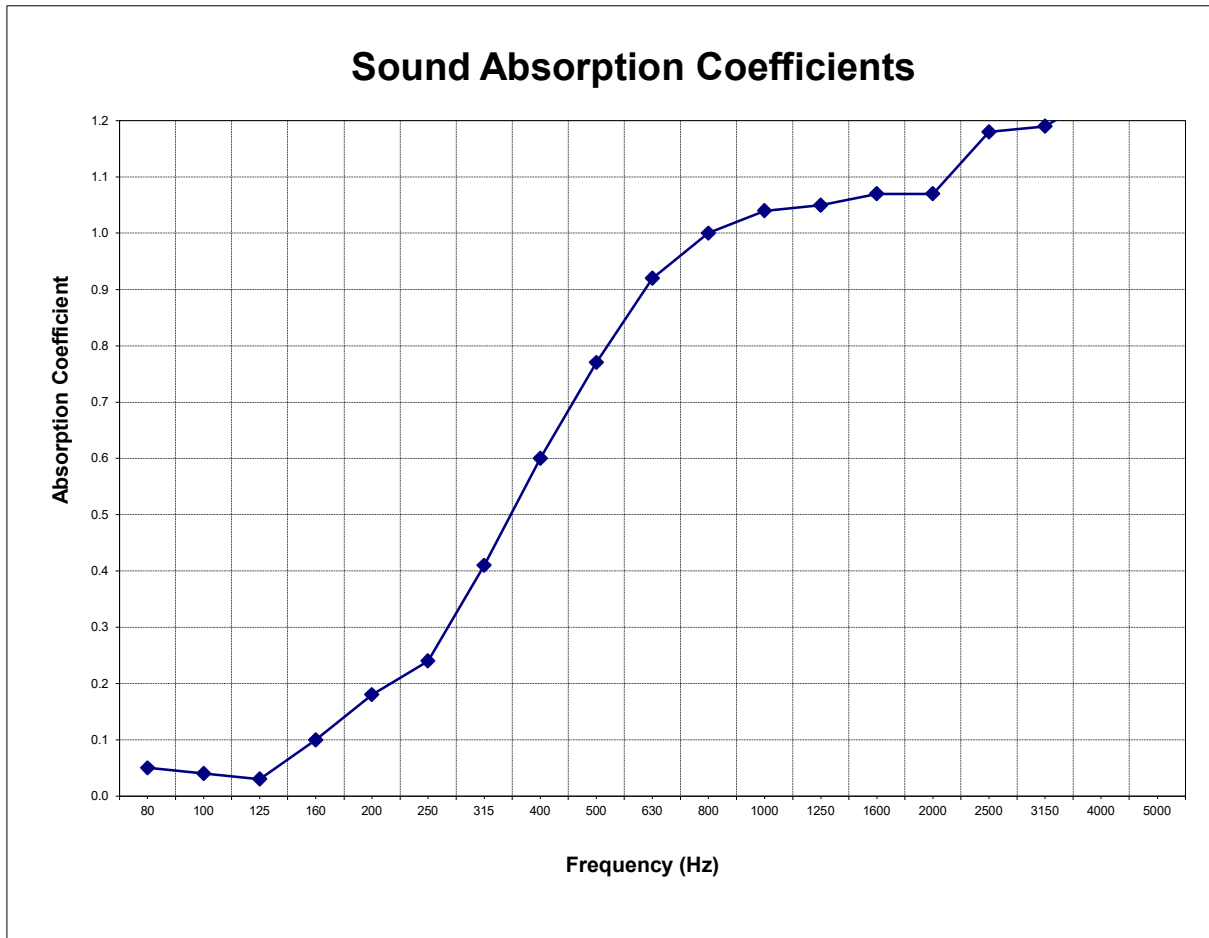
NRC Rating **0.80** *(Noise Reduction Coefficient)*
SAA Rating **0.79** *(Sound Absorption Average)*

- Notes:**
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
 - 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500 hertz. The average is rounded to the nearest multiple of 0.01.



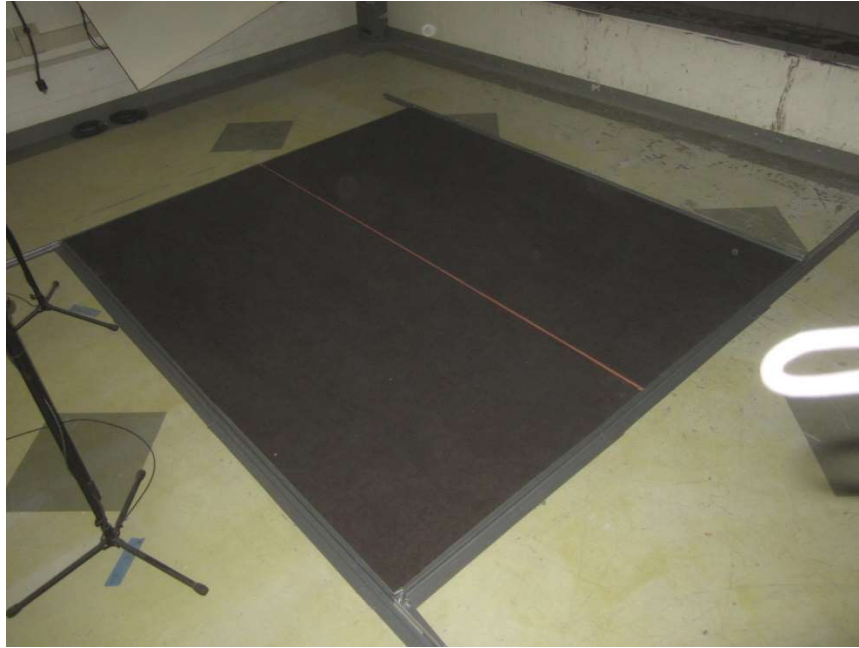
SOUND ABSORPTION ASTM C 423

Test Date	08/03/15	
ATI No.	E9775.01J	
Client	Burch Fabrics	
Specimen	Series/Model: Columbus Silver over Owens Corning Type 475-FRK 1" duct board	
Operator	Eric A. Thompson	
Sample Area	6.69 m ²	
Mounting Type	Type A	
	Empty	Full
Temp C	21.9	21.7
RH %	51	48
B.P. (mb)	1008	



Appendix C

Photographs



Installed Specimen Owens Corning 1" Duct Board



Installed Specimen Traction Chrome



Installed Specimen Collaborate Moon Rock



Installed Specimen Century Dew



Installed Specimen Alliance Taupe



Installed Specimen Collective Pearl



Installed Specimen Unison Suede



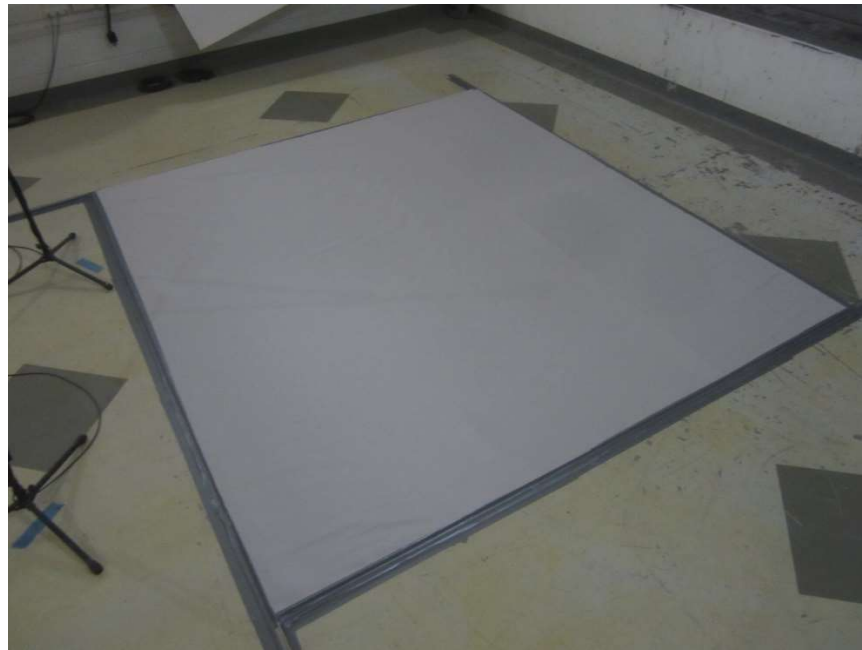
Installed Specimen Coalition Soft Bronze



Installed Specimen Midway Mineral



Installed Specimen Dayton Straw



Installed Specimen Columbus Silver

130 Derry Court
York, PA 17406-8405
Phone: 717-764-7700
Fax: 717-764-4129

Ms. Jenni Chilver
Burch Fabrics ("Customer")
4200 Brockton Dr SE
Grand Rapids, MI 49512

Re: Quotation for ASTM C423 Test on Prime Time & Ace Fabrics

Dear Ms. Chilver:

Pursuant to your request, Architectural Testing, Inc., an Intertek company ("Intertek-ATI"), is pleased to provide the following proposal for your consideration.

Services Requested

Testing outlined below will be completed per the requirements of the current version of ASTM C423.

Item Description	Total
Type A Mount setup and empty room test - No Charge	
Installation and test on 1" fiberglass board (labor & materials)	\$750.00
Installation and test on Prime Time fabric	\$600.00
Installation and test on Ace fabric	\$600.00
Test report	\$300.00
Grand Total (USD) :	\$2,250.00

Comments

Intertek-ATI will supply the 1" fiberglass board.

If the scope of the project changes or additional tests are required, additional fees will apply. Additional work will not be performed without written consent from the customer.

If international customs and/or shipping fees are required, the fee(s) will be added to the invoice +20%.

The prices in this proposal apply to this project only.

All specimens must be tested at the same time or standard fees will apply.

Additional testing will be charged at standard fees. If the scope of this project changes, additional fees may apply.

Terms

The terms for the scope of work as outlined in this proposal shall be **full payment net prior to issuance of results or reports, or as services are completed**. These terms are subject to approval by Intertek-ATI's Accounting Department prior to initiation of the project. Should the requirements for this project significantly deviate from those quoted herein, Intertek-ATI reserves the right to revise this proposal.

Remit Payment to:
Architectural Testing, Inc. lockbox 419241
PO Box 419241
Boston, MA 02241-9241

Information for courier, credit card, ACH and wire payment is available upon request.

Test Specimens Required

Prime Time Fabric - 96" by 108"
Ace Fabric - 96" by 108"

Referenced Standards

ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method

Scheduling

Upon receiving authorization of this proposal and all required information for the project (including drawings, project details, and shipping time frame for test samples) outlined herein, the work will be scheduled according to the order in which it was received.

We thank you for the opportunity to provide this proposal and look forward to working with you. Should you have any questions or require additional information, please contact us at your convenience.

For Architectural Testing, Inc.:



Digitally Signed by: Kaitlin Weaver

Kaitlin Milesky
Project Manager

Acceptance

Please acknowledge acceptance of Intertek-ATI's Testing and Evaluation Terms and Conditions, attached hereto. Please note that all fees listed herein are only estimates of the final project costs. The final cost for this project will be reflected on the invoice(s) provided to Customer by Intertek-ATI.

To accept this proposal, please fill in the following information and return electronically or fax the proposal to Intertek-ATI at 717-764-4129. Please include a Purchase Order number if available and forward the actual Purchase Order at your convenience.

As a duly authorized representative of and on behalf of Customer, I hereby acknowledge that I have read and understand this document including the fees, payment terms, and insurance. I hereby authorize Intertek-ATI to proceed with the work described in this proposal.

Jenni Chilver

Customer Signature

05/11/2022

Date

Jenni Chilver

Customer Name (Please Print)

Director of Design

Title

Purchase Order Number

Testing and Evaluation Terms and Conditions:

1.0 INTRODUCTION - These Terms and Conditions are incorporated into the proposal made and submitted to you by Architectural Testing, Inc., an Intertek company ("Intertek-ATI"). The party executing this document ("Customer") indicates acceptance of this proposal as a contract between Customer and Intertek-ATI which governs the performance of the stated services and the rights and obligations of the parties and that Intertek-ATI may proceed with the work.

2.0 PROPOSAL TERM - Unless otherwise stated in the proposal, this offer shall remain valid until accepted, but in no event for a period longer than sixty days from the date of the proposal.

3.0 CUSTOMER INFORMATION - Customer represents that the information supplied by it or its agents to Intertek-ATI is accurate and complete and samples are representative, and Customer has informed Intertek-ATI concerning any dangerous or potentially dangerous characteristics of such samples which could cause injury during the performance of the work or in the transporting of such samples and Customer also acknowledges that Intertek-ATI is relying upon such information and samples or data in the preparation of this proposal without further verification by Intertek-ATI as to its accuracy or completeness. The Customer is responsible for informing Intertek-ATI in advance of any applicable import/export restrictions that may apply to the samples and/or services to be provided, including instances where products, information or technology may be exported to a country that is restricted or banned from such export. The Customer agrees to hold Intertek-ATI harmless and indemnify Intertek-ATI from any liability of whatever kind or nature, including but not limited to court costs and reasonable attorney's fees if information provided by the Customer is inaccurate or incomplete or samples are not representative. Intertek-ATI agrees that information received from the Customer shall remain the property of the Customer and will be returned to the Customer upon demand, except for that which is necessary as a basis for the Intertek-ATI Reports. Customer may designate in writing any information provided by Customer to Intertek-ATI as confidential and proprietary. If Customer has done so, Intertek-ATI will not release to third parties any such information without the prior written consent of the Customer or only in response to a proper court order or process. As to that information, Intertek-ATI may make and retain copies. Customer shall designate in writing to Intertek-ATI if it does not wish to have Intertek-ATI transmit any information, including test data and Reports, via electronic means.

4.0 PROPOSAL, PRICE AND SCHEDULE:

4.1 Intertek-ATI will work diligently to provide the services according to the costs and schedule stated in the referenced proposal. Customer recognizes and agrees that the proposal is a good faith estimate of the costs for the services to be provided and times of completion, but such estimate is not a guarantee of the total costs or time that may be involved in completing the proposal. Intertek-ATI will not exceed the authorized estimate of costs without written authorization of Customer. Samples will be shipped by Customer to Intertek-ATI prepaid and will be returned collect or disposed of at Customer's expense within thirty (30) days after testing is completed, unless alternative arrangements are made by Customer. Additional fees will be charged for unanticipated assembly or preparation of samples. Additional testing or retesting for any reason is subject to additional charges. Test services will not be initiated until satisfactory credit has been established with Intertek-ATI's accounting department.

4.2 Unless specifically identified in the proposal, Intertek-ATI's proposal does not include items such as drug/substance abuse screening or special project-specific site training. If a project requires anything in addition to the items specified in Intertek-ATI's proposal, Customer must notify Intertek-ATI, and Intertek-ATI will review the requested items for acceptance/amendment to the proposal. Customer agrees that Intertek-ATI shall have the right to collect from the Customer its reasonable expenses incurred in enforcing these terms and conditions.

4.3 Any reference to a customer Purchase Order does not change the Intertek Terms and Conditions. Intertek does not agree to any terms and conditions, exhibits, or addenda attached and/or incorporated into any Purchase Order.

4.4 This proposal specifically excludes compliance with any project labor agreement, labor agreement, or other union or apprenticeship requirements. In addition, unless explicitly agreed to in the body of this proposal, this proposal specifically excludes compliance with any state or federal prevailing wage law or associated requirements, including the Davis Bacon Act. It is agreed that no applicable prevailing wage classification or wage rate has been provided to Intertek-ATI, and that all wages and cost estimates contained herein are based solely upon standard, non-prevailing wage rates. Should it later be determined by the Owner or any applicable agency that in fact prevailing wage applies, then it is agreed that the contract value of this agreement shall be equitably adjusted to account for such changed circumstance. Client will reimburse, defend, indemnify and hold harmless Intertek-ATI from and against any liability resulting from a subsequent determination that prevailing wage regulations cover the Project, including all costs, fines and attorney's fees.

5.0 INVOICING - Invoices will generally be issued as services are completed. Invoices are due and payable to Intertek-ATI at its offices by the due date shown on the invoice in conjunction with the terms listed in the pricing. If necessary, the Customer agrees to pay reasonable collection costs in the event of non-payment.

6.0 INSURANCE - Intertek-ATI declares that it maintains workers' compensation and employer's liability insurance on Intertek-ATI employees in a form and amount as required by applicable laws. This insurance does not cover any employees of Customer or third parties who may be involved with the work to be performed, whether on property of Intertek-ATI, Customer or third parties.

7.0 CANCELLATION / POSTPONEMENT - Intertek-ATI may charge a minimum fee of \$1,000 for cancellations or postponements that occur within three (3) business days of the confirmed service and/or testing date(s). Intertek-ATI may charge for services rendered and material cost incurred prior to cancellations or postponements.

8.0 REPORTS - The Customer agrees to waive any claim against Intertek-ATI and defend, indemnify, and hold Intertek-ATI harmless from any and all causes of action, lawsuit, proceedings or claims, including legal fees and expenses incurred by Intertek-ATI, allegedly arising as a result of unauthorized use of Intertek-ATI's Reports. The term Reports includes all reports, laboratory test data, calculations, estimates, notes and other documents prepared by Intertek-ATI in the course of providing services to the Customer. All technical determinations of compliance arising from product, material or system evaluation shall not be considered final until issuance of a written report, reviewed and signed by an Intertek-ATI qualified Reviewer. All final decisions on product certification are made by the Certification Manager. Intertek-ATI retains any and all rights of ownership of Intertek-ATI's concepts, ideas, inventions, patents or copyrights used by Intertek-ATI in preparing Intertek-ATI's Reports and the provision of services to the Customer. Only the Customer is authorized

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to copy or distribute Intertek-ATI's Reports and then only in their entirety, and the Customer shall not use the Reports in a misleading manner. Customer further agrees and understands that reliance upon the Reports is limited to the representations made therein. Any use of the Intertek-ATI name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek-ATI. If Intertek-ATI becomes directly or indirectly involved in litigation as a result of misuse of its Reports, the Customer agrees to compensate Intertek-ATI for its fees and expenses, including legal costs, in accordance with Intertek-ATI's prevailing fee schedule and expense reimbursement policy. When the Customer requests a statement of conformity to a specification or standard for the test or calibration (e.g. pass/fail, in-tolerance/out-of-tolerance), the specification or standard and the decision rule shall be clearly defined. Unless inherent in the requested specification or standard, the decision rule selected shall be communicated to, and agreed with, the customer. Unless differently required, Intertek laboratories apply the "Simple Acceptance" rule, also called "Shared Risk approach" of ILAC-G8:09/2019 guide. The statements of conformity are reported as:

- Passed – When the measured values are within the specified limits
- Failed – When one or more measured values are outside the specified limits

9.0 LIMITED WARRANTY - Intertek-ATI warrants that if any of its completed services fail to conform to professional standard, Intertek-ATI will, at its own expense, perform corrective services of the type originally performed as may be reasonably required to correct such defects, of which Intertek-ATI is notified in writing within six months of the completion of services. No other representation, express or implied, and no warranty or guarantee is included or intended in this Agreement, or in any report, opinion, document, or otherwise. Specific jurisdictions and regulatory authorities may require additional testing and evaluation for acceptance in specific applications. Intertek-ATI makes no representations regarding acceptance by a jurisdiction or a regulatory authority.

10.0 LIMITS OF LIABILITY - Intertek-ATI's liability is limited as follows:

10.1 The Customer agrees to limit Intertek-ATI's liability arising from Intertek-ATI's professional activity, errors, or omissions, such that the total aggregate liability of Intertek-ATI shall not exceed Intertek-ATI's total fee for the services rendered on the project in question, except in the case of a finding of gross negligence or willful misconduct on the part of Intertek-ATI by a court of competent jurisdiction.

10.2 Intertek-ATI shall be discharged from all liability to the Customer for all claims for loss, damage or expense unless a claim is made within three (3) months of the date at which the damage, defect or alleged non-performance became apparent to the Customer, and the process of law served no later than two (2) years from the provision of services by Intertek-ATI.

10.3 Intertek-ATI shall not be liable to the Customer for any consequential damages incurred by Customer due to the fault of Intertek-ATI, regardless of the nature of this fault, whether it was committed by Intertek-ATI, its employees, agents or subcontractors. Consequential damages include, but are not limited to, loss of use and loss of profit.

10.4 The Customer agrees to extend any and all limitations, indemnifications, and waivers provided by the Customer to Intertek-ATI to those individuals and organizations Intertek-ATI retains for proper execution of the work. These shall be deemed to include but are not necessarily limited to Intertek-ATI's officers and employees and their heirs and assigns, as well as Intertek-ATI's agents, subcontractors and their officers, employees, heirs and assigns.

10.5 Customer acknowledges that testing, including sample preparation and transportation, may damage or destroy Customer's product. Customer agrees to hold Intertek-ATI harmless from any and all responsibility for such alteration.

10.6 The Customer agrees Intertek-ATI shall not be responsible for any injuries to the Customer's representatives while attending to or observing testing at Intertek-ATI's facility. If testing takes place at the Customer's facility, Customer agrees that Intertek-ATI will not operate and shall not be responsible for any of Customer's equipment and that although Intertek-ATI agrees to abide by Customer's safety procedures, Intertek-ATI shall not be responsible for injury to any of Customer's personnel.

11.0 DISCIPLINE SPECIFIC TERMS

11.1 FIRE TESTING

- Customer shall notify Intertek-ATI prior to testing of any known hazardous or toxic compounds in the products supplied for testing.
- Intertek-ATI will perform the testing for the duration specified by the standard unless it is determined by Intertek-ATI that unsafe, environmentally-detrimental, or otherwise dangerous conditions have been reached, at which time the test will be terminated.
- If the testing of Customer's product causes damage to Intertek-ATI's equipment, property, or employees due to the nondisclosure of hazardous, toxic, or otherwise dangerous compounds, the Customer shall be liable for all costs associated with such damages.
- Hazardous materials, such as sealant primer, which are not fully consumed during the course of the project and which are not otherwise able to be utilized or recycled must be removed from the premises at the completion of testing. A hazardous waste disposal fee will be assessed to Customer for such hazardous materials that are found on site immediately prior to mock-up demolition.

11.2 FIELD TESTING

- Union Labor: Intertek-ATI is a professional services organization similar to a special inspector. The quoted fee represents Intertek-ATI's estimated costs unencumbered by organized union labor restrictions. Any restrictions encountered on site impacting Intertek-ATI's ability to work will result in additional fees.

12.0 RECORDING - Photographs or video recordings of the Customer's own project may be taken by and used for the Customer's own internal purposes. Photographs or video recordings may not be used for marketing or publicity, or distributed to a third party or otherwise published without Intertek's prior review and consent in writing. Taking photographs of other Customers' samples, test setups, or facilities, or recording in any manner any test specimen other than the test specimen related to the Customer's project is prohibited; and the Customer agrees to hold in strict confidence and not use any proprietary information disclosed either advertently or inadvertently. The Customer shall defend, hold harmless, and indemnify Intertek for any breach of this clause.

13.0 GOVERNING LAW - This proposal, and any work performed pursuant to this proposal, shall be governed by the laws of the jurisdiction within which the Intertek-ATI facility making the proposal is located. Any action brought hereon shall be venued in said jurisdiction.

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14.0 SEVERABILITY - Any provision of this proposal that may be held invalid, void or unenforceable for any reason, shall not affect any other term or condition of this proposal, and such term or condition shall be replaced or interpreted to accomplish the intent of the parties.

15.0 SUBPOENA - Intertek's employees shall not be retained as expert witnesses except by separate, written agreement. Customer agrees to pay Intertek's legal expenses, administrative costs and fees pursuant to Intertek's then current fee schedule for Intertek to respond to any subpoena.

16.0 MODIFICATIONS - No modification, waiver or amendment of any of these terms and conditions, including any assignment of Customer's rights and responsibilities hereunder, shall be binding upon Intertek-ATI unless agreed to in a writing signed by an agent of Intertek-ATI.