Acoustical Surfaces, Inc.

SOUNDPROOFING, ACOUSTICS, NOISE & VIBRATION CONTROL SPECIALISTS

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We Identify and S.T.O.P. Your Noise Problems

Acoustic and Insulation Product Product Testing Laboratories

Test Number	C423_090010

ASTM C423 Sound Absorption

Brief Description:	1" FG with Arcadia Vinyl 12.8% Open Ebony 3X21-99				
Date:	2/5/2009				
Test Request:	89330	**Tested By:**	Don Hill	**Notebook No.**	N/A
Measurement Procedure:	Averaging algorithm is exponential.			**Page No.:**	N/A

Test Method: The sample was tested in compliance with ASTM C423 and ASTM E795.

Test System: Bruel & Kjaer Type 3560 SN: 2447687

Sound Source: Delta Noise Generator creating Pink Noise

Calibration Frequency: 250 Hz

Type: Pistonphone **Level:** 124.00 dB

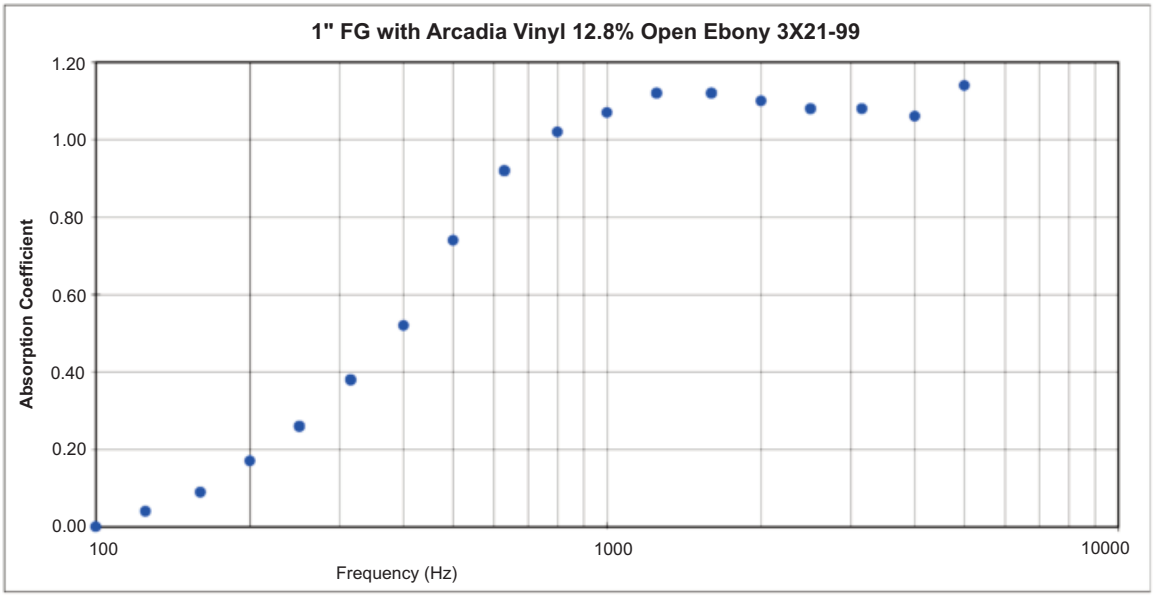
Location: Acoustics Lab B75 **Date:** 2/5/2009

Summary of Test Results :

Frequency (Hz)	Absorption Coefficient	Absorption (Metric Sabines)
100	**0.00**	0.02
125	**0.04**	0.29
160	**0.09**	0.60
200	**0.17**	1.13
250	**0.26**	1.77
315	**0.38**	2.53
400	**0.52**	3.49
500	**0.74**	4.99
630	**0.92**	6.15
800	**1.02**	6.86
1000	**1.07**	7.16
1250	**1.12**	7.52
1600	**1.12**	7.52
2000	**1.10**	7.39
2500	**1.08**	7.25
3150	**1.08**	7.26
4000	**1.06**	7.10
5000	**1.14**	7.64

	Empty Room	Full Room
Temperature (deg. C):	20.28	20.37
% Relative Humidity:	46.94	43.28
Date:	2/5/2009	2/5/2009
Atmospheric Pressure (kPa):	99	

NRC	**0.80**
SAA	**0.79**



Owens Corning Acoustic and Insulation Product Testing Laboratories
2790 Columbus Rd. Rt. 16 Granville, OH 43023-1200

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Test Number	C423_090010

ASTM C423 Sound Absorption

Full Description:	Tested By:	Don Hill		
Weight (kg):	18.40	Weight (lb):	40.56	
Area (sq. m):	6.70	Area (sq. ft.):	72.17	
Mounting:	Type D5 – Furring Strips			
Other Information:				

The purpose of this testing is to determine the sound absorptive properties of the submitted sample.

The test material is described as
1" FG with Arcadia Vinyl 12.8% Open Ebony 3X21-99
Each panel was characterized/measured in the Owens Corning Acoustic Research Center.
by Don Hill on 4-Feb-09
These measurements are documented below.
All measurements and calculations were conducted in accordance with Owens Corning Test Methods:
D-01Ae, Thickness
W-01Cb, Density and Square Foot Weight.
A standard tape measure was used to obtain the lengths and widths of each panel. The lengths provided here are an average of 2 measurements and the widths are an average of 3 measurements per panel.
Per D-01Ae, the thickness measurements are an average of 5 measurements per panel.

The sum total area of the sample was 72.17 square (feet)

Lenght (in)	Width (in)	Thickness (in)	Weight (lbs)	Density (pcf)	Sq.ft.wt. (psf)
108.12	96.12	1.01	40.56	6.68	0.56

Individual panel data available upon request.
All calculations and physical measurements include all components associated with this sample unless otherwise noted.
The sample was given 24 hours to come to equilibrium with the atmospheric conditions of the test chamber.
The panels were butted together to form a nominal 8 ft. x 9 ft. rectangular sample.
There were no interior gaps between any of the panels nor were there any gaps between the panels and the perimeter edge frame.
The perimeter edge of the sample was sealed with an ASTM approved aluminum frame.
The facing side of the sample was exposed to the sound field.
The sample was placed in the designated ASTM C423 position within the 10,110 cu.ft. reverberation chamber.
Details of this position may be obtained by request. All ASTM E795 mounting requirements were met for this test.
The source speakers were located in positions 1 and 2 (standard locations) within the reverberation chamber.
Details of this position may be obtained by request.

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