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LOFTWALL, INC.
ACOUSTICAL PERFORMANCE TEST REPORT

SCOPE OF WORK
ASTM C423 SOUND ABSORPTION TESTING ON MOSAIC, PET PANELS

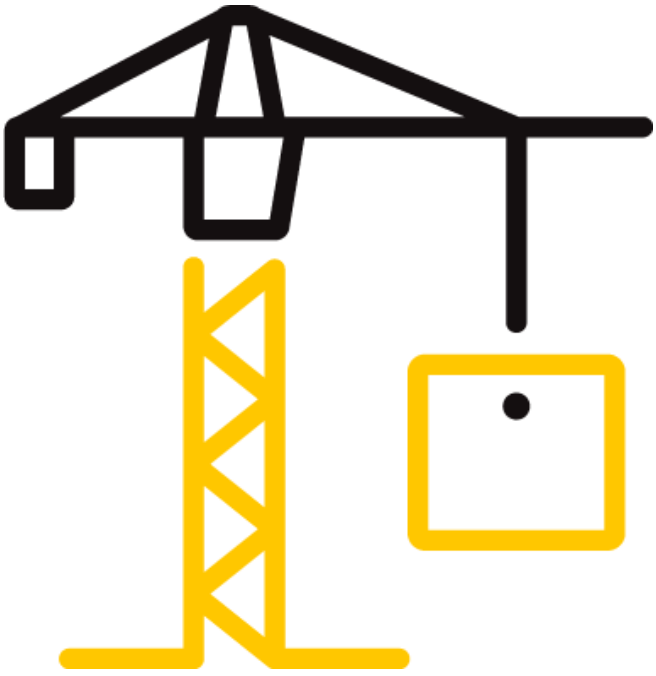
REPORT NUMBER
P1211.01-113-11-R0

TEST DATE
09/13/22

ISSUE DATE
09/23/22

PAGES
13

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



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TEST REPORT FOR LOFTWALL, INC.
Report No.: P1211.01-113-11-R0
Date: 09/23/22

REPORT ISSUED TO

LOFTWALL, INC.
2617 North 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, Pennsylvanian.

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:	Zachary P. Golden	**REVIEWED BY:**	Kurt A. Golden
TITLE:	Technician Team Leader Acoustical Testing	**TITLE:**	Manager Acoustical Testing
SIGNATURE:	Digitally Signed by: Zachary Golden	**SIGNATURE:**	Digitally Signed by: Kurt A. Golden
DATE:	09/23/22	**DATE:**	09/23/22

ZPG:jmcs

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SECTION 2
SUMMARY OF TEST RESULTS

SERIES/MODEL	Mosaic							
SAMPLE TYPE	1/2" Thick PET Panels							
MOUNTING TYPE	A							
DATA FILE NO.	**1/3 OCTAVE SOUND ABSORPTION COEFFICIENTS AT THE OCTAVE BAND FREQUENCIES**						**NRC**	**SAA**
	125	**250**	**500**	**1000**	**2000**	**4000**		
P1211.01A	0.00	0.04	0.21	0.53	0.79	1.0	0.40	0.41

SERIES/MODEL	Mosaic							
SAMPLE TYPE	1/4" Thick PET Panels							
MOUNTING TYPE	A							
DATA FILE NO.	**1/3 OCTAVE SOUND ABSORPTION COEFFICIENTS AT THE OCTAVE BAND FREQUENCIES**						**NRC**	**SAA**
	125	**250**	**500**	**1000**	**2000**	**4000**		
P1211.01B	0.00	0.00	0.08	0.27	0.51	0.75	0.20	0.23

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 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 #	CAL DATE
2-Channel Analog Input	National Instruments	NI-9250	2-Channel Analog Input	INT02581	03/22
2-Channel Analog Input	National Instruments	NI-9250	2-Channel Analog Input	INT02583	03/22
2-Channel Analog Input	National Instruments	NI-9250	2-Channel Analog Input	INT02584	03/22
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	INT02912	02/22
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64908	01/22
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64909	01/22
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64910	01/22
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64911	01/22
Receive Room Environmental Indicator	Comet	T7510	Receive Room	64915	02/22
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

SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Zachary P. Golden	Intertek B&C

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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 m^2. 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

TEST OPTION P1211.01A

SERIES/MODEL	Mosaic
SAMPLE TYPE	1/2" Thick PET Panels
MOUNTING TYPE	A

Two, 1.22 m by 2.44 m (48" by 96") and one, 2.44 m by 0.30 m (96" 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 specimen was 15.88 kg (35 lbs).

DESCRIPTION	THICKNESS	DENSITY	WEIGHT
PET Panels	12.45 mm 0.49"	190.36 kg/m^3 12.00 lbs/ft^3	2.37 kg/m^2 0.49 lbs/ft^2

TEST OPTION P1211.01B

SERIES/MODEL	Mosaic
SAMPLE TYPE	1/4" Thick PET Panels
MOUNTING TYPE	A

Two, 1.22 m by 2.44 m (48" by 96") and one, 2.44 m by 0.30 m (96" 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 specimen was 10.43 kg (23 lbs).

DESCRIPTION	THICKNESS	DENSITY	WEIGHT
PET Panels	7.11 mm 0.28"	219.41 kg/m^3 13.71 lbs/ft^3	1.56 kg/m^2 0.32 lbs/ft^2

Photographs are included in Section 11.

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

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SECTION 10

TEST RESULTS

P1211.01A DATA

TECHNICIAN	Zachary P. Golden
SPECIMEN AREA	6.69 m²
MOUNTING TYPE	A

	EMPTY	FULL
TEMP °C	21.1	20.4
RH %	47	48
B.P. (mb)	993	993

FREQ (Hz)	EMPTY ROOM ABSORPTION (m^2)	FULL ROOM ABSORPTION (m^2)	ABSORPTION COEFFICIENT
80	5.19	5.04	0.00
100	6.09	5.74	0.00
125	5.41	5.31	0.00
160	4.74	4.92	0.03
200	5.46	5.71	0.04
250	5.74	5.98	0.04
315	5.35	5.83	0.07
400	5.12	5.93	0.12
500	4.97	6.37	0.21
630	4.94	6.95	0.30
800	5.21	8.07	0.43
1000	5.09	8.66	0.53
1250	5.30	9.59	0.64
1600	5.34	10.34	0.75
2000	5.26	10.58	0.79
2500	5.66	12.06	0.96
3150	6.35	12.66	0.94
4000	6.97	13.66	1.00
5000	7.46	14.30	1.02

NRC RATING	0.40	*(Noise Reduction Coefficient)*
SAA RATING	0.41	*(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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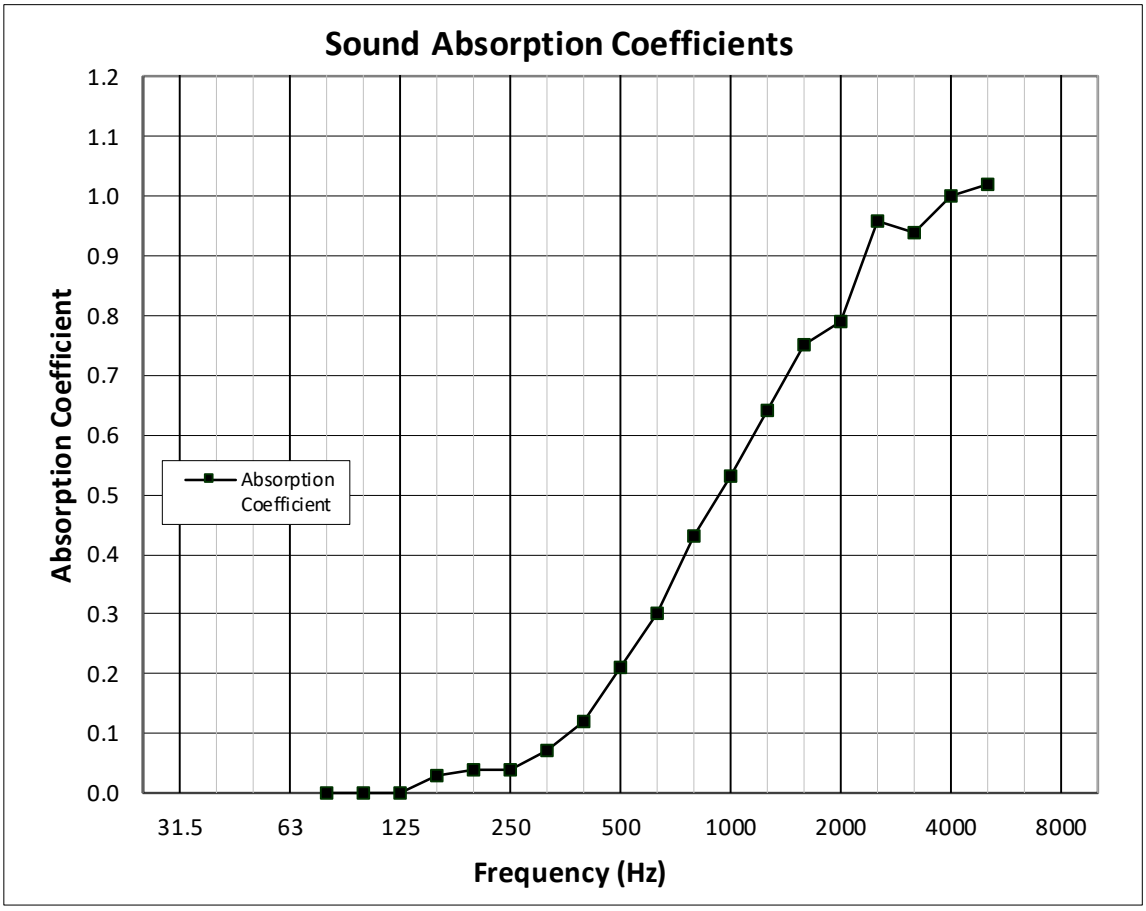
P1211.01A GRAPH



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P1211.01B DATA

TECHNICIAN	Zachary P. Golden	
SPECIMEN AREA	6.69 m²	
MOUNTING TYPE	A	
	EMPTY	**FULL**
TEMP °C	21.1	21.2
RH %	47	49
B.P. (mb)	993	993

FREQ (Hz)	**EMPTY ROOM ABSORPTION** (m^2)	**FULL ROOM ABSORPTION** (m^2)	**ABSORPTION COEFFICIENT**
80	5.19	5.02	0.00
100	6.09	5.77	0.00
125	5.41	5.33	0.00
160	4.74	4.83	0.01
200	5.46	5.49	0.00
250	5.74	5.77	0.00
315	5.35	5.47	0.02
400	5.12	5.46	0.05
500	4.97	5.52	0.08
630	4.94	5.80	0.13
800	5.21	6.49	0.19
1000	5.09	6.88	0.27
1250	5.30	7.72	0.36
1600	5.34	8.45	0.47
2000	5.26	8.69	0.51
2500	5.66	10.26	0.69
3150	6.35	10.91	0.68
4000	6.97	12.00	0.75
5000	7.46	12.72	0.79

NRC RATING	0.20	*(Noise Reduction Coefficient)*
SAA RATING	0.23	*(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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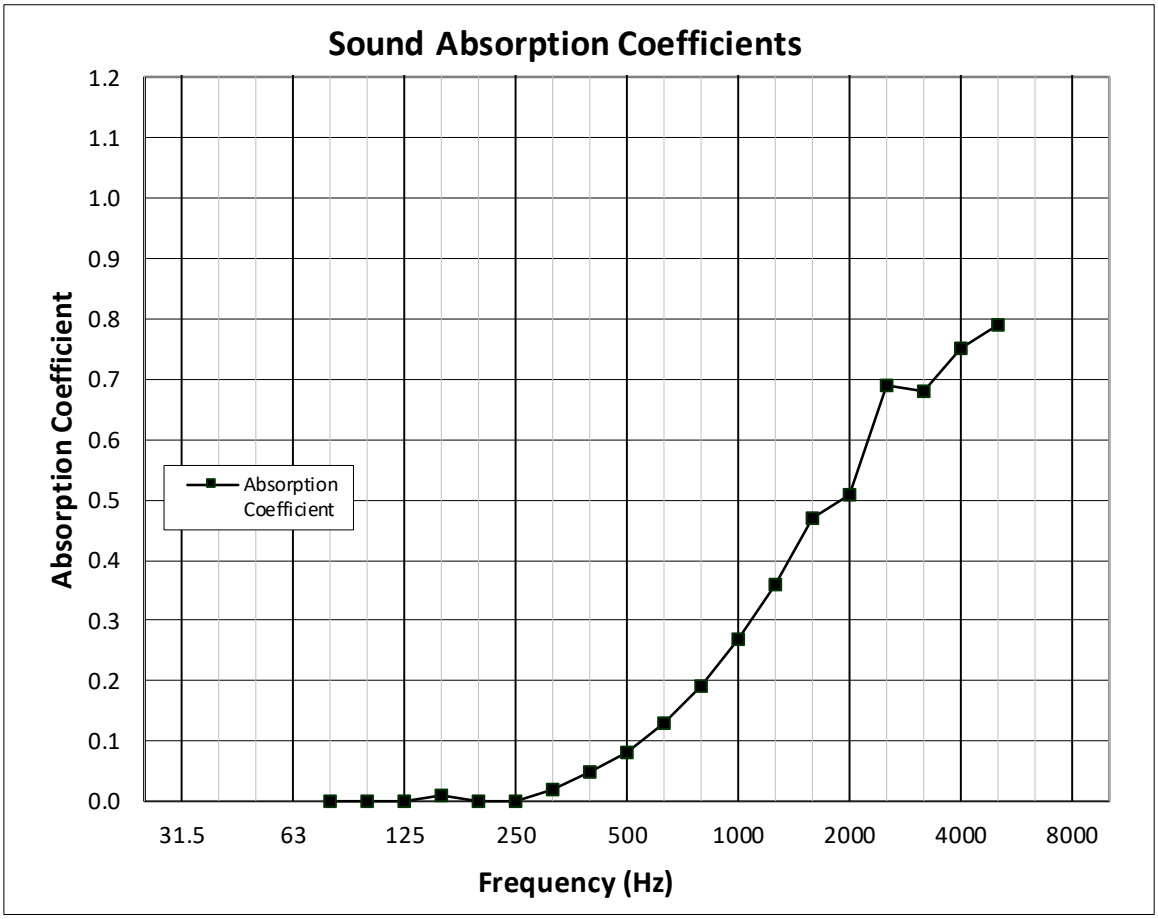

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SECTION 11
PHOTOGRAPHS

Photo No. 1
View of Installed Test Option P1211.01A

Photo No. 2
Side View of Installed Test Option P1211.01A

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Photo No. 3
View of Installed Test Option P1211.01B

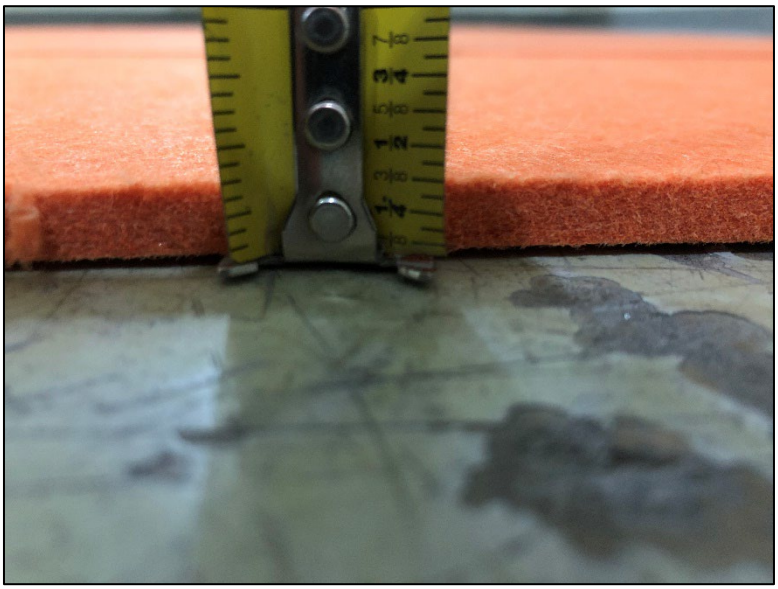

Photo No. 4
Side View of Installed Test Option P1211.01B

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SECTION 12
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	09/23/22	N/A	Original Report Issue