

LOFTWALL, INC.

ACOUSTICAL PERFORMANCE TEST REPORT

SCOPE OF WORK

ASTM C423 SOUND ABSORPTION TESTING ON ARBOR/ARBOR SLIM, PET PANELS

REPORT NUMBER

P6681.01-113-11-R2

TEST DATE

04/05/23

ISSUE DATE

04/17/23

REVISION 2 DATE

05/04/23

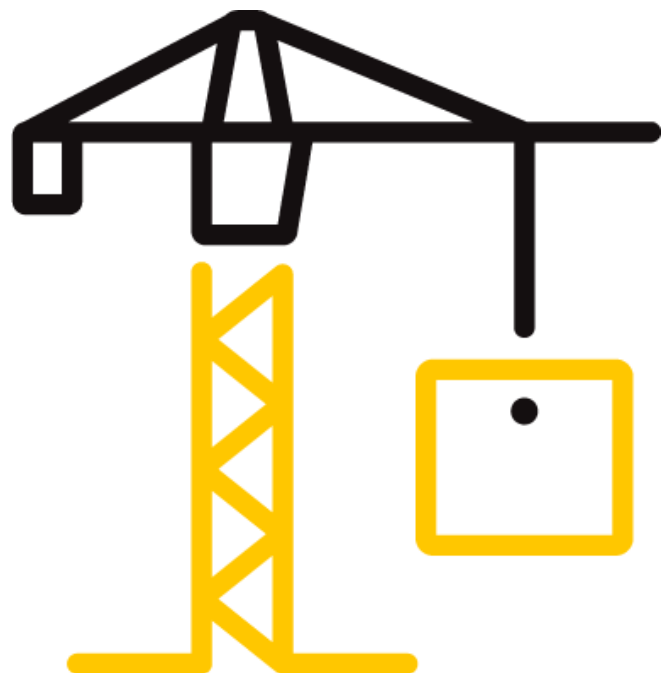
PAGES

17

DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-2755 (05/16/22)

© 2017 INTERTEK



TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

REPORT ISSUED TO

LOFTWALL, INC.

2617 N Great SW Parkway, Suite 100
Grand Prairie, Texas 75050

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by LOFTwall, Inc. to perform a sound absorption test. Results obtained are tested values and were secured by using the designated test methods. 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. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule, also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

For INTERTEK B&C:

COMPLETED BY:	Cody L. French	REVIEWED BY:	Kurt A. Golden
TITLE:	Technician	TITLE:	Manager
SIGNATURE:	Acoustical Testing	SIGNATURE:	Acoustical Testing
DATE:	05/04/23	DATE:	05/04/23

CLF:jmc

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek 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. The observations and test results in this report are relevant only to the sample(s) tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.



TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

SECTION 2
SUMMARY OF TEST RESULTS

SERIES/MODEL	9 mm Polyester (PET) Panels for Acoustical Applications							
SAMPLE TYPE	9 mm PET Panels							
MOUNTING TYPE	Type A							
DATA FILE NO.	1/3 OCTAVE SOUND ABSORPTION COEFFICIENTS AT THE OCTAVE BAND FREQUENCIES						NRC	SAA
	125	250	500	1000	2000	4000		
P6681.01A	0.00	0.02	0.11	0.37	0.67	0.91	0.30	0.31

SERIES/MODEL	Arbor							
SAMPLE TYPE	PET and MDF and Veneer Panels							
MOUNTING TYPE	Type A							
DATA FILE NO.	1/3 OCTAVE SOUND ABSORPTION COEFFICIENTS AT THE OCTAVE BAND FREQUENCIES						NRC	SAA
	125	250	500	1000	2000	4000		
P6681.01B	0.01	0.07	0.25	0.65	1.01	0.84	0.50	0.50

SERIES/MODEL	Arbor Slim							
SAMPLE TYPE	PET and Veneer Panels							
MOUNTING TYPE	Type dA							
DATA FILE NO.	1/3 OCTAVE SOUND ABSORPTION COEFFICIENTS AT THE OCTAVE BAND FREQUENCIES						NRC	SAA
	125	250	500	1000	2000	4000		
P6681.01C	0.00	0.03	0.14	0.45	0.84	1.00	0.35	0.38

TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

SECTION 3

TEST METHODS

The specimens were evaluated in accordance with the following:

ASTM C423-22, *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 aluminum angle/ and duct tape.

TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

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 #	CAL DATE
2-Channel Analog Input	National Instruments	NI-9250	2-Channel Analog Input	INT02674	09/22
2-Channel Analog Input	National Instruments	NI-9250	2-Channel Analog Input	INT02675	09/22
2-Channel Analog Input	National Instruments	NI-9250	2-Channel Analog Input	INT02676	09/22
Receive Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	64908	01/23
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64902	10/22
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64903	08/22
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64907	01/23
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64911	10/22
Receive Room Environmental Indicator	Comet	T7510	Receive Room	64914	03/23
Microphone Calibrator	Norsonic	1251	Acoustical Calibrator	Y002919	04/22

*- 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

TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

SECTION 6**LIST OF OFFICIAL OBSERVERS**

NAME	COMPANY
Cody L. French	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.

TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

SECTION 9
TEST SPECIMEN DESCRIPTION

SERIES/MODEL	Polyester (PET) Acoustical Panels/Arbor/Arbor Slim
SAMPLE TYPE	PET Panels
MOUNTING TYPE	Type A

The panels were arranged to produce the 2.44 m by 2.74 m (96" by 108") test specimen.

The total weight of the specimen was 13.61 kg (30 lbs).

DESCRIPTION	THICKNESS	DENSITY	WEIGHT
9 mm PET Acoustical Panels	9 mm 0.354"	220.00 kg/m ³ 13.73 lbs/ft ³	1.980 kg/m ² 0.405 lbs/ft ²
PET and MDF and Veneer Panels	20.80 mm 0.819"	377.88 kg/m ³ 23.59 lbs/ft ³	7.86 kg/m ² 1.61 lbs/ft ²
PET and Veneer Panels	10.21 mm 0.402"	219.98 kg/m ³ 13.73 lbs/ft ³	2.246 kg/m ² 0.460 lbs/ft ²

Photographs are included in Section 11.

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

TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

SECTION 10
TEST RESULTS
P6681.01A DATA, 9 mm PET Panels

SPECIMEN AREA	6.69 m ²	
MOUNTING TYPE	A	
	EMPTY	FULL
TEMP °C	23.1	23.3
RH %	52	52
B.P. (mb)	1003	1003

FREQ (Hz)	EMPTY ROOM ABSORPTION (m ²)	FULL ROOM ABSORPTION (m ²)	ABSORPTION COEFFICIENT
80	5.65	5.92	0.04
100	6.06	6.26	0.03
125	5.29	5.28	0.00
160	4.80	4.87	0.01
200	5.47	5.55	0.01
250	5.74	5.90	0.02
315	5.30	5.63	0.05
400	5.01	5.51	0.07
500	4.96	5.69	0.11
630	4.85	6.17	0.20
800	5.10	6.96	0.28
1000	5.01	7.52	0.37
1250	5.26	8.56	0.49
1600	5.32	9.39	0.61
2000	5.26	9.71	0.67
2500	5.64	11.28	0.84
3150	6.31	12.00	0.85
4000	6.98	13.04	0.91
5000	7.52	13.77	0.94

NRC RATING	0.30	(Noise Reduction Coefficient)
SAA RATING	0.31	(Sound Absorption Average)

Notes:

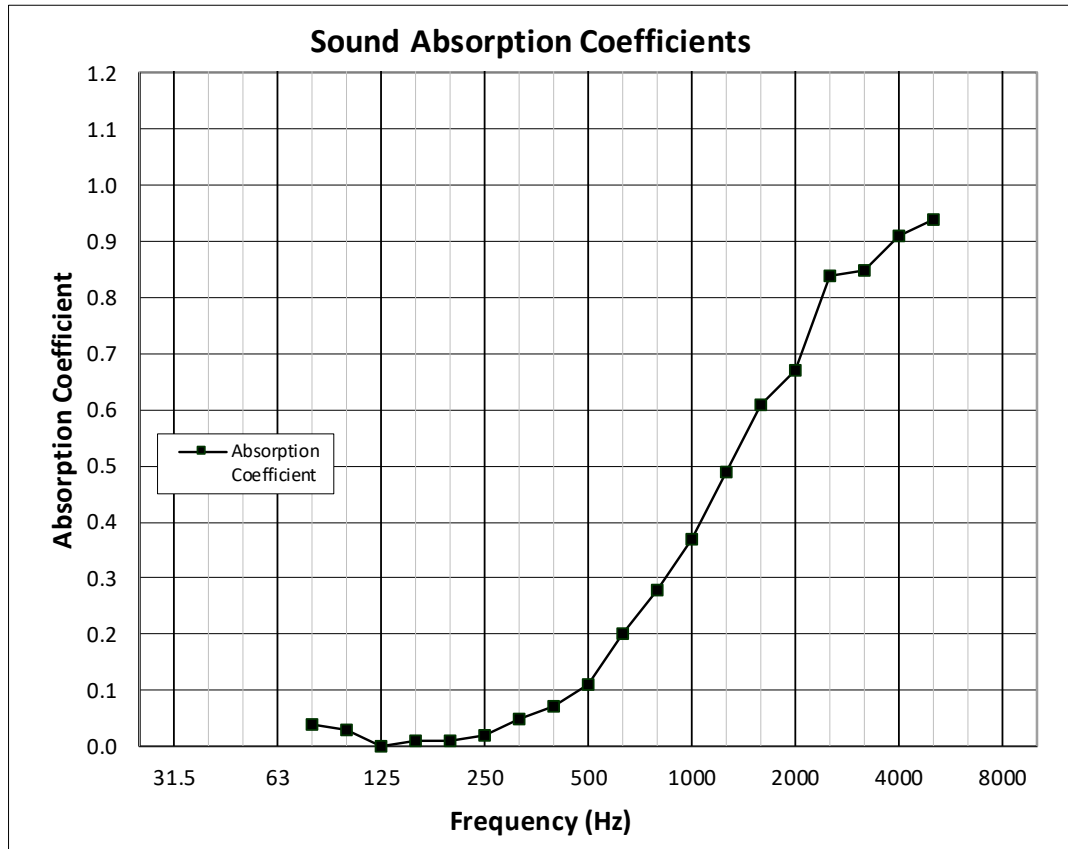
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
- 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500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

TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

P6681.01A GRAPH, 9 mm PET Panels



TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

P6681.01B DATA, Arbor PET and MDF and Veneer Panels

SPECIMEN AREA	6.68 m ²	
MOUNTING TYPE	A	
	EMPTY	FULL
TEMP °C	23.1	23.3
RH %	52	50
B.P. (mb)	1003	1003

FREQ (Hz)	EMPTY ROOM ABSORPTION (m ²)	FULL ROOM ABSORPTION (m ²)	ABSORPTION COEFFICIENT
80	5.65	5.96	0.05
100	6.06	6.25	0.03
125	5.29	5.35	0.01
160	4.80	4.99	0.03
200	5.47	5.73	0.04
250	5.74	6.24	0.07
315	5.30	6.09	0.12
400	5.01	6.19	0.18
500	4.96	6.61	0.25
630	4.85	7.39	0.38
800	5.10	8.53	0.51
1000	5.01	9.36	0.65
1250	5.26	10.74	0.82
1600	5.32	11.83	0.97
2000	5.26	12.00	1.01
2500	5.64	12.58	1.04
3150	6.31	12.45	0.92
4000	6.98	12.57	0.84
5000	7.52	12.63	0.77

NRC RATING	0.50	<i>(Noise Reduction Coefficient)</i>
SAA RATING	0.50	<i>(Sound Absorption Average)</i>

Notes:

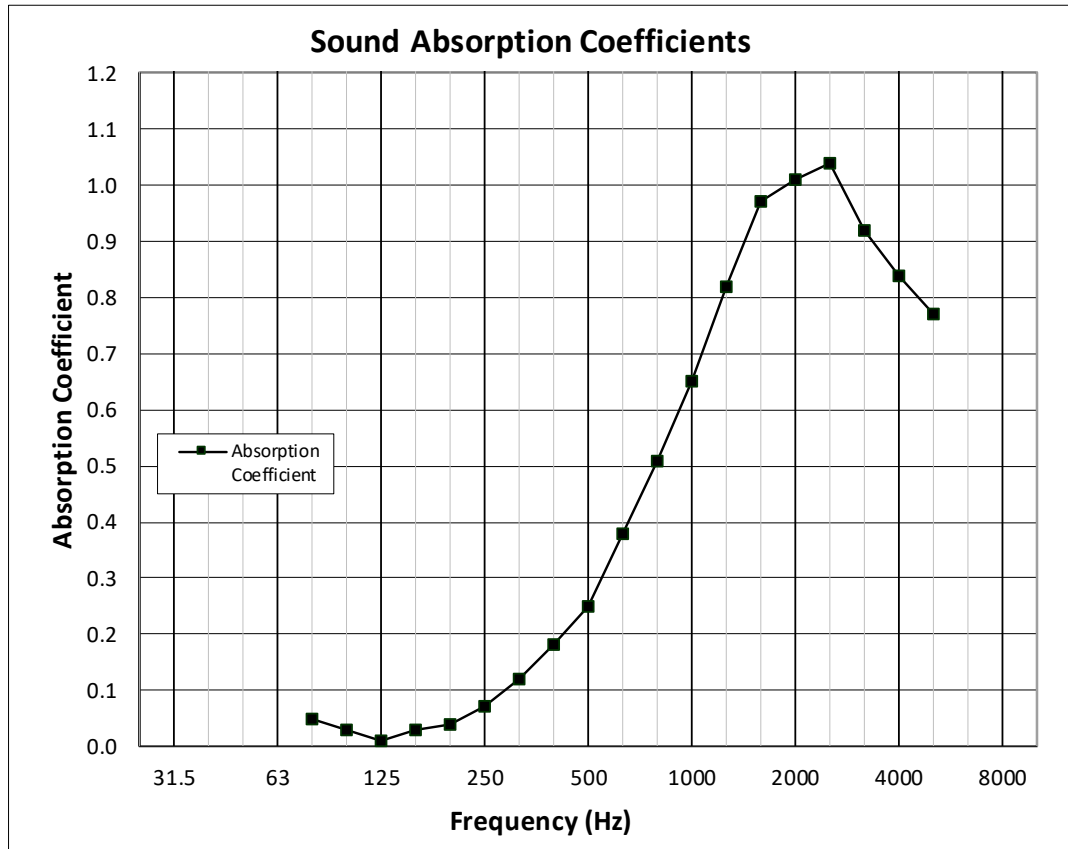
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
- 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500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

TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

P6681.01B GRAPH, Arbor PET and MDF and Veneer Panels



TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

P6681.01C DATA, Arbor Slim PET and Veneer Panels

SPECIMEN AREA	6.69 m ²	
MOUNTING TYPE	A	
	EMPTY	FULL
TEMP °C	23.1	23.3
RH %	52	51
B.P. (mb)	1003	1003

FREQ (Hz)	EMPTY ROOM ABSORPTION (m ²)	FULL ROOM ABSORPTION (m ²)	ABSORPTION COEFFICIENT
80	5.65	5.92	0.04
100	6.06	6.17	0.02
125	5.29	5.27	0.00
160	4.80	4.87	0.01
200	5.47	5.59	0.02
250	5.74	5.97	0.03
315	5.30	5.72	0.06
400	5.01	5.63	0.09
500	4.96	5.88	0.14
630	4.85	6.38	0.23
800	5.10	7.34	0.33
1000	5.01	7.99	0.45
1250	5.26	9.23	0.59
1600	5.32	10.37	0.76
2000	5.26	10.89	0.84
2500	5.64	12.65	1.05
3150	6.31	13.26	1.04
4000	6.98	13.69	1.00
5000	7.52	13.54	0.90

NRC RATING	0.35	<i>(Noise Reduction Coefficient)</i>
SAA RATING	0.38	<i>(Sound Absorption Average)</i>

Notes:

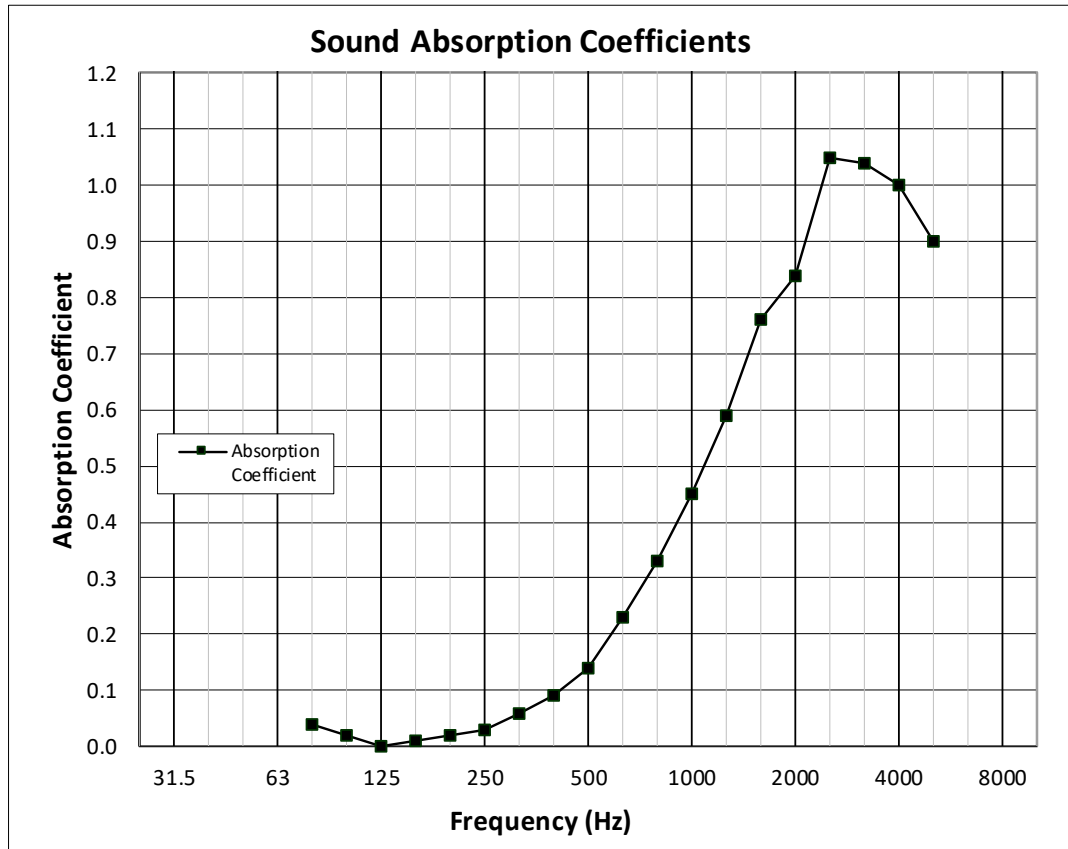
- 1) The NRC rating is the arithmetic average of the sound absorption coefficients at 250, 500, 1000, and 2000 hertz. The average is rounded to the nearest multiple of 0.05.
- 2) The SAA rating is the arithmetic average of the sound absorption coefficients at the frequencies ranging from 200 to 2500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

TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

P6681.01C GRAPH, Arbor Slim PET and Veneer Panels



TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

SECTION 11

PHOTOGRAPHS



Photo No. 1

View of Installed Test Option P6681.01A



Photo No. 2

Side View of Installed Test Option P6681.01A

TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

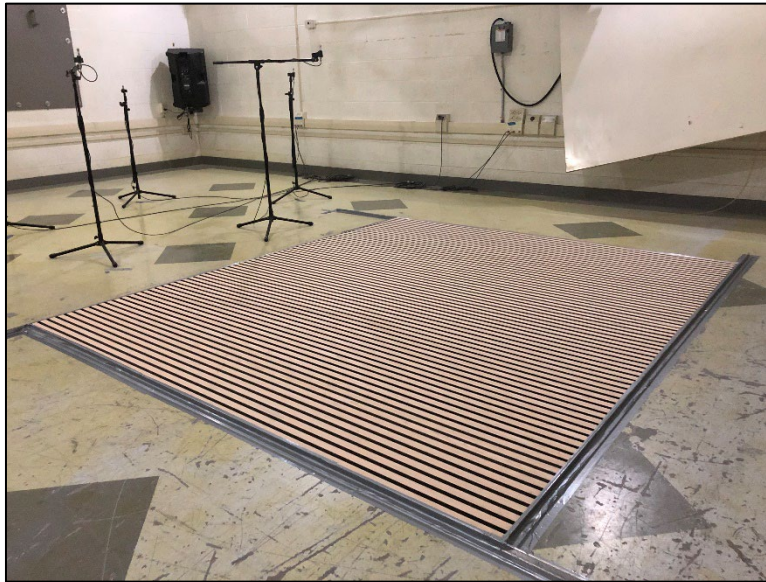


Photo No. 3
View of Installed Test Option P6681.01B

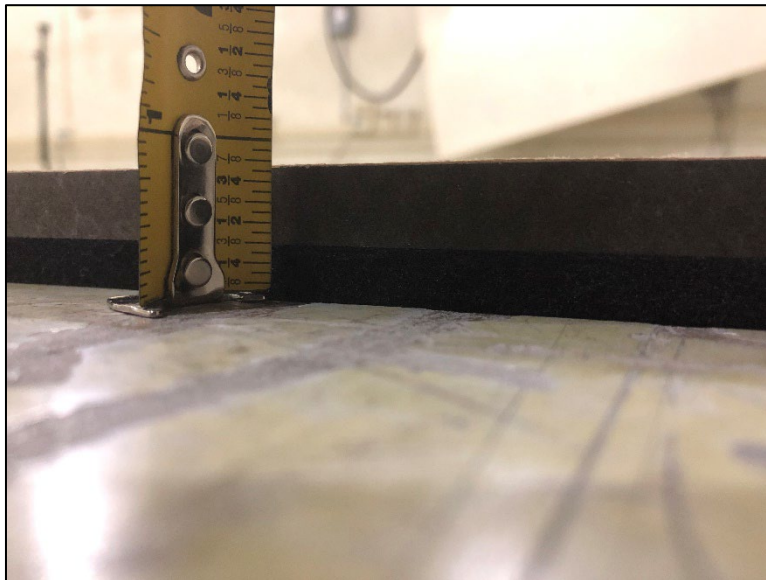


Photo No. 4
Side View of Installed Test Option P6681.01B

TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

**Photo No. 5****View of Installed Test Option P6681.01C****Photo No. 6****Side View of Installed Test Option P6681.01C**

TEST REPORT FOR LOFTWALL, INC.

Report No.: P6681.01-113-11-R2

Revision 2 Date: 05/04/23 Date: 04/17/23

SECTION 12**REVISION LOG**

REVISION #	DATE	PAGES	REVISION
0	04/17/23	N/A	Original Report Issue
1	04/24/23	3, 7, 8, 9	Corrected Series/Model name for Test Option P6681.01A
2	05/04/23	5	Corrected the Equipment list