Title: Sound Absorption Test Results

Product: 6 baffles – two layers of 1" Echo Eliminator

Application: Ceiling

Testing Standard: ASTM C423 with baffles suspended on 2 cables - 16" spacing between baffles - 45" between cables

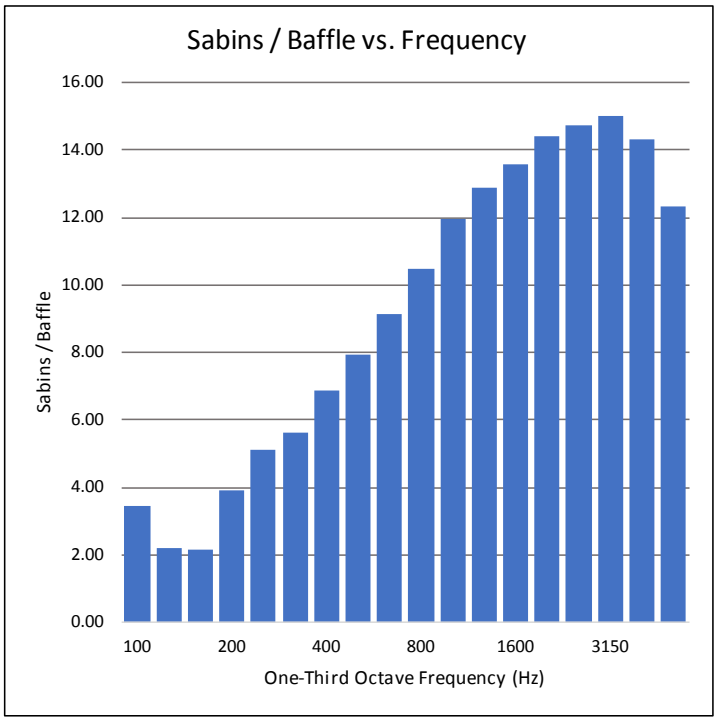
Test Date: 09/26/2000

Why this test: This test evaluates a products efficiency of absorbing sound at multiple frequencies. The test simulates the product's acoustical performance installed as hanging baffles.

Test Result Summary: Sabins / Baffle average at NRC frequencies - 9.85

Sabins / Baffle average at NRC frequencies
9.85

Frequency (Hz)	Absorption (Sabins /Baffle)
100	3.44
125	2.23
160	2.15
200	3.93
250	5.12
315	5.64
400	6.89
500	7.95
630	9.14
800	10.46
1000	11.94
1250	12.87
1600	13.55
2000	14.40
2500	14.75
3150	14.99
4000	14.30
5000	12.33



Test ID: 18 0-0730.7

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PROJECT NUMBER: 18 0-0730.7

DATE: September 26, 2000

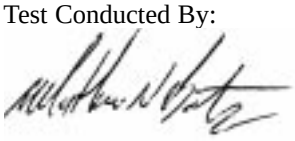
STOCK / TWIN CITY TESTING CORPORATION
662 Cromwell Avenue
St. Paul, Minnesota 55114

SOUND ABSORPTION TESTING CONDUCTED
ON SIX BAFFLES CONSISTING OF ONE
TWO 1" LAYERS BAFP INSULATION

Prepared for:
ACOUSTICAL SURFACES – DIVISION OF
ARCHITECTURAL SURFACES, INC.
Attn: Mr. Steve Anderson
123 Columbus Court North, Suite 201
Chaska, MN 55318

Client Purchase Order Number 00012348

Test Conducted By:



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Reviewed By:

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Product Testing Department
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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 six baffles consisting on six 2' x 4' baffles consisting on 1" BAFP insulation submitted by Acoustical Surfaces. This work was requested by Mr. Mike Nixon on September 6, 2000 with the testing conducted on September 13, 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 Sabins / Baffle average of the tested specimens was **9.85** at the NRC frequencies of 250, 500, 1000 and 2000 Hertz. 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. The baffles were suspended above the floor of the reverberation chamber on cables. The full mounting and and configuration details are provided under “TEST RESULTS” below.

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

Title: Sound Absorption Test Results

Product: 6 baffles - 2" Echo Eliminator

Application: Ceiling

Testing Standard: ASTM C423 with baffles suspended on two cables - 16" spacing between baffles - 45" spacing between cables

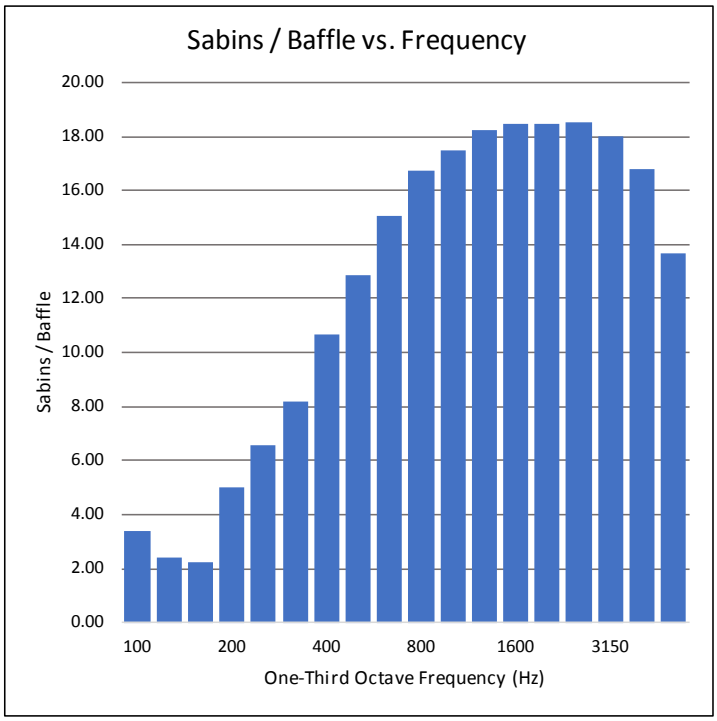
Test Date: 09/26/2000

Why this test: This test evaluates a products efficiency of absorbing sound at multiple frequencies. The test simulates the product's acoustical performance installed as hanging baffles.

Test Result Summary: Sabins / Baffle average at NRC frequencies - 13.85

Sabins / Baffle average at NRC frequencies
13.85

Frequency (Hz)	Absorption (Sabins/Baffle)
100	3.37
125	2.40
160	2.23
200	5.02
250	6.55
315	8.19
400	10.69
500	12.86
630	15.05
800	16.74
1000	17.46
1250	18.21
1600	18.46
2000	18.49
2500	18.50
3150	18.00
4000	16.77
5000	13.65



Test ID: 18 0-0730.17

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TEST RESULTS:

Manufacturer : Acoustical Surfaces
Type : Baffles 1" layers of BAFP.
Dimensions (W x H x D) : 2' x 4' x 1"
Weight : 14 lbs. (0.29 psf)
Surface Area : 8.0 ft^2
Total Surface Area : 96.0 ft^2 – consisting of 6 baffles-(2 sides)
Mounting Type : 3 specimens suspended on 2 cables. 16" between specimens 41" from floor to specimens. 45" between cables.

Test No. 18 0-0730.7

Frequency Hz	Absorption Coefficients)
100	3.44
125	2.23
160	2.15
200	3.93
250	5.12
315	5.64
400	6.89
500	7.95
630	9.14
800	10.46
1000	11.94
1250	12.87
1600	13.55
2000	14.40
2500	14.75
3150	14.99
4000	14.30
5000	12.33

Sabins / Baffle Average (NRC Frequencies) = 9.85
The NRC frequencies are at 250, 500, 1000, and 2000 Hz