Title: Sound Absorption Test Results

Product: 2 Layers of 1" Echo Eliminator

Application: Wall and Ceiling

Testing Standard: ASTM C423 A-Mount

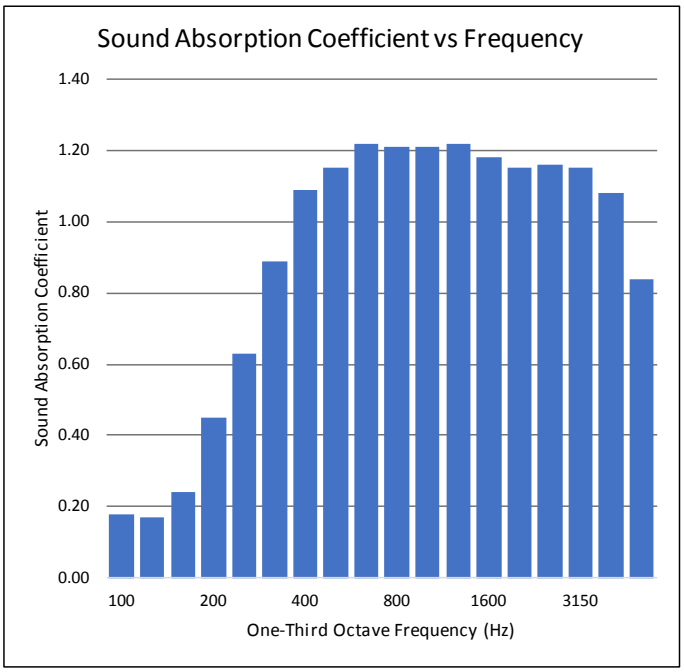
Test Date: 09/26/2000

Why this test: This test evaluates a products efficiency of absorbing sound at multiple frequencies. The test simulates the product's acoustical performance with a direct installation on a wall or ceiling.

Test Result Summary: NRC - 1.05; SAA - 0.90

NRC	SAA
1.05	0.90

Frequency (Hz)	Absorption Coefficient
100	0.18
125	0.17
160	0.24
200	0.45
250	0.63
315	0.89
400	1.09
500	1.15
630	1.22
800	1.21
1000	1.21
1250	1.22
1600	1.18
2000	1.15
2500	1.16
3150	1.15
4000	1.08
5000	0.84



Test ID: 18 0-0730.5

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PROJECT NUMBER: 18 0-0730.5

DATE: September 26, 2000

STOCK / TWIN CITY TESTING CORPORATION
662 Cromwell Avenue
St. Paul, Minnesota 55114

SOUND ABSORPTION TESTING CONDUCTED
ON A WALL PANEL CONSISTING OF TWO LAYERS
OF BAFP NOISE STOP ECHO ELIMINATOR™
ACOUSTICAL RECYCLED COTTON INSULATION

Prepared for:
ACOUSTICAL SURFACES – DIVISION OF
ARCHITECTURAL SURFACES, INC.
Attn: Mr. Steve Anderson
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Chaska, MN 55318

Client Purchase Order Number 00012348

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The test results contained in this report pertain only to the samples submitted for testing and not necessarily to all similar products.

SOUND ABSORPTION - ASTM C423-99a

INTRODUCTION:

This report presents the results of Sound Absorption testing conducted on a wail panel consisting of two 1" layers of Noise Stop Echo Eliminator™ BAFP insulation submitted by Acoustical Surfaces. This work was requested by Mr. Mike Nixon on September 6, 2000 with the testing conducted on September 14, 2000.

This report must not be reproduced except in its entirety with the approval of Stork / Twin City Testing Corporation. The data in this report relates only to the item tested.

Stork / Twin City Testing Corporation has been accredited by the U.S. Department of Commerce and the National Institute of Standards and Technology (NIST, formerly NBS) under their National Voluntary Laboratory Accreditation Program (NVLAP) for conducting this test procedure. This report may not be used to claim product endorsement by NVLAP or any agency of the U.S.Government.

TEST RESULTS SUMMARY:

The Noise Reduction Coefficient (NRC) value of the tested specimen was **1.05**. A detailed data sheet is provided below under “TEST RESULTS”.

TEST PROCEDURE:

ASTM: C423-99a, “Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method” was followed in every respect. Sixteen- 2' x 4' x 1" panels were joined together to make one extended plane surface of 64 square feet (8' x 8' x 2") which was then placed on the floor of the reverberation chamber. Further mounting and configuration details are provided under “TEST RESULTS” below.

Absorption coefficients are the fraction of diffuse incident sound absorbed by the specimen and are expressed in sabins per square foot. The NRC is the average of the absorption coefficients for 250, 500, 1000, and 2000 Hertz and is reported to the nearest integral of 0.05.

TEST EQUIPMENT:

Manufacturer	Model	Serial #	Description
Norwegian Electronics	NE830	11511	Real Time Spectrum Analyzer
Brüel & Kjær	3923	815424	Rotating Microphone Boom
Larson-Davis	2560	1032	Pressure Condenser Microphone
Compaq Computer	V20 CIO	A942CZGZE580	Custom Designed Software

TEST RESULTS:

Manufacturer : Acoustical Surfaces
Type : Wall Panel – 2 - 1" layers of BAFP.
Dimensions (W x H x D) : 2.0' x 4.0' x 21"
Weight : 37 lbs. (0.58 psf)
Surface Area : 8.0 ft^2
Total Surface Area : 64.0 ft^2 – consisting of 6 panels - (2 layers)
Mounting Type : Type A

Test No. 18 0-0730.5

Frequency Hz	Absorption Coefficients	Absorption (Sabins)
100	0.18	11.82
125	0.17	10.93
160	0.24	15.50
200	0.45	29.08
250	0.63	40.59
315	0.89	57.11
400	1.09	69.49
500	1.15	73.86
630	1.22	78.30
800	1.21	77.47
1000	1.21	77.95
1250	1.22	77.83
1600	1.18	75.28
2000	1.15	73.72
2500	1.16	74.56
3150	1.15	73.38
4000	1.08	69.27
5000	0.84	53.67

Noise Reduction Coefficient (NRC) = 1.05
The NRC frequencies are at 250, 500, 1000, and 2000 Hz

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