



**G0626.01-113-11-R0**  
**ACOUSTICAL PERFORMANCE TEST REPORT**  
**ASTM C423**

**Rendered to**

**LOFTWALL, INC.**

**SERIES/MODEL: FLOX**

**TYPE: Acoustical Partition Screen**

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		
G0626.01	0.34	0.48	0.60	0.77	0.83	0.91	0.65	0.68

Reference should be made to Intertek-ATI Report No. G0626.01.01-113-11 for complete test specimen description. This page alone is not a complete report.



## Acoustical Performance Test Report

LOFTWALL, INC.  
4705 Vicksburg Street  
Dallas, Texas 75207

Report	G0626.01-113-11
Test Date	07/14/16
Report Date	07/22/16

### 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 K mounting, the test specimen was an office panel.

### **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<sup>2</sup>. 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.

The Sound Absorption Coefficient is the full room absorption minus the empty room absorption divided by the number of units being tested. The Sound Absorption Coefficient is dimensionless.

### **Specimen Description**

The test specimen was made up of two 36" wide by 72" high vertically-formed fabric panels. The panels were connected by a vertical aluminum profile, which was attached to a steel plate base. The test specimen had a total area of 72 square feet. A photograph of the test specimen is included in Appendix C.

### **Comments**

The client did not supply a report drawing of the test specimen. The specimen was returned per the client's request.

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: Matthew Tressler

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Matthew D. Tressler  
Technician - Acoustical Testing

  
Digitally Signed by: Kurt A. Golden

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Kurt A. Golden  
Project Lead – Acoustical Testing

MDT: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: Photograph (1)



### Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
R0	07/22/16	N/A	Original Report Issue

## Appendix A

**Instrumentation:**

Instrument	Manufacturer	Model	Description	ATI Number	Date of Calibration
Data Acquisition Unit	National Instruments	PXI-1033	Data Acquisition card	1643A62	04/16 *
Receive Room Microphone	PBC Piezotronics	378B20	Microphone and Preamplifier	64902	12/15
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64903	12/15
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	65103	12/15
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64905	12/15
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64906	12/15
Receive Room Environmental Indicator	Comet	T7510	Receive Room	64915	03/16
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 <sup>3</sup> (8291.3 ft <sup>3</sup> )	Rotating vane and stationary diffusers Temperature and humidity controlled Isolation pads under the floor

N/A-Not Applicable



G0626.01-113-11-R0

## **Appendix B**

### **Complete Test Results**



**SOUND ABSORPTION**  
ASTM C 423

<b>Test Date</b>	07/14/16	
<b>ATI No.</b>	G0626.01	
<b>Client</b>	LOFTwall, Inc.	
<b>Specimen</b>	Series/Model: FLOX, acoustical partition screen	
<b>Operator</b>	Matthew D. Tressler	
<b>Sample Area</b>	6.69 m <sup>2</sup>	
<b>Mounting Type</b>	Type K	
	Empty	Full
<b>Temp C</b>	24.2	23.8
<b>RH %</b>	46	47
<b>B.P. (mb)</b>	1003	

Freq (Hz)	Empty Room Absorption (m <sup>2</sup> )	Uncertainty	Full Room Absorption (m <sup>2</sup> )	Uncertainty	Absorption Coefficient	Relative Uncertainty
80	4.74	0.248	6.52	0.192	0.27	0.047
100	5.07	0.348	7.14	0.097	0.31	0.054
125	4.94	0.318	7.21	0.275	0.34	0.063
160	4.55	0.145	7.02	0.239	0.37	0.042
200	4.37	0.098	7.12	0.078	0.41	0.019
250	4.93	0.072	8.14	0.065	0.48	0.015
315	5.06	0.083	8.54	0.032	0.52	0.013
400	5.15	0.081	8.81	0.062	0.55	0.015
500	5.12	0.056	9.12	0.122	0.60	0.020
630	4.71	0.028	9.22	0.030	0.67	0.006
800	4.85	0.031	9.72	0.008	0.73	0.005
1000	4.86	0.034	10.01	0.021	0.77	0.006
1250	5.21	0.027	10.64	0.009	0.81	0.004
1600	5.25	0.014	10.79	0.011	0.83	0.003
2000	5.15	0.011	10.70	0.056	0.83	0.009
2500	5.36	0.023	11.51	0.133	0.92	0.020
3150	5.90	0.008	11.86	0.006	0.89	0.001
4000	6.21	0.010	12.33	0.011	0.91	0.002
5000	6.77	0.006	13.02	0.009	0.93	0.002

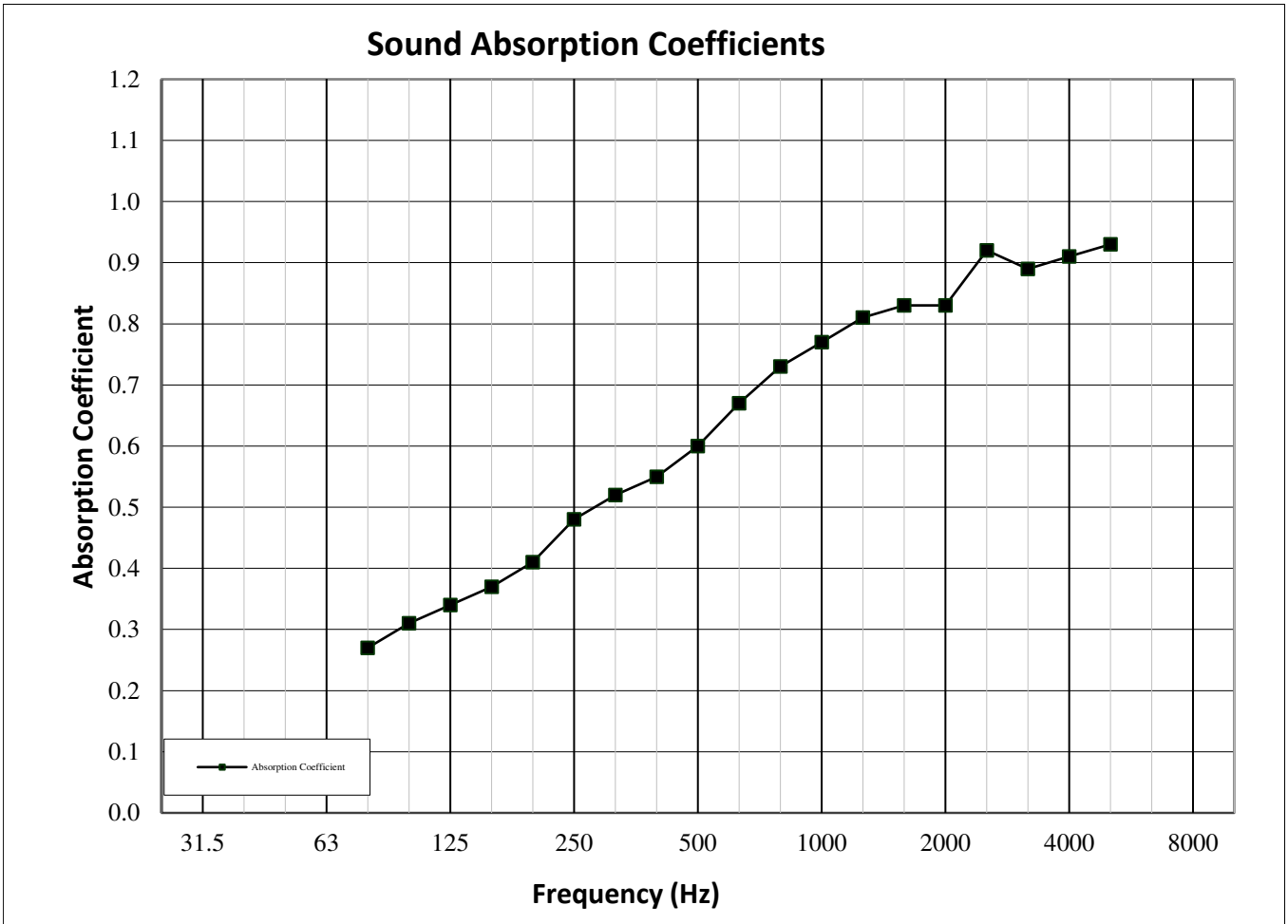
**NRC Rating**            **0.65**            *(Noise Reduction Coefficient)*  
**SAA Rating**            **0.68**            *(Sound Absorption Average)*

- 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

<b>Test Date</b>	07/14/16	
<b>ATI No.</b>	G0626.01	
<b>Client</b>	LOFTwall, Inc.	
<b>Specimen</b>	Series/Model: FLOX, acoustical partition screen	
<b>Operator</b>	Matthew D. Tressler	
<b>Sample Area</b>	6.69 m <sup>2</sup>	
<b>Mounting Type</b>	Type K	
	Empty	Full
<b>Temp C</b>	24.2	23.8
<b>RH %</b>	46	47
<b>B.P. (mb)</b>	1003	



**Appendix C**

**Photograph**



**View of Installed Test Specimen**