

FABRITRAK SYSTEMS, INC. ACOUSTICAL PERFORMANCE TEST REPORT

SCOPE OF WORK

ASTM C423 SOUND ABSORPTION TESTING ON
FABRI FLEX™ FABRIC OVER TERRA CORE POLY™ INFILL ABSORPTION PANEL

REPORT NUMBER

I1434.01-113-11-R1

TEST DATE

02/26/18

ISSUE DATE

04/04/18

REVISION 1

04/09/18

RECORD RETENTION END DATE

02/26/22

PAGES

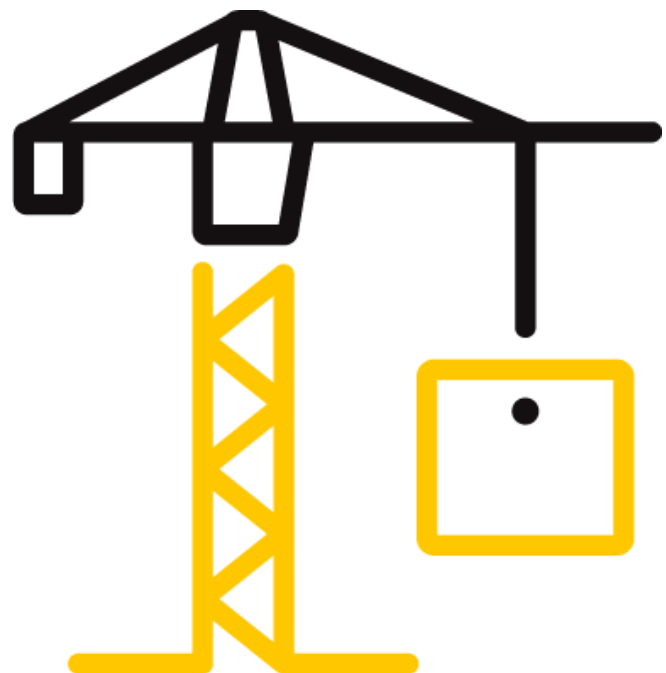
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TEST REPORT FOR FABRITRAK SYSTEMS, INC.

Report No.: I1434.01-113-11-R1

Date: 04/04/18 Revision 1 Date: 04/09/18

REPORT ISSUED TO FABRITRAK SYSTEMS, INC.

111 West Park Drive
Mt. Laurel, New Jersey 08054

SECTION 1 SCOPE

Intertek Building & Construction (B&C) was contracted by FabriTrak Systems, Inc. to perform a sound absorption test. Results obtained are tested values and were secured by using the designated test method(s). The complete test data is included herein. The client provided the test specimen. All measurements were conducted in the HT test chambers at Intertek B&C located in York, Pennsylvania.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2 SUMMARY OF TEST RESULTS

SERIES/MODEL		Fabri Flex™ Fabric over Terra Core Poly™ Infill						
SAMPLE TYPE		Absorption Panel						
MOUNTING TYPE		Type A						
DATA FILE NO.	1/3 OCTAVE SOUND ABSORPTION COEFFICIENTS						NRC	SAA
	125	250	500	1000	2000	4000		
I1434.01A	0.08	0.29	0.73	1.08	0.92	0.78	0.75	0.76

For INTERTEK B&C:

COMPLETED BY:	Daniel J. Poet	REVIEWED BY:	Kurt A. Golden
TITLE:	Technician II Department	TITLE:	Project Lead Acoustical Testing
SIGNATURE:		SIGNATURE:	
DATE:	04/09/18	DATE:	04/09/18

DJP:jmcs

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SECTION 3

TEST METHODS

The specimens were evaluated in accordance with the following:

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*

SECTION 4

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 aluminium angle and duct tape.

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SECTION 5 EQUIPMENT

The equipment listed below meets the requirements of the test methods stated in Section 3 of this report.

INSTRUMENT	MANUFACTURER	MODEL	DESCRIPTION	ASSET #	DATE OF CALIBRATION
Data Acquisition Card	National Instruments	PXI-4462	Data Acquisition Card	65124	06/16 *
Data Acquisition Card	National Instruments	PXI-4462	Data Acquisition Card	65126	05/16 *
Data Acquisition Card	National Instruments	PXI-4462	Data Acquisition Card	65125	05/16 *
Receive Room Microphone	PBC Piezotronics	378B20	Microphone and Preamplifier	64907	12/17
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64908	12/17
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64909	12/17
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64910	12/17
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64911	01/18
Receive Room Environmental Indicator	Comet	T7510	Receive Room	64915	03/17
Microphone Calibrator	Norsonic	1251	Pistonphone Calibrator	Y002929	04/17

*- 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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SECTION 6

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Daniel Poet	Intertek B&C
Kurt Golden	Intertek B&C

SECTION 7

TEST PROCEDURE

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.

Intertek B&C will store samples of test specimens for four years.

SECTION 8

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.

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SECTION 9

TEST SPECIMEN DESCRIPTION

Four, 1.22 m by 1.22 m (48" by 48"), panels and two, 1.22 m by 0.30 m (48" by 12"), panels were arranged to produce the 2.44 m by 2.74 m (96" by 108") test specimen. The total weight of the test specimen was 11.10 kg (24.48 lbs).

Photographs are included in Section 11.

The client did not supply a report drawing of the test specimen.

DESCRIPTION	THICKNESS	WEIGHT
Fabri Flex™ Fabric over Terra Core Poly™ Infill	23.11 mm	1.44 kg/ m ²
	0.91"	0.30 lbs/ft ²

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SECTION 10

TEST RESULTS

I1434.01A DATA

SPECIMEN AREA	6.69 m ²	
MOUNTING TYPE	A mount	
	EMPTY	FULL
TEMP °C	22.7	22.3
RH %	53	52
B.P. (mb)	992	994

FREQ (Hz)	EMPTY ROOM ABSORPTION (m ²)	UNCERTAINTY	FULL ROOM ABSORPTION (m ²)	UNCERTAINTY	ABSORPTION COEFFICIENT	RELATIVE UNCERTAINTY
80	4.15	0.470	4.49	0.392	0.05	0.092
100	4.98	0.141	5.40	0.323	0.06	0.053
125	5.02	0.333	5.58	0.343	0.08	0.072
160	4.28	0.113	5.21	0.192	0.14	0.033
200	4.23	0.087	5.68	0.114	0.22	0.021
250	4.92	0.087	6.86	0.057	0.29	0.016
315	5.09	0.093	8.08	0.052	0.45	0.016
400	5.17	0.040	9.04	0.059	0.58	0.011
500	5.14	0.034	10.01	0.261	0.73	0.039
630	4.84	0.051	11.04	0.011	0.93	0.008
800	5.03	0.025	11.94	0.026	1.03	0.005
1000	5.03	0.020	12.25	0.032	1.08	0.006
1250	5.37	0.033	12.31	0.016	1.04	0.005
1600	5.42	0.022	11.96	0.010	0.98	0.004
2000	5.32	0.007	11.49	0.013	0.92	0.002
2500	5.55	0.012	11.69	0.104	0.92	0.016
3150	6.13	0.008	11.72	0.008	0.84	0.002
4000	6.53	0.008	11.78	0.005	0.78	0.001
5000	7.03	0.006	11.97	0.006	0.74	0.001

NRC RATING	0.75	(Noise Reduction Coefficient)
SAA RATING	0.76	(Sound Absorption Average)

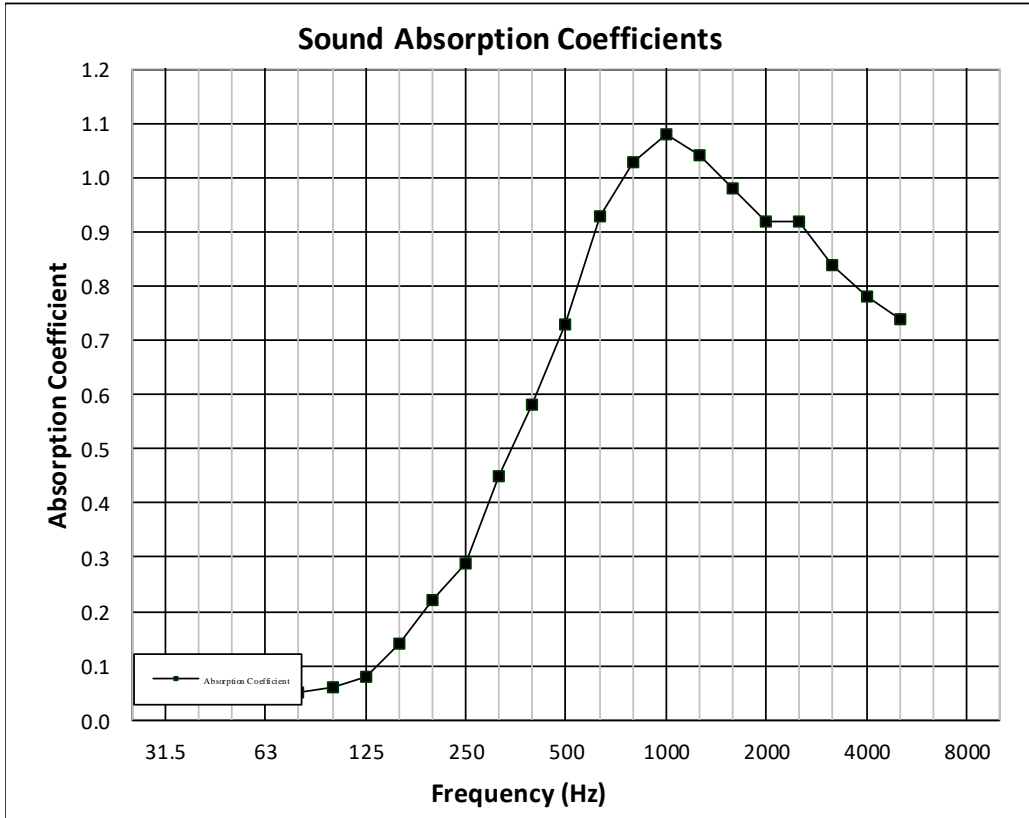
- Notes:
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
 - 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200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

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I1434.01A GRAPH



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SECTION 11

PHOTOGRAPHS

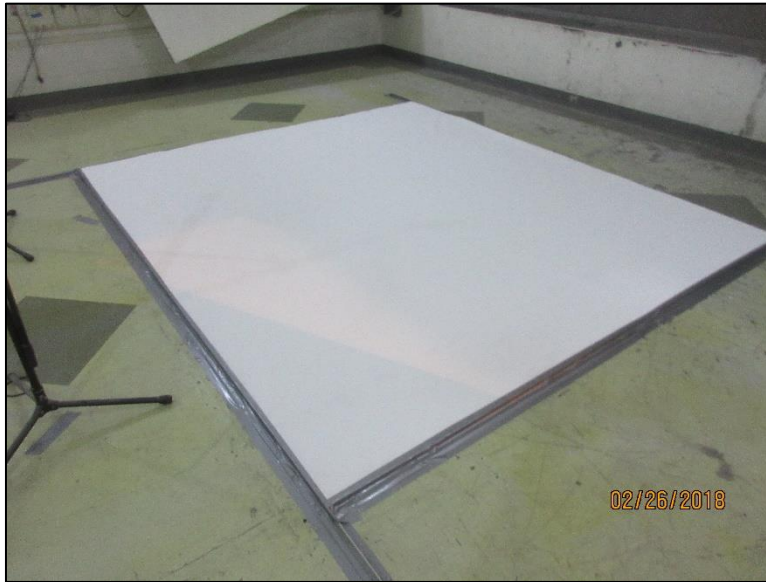


Photo No. 1
View of Installed Test Specimen



Photo No. 2
Cross Section View



Total Quality. Assured.

130 Derry Court
York, Pennsylvania 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

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REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	04/04/18	N/A	Original Report Issue
1	04/09/18	1,2,6	Included Fabri Flex™ in Series/Model name