



G9534.02-113-11-R0
ACOUSTICAL PERFORMANCE TEST REPORT
ASTM C423

Rendered to

FABRITRAK SYSTEMS, INC.

SERIES/MODEL: Fabri Flex Fabric with 6#

TYPE: 1" (25.4 mm) Thick Acoustical Fiberglass

Summary of Test Results								
Data File No.	1/3 Octave Sound Absorption Coefficients at the Octave Band Frequencies						NRC	SAA
	125	250	500	1000	2000	4000		
G9534.01B	0.76	0.79	0.79	0.94	0.84	0.78	0.85	0.85

Reference should be made to Intertek-ATI Report No. G9534.02-113-11 for complete test specimen description. This page alone is not a complete report.



Acoustical Performance Test Report

FABRITRAK SYSTEMS, INC.
111 West Park Drive
Mount Laurel, New Jersey 08054

Report	G9534.02-113-11
Test Date	03/30/17
Report Date	05/03/17

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 C423-17, Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method

ASTM E795-16 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 E-400 mounting, the specimen was placed on the Type E test assembly so that the absorptive face of specimen was suspended 400 mm above the floor of the reverberation room. The perimeter of the specimen was sealed to the test assembly with duct tape. The perimeter of the test assembly was sealed to the floor with 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

Eight, 0.61 m by 1.22 m (2' by 4'), panels and two, 0.30 m by 1.22 m (12" by 48"), panels were arranged to produce the 2.44 m by 2.74 m (8' by 9') test specimen. The total weight of the specimen was 14.89 kg (33 lbs). Photographs are included in Appendix C.

Description	Thickness		Density		Weight	
	mm	in	kg/m ³	lbs/ft ³	kg/m ²	lbs/ft ²
Acoustic fiberglass with 6#	21.50	0.846	95.35	6	2.05	0.42
Acoustic fabric	0.34	0.013	500.00	30	0.17	0.03

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:

Zachary P. Golden
Technician - Acoustical Testing

Kurt A. Golden
Project Lead – Acoustical Testing

ZPG:jmcs

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

Appendix A: Equipment description (1)

Appendix B: Complete test results (2)

Appendix C: Photographs (1)



Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
R0	05/03/17	N/A	Original Report Issue



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Appendix A

Instrumentation:

Instrument	Manufacturer	Model	Description	ATI Number	Date of Calibration
Data Acquisition Unit	National Instruments	PXI-4462	Input Card	65126	05/16 *
Data Acquisition Card	National Instruments	PXI-4462	Data Acquisition Card	1643A62	04/16
Data Acquisition Card	National Instruments	PXI-4462	Data Acquisition Card	65126	05/16
Data Acquisition Card	National Instruments	PXI-4462	Data Acquisition Card	065125	05/16
Receive Room Microphone	PBC Piezotronics	378B20	Microphone and Preamplifier	64907	01/17
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64908	01/17
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64909	01/17
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64910	01/17
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64911	01/17
Receive Room Environmental Indicator	Comet	T7510	Receive Room	64915	03/17
Microphone Calibrator	Norsonic	1251	Pistonphone Calibrator	65105	05/16

*- 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	Rotating vane and stationary diffusers Temperature and humidity controlled Isolation pads under the floor

N/A-Not Applicable



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Appendix B

Complete Test Results



SOUND ABSORPTION
ASTM C423

Test Date	03/30/17	
Job No.	G9534.01B	
Client	FabriTrak Systems, Inc	
Specimen	Series/Model: Fabri Flex Fabric with 6#, 1" (25.4 mm) thick acoustical fiberglass	
Operator	Zachary Golden	
Sample Area	6.69 m ²	
Mounting Type	E400	
	Empty	Full
Temp °C	21.7	21.2
RH %	53	51
B.P. (mb)	1015	

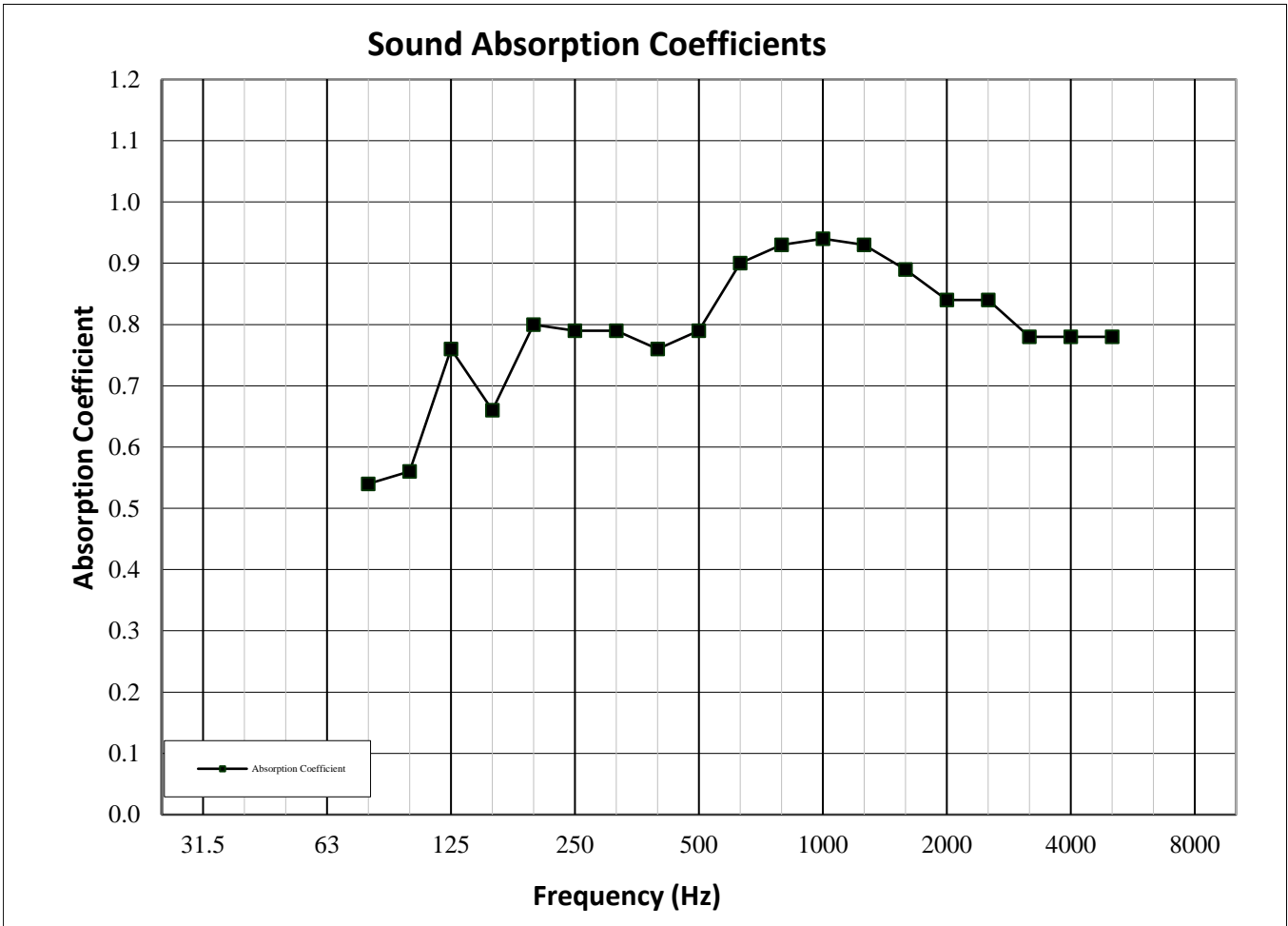
Freq (Hz)	Empty Room Absorption (m ²)	Uncertainty	Full Room Absorption (m ²)	Uncertainty	Absorption Coefficient	Relative Uncertainty
80	4.37	0.693	7.99	0.220	0.54	0.109
100	5.19	0.445	8.91	0.465	0.56	0.096
125	4.99	0.249	10.07	0.277	0.76	0.056
160	4.14	0.244	8.55	0.110	0.66	0.040
200	4.37	0.118	9.70	0.095	0.80	0.023
250	4.84	0.103	10.12	0.107	0.79	0.022
315	5.03	0.114	10.33	0.039	0.79	0.018
400	5.15	0.062	10.23	0.038	0.76	0.011
500	5.13	0.035	10.38	0.057	0.79	0.010
630	4.74	0.043	10.74	0.023	0.90	0.007
800	4.89	0.018	11.13	0.025	0.93	0.005
1000	4.92	0.037	11.20	0.024	0.94	0.007
1250	5.25	0.017	11.48	0.022	0.93	0.004
1600	5.30	0.018	11.24	0.020	0.89	0.004
2000	5.20	0.012	10.80	0.018	0.84	0.003
2500	5.44	0.009	11.07	0.118	0.84	0.018
3150	5.98	0.016	11.19	0.009	0.78	0.003
4000	6.30	0.009	11.48	0.011	0.78	0.002
5000	6.87	0.006	12.08	0.009	0.78	0.002

NRC Rating **0.85** *(Noise Reduction Coefficient)*
SAA Rating **0.85** *(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.

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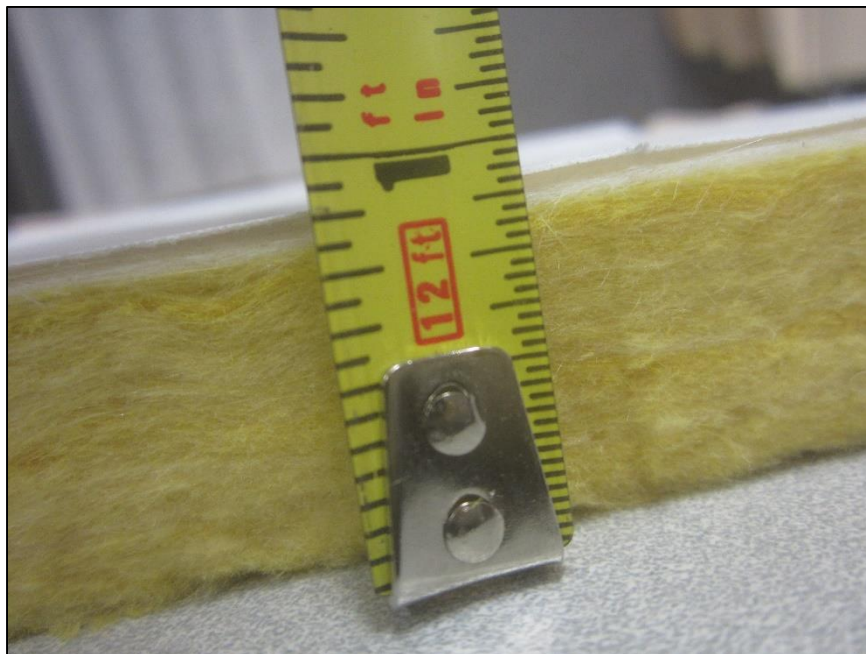


Appendix C

Photographs



Receive Room View of Test Specimen



Cross Section View of Test Specimen