Acoustical Surfaces, Inc.
We identify and S.T.O.P Your Noise Problems
Sound Transmission Obscuring Products
Soundproofing, Acoustics, Noise & Vibration Control Specialists ™

Acoustical Surfaces, Inc.

SOUNDPROOFING, ACOUSTICS, NOISE & VIBRATION CONTROL SPECIALISTS

123 Columbia Court North • Suite 201 • Chaska, MN 55318
(952) 448-5300 • Fax (952) 448-2613 • (800) 448-0121

Email: sales@acousticalsurfaces.com
Visit our Website: www.acousticalsurfaces.com

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twin city testing corporation

662 CROMWELL AVENUE
ST. PAUL, MN 55114
PHONE: 651/645-3601

REPORT OF: NOISE REDUCTION COEFFICIENT TEST

PROJECT: WALL SOUND ABSORBER: 2" PYRAMID

REPORTED TO: Rendered by Manufacturer and Released to:
Architectural Surfaces Inc./
Acoustical Surfaces Inc.

DATE: July 20, 1989
Revised: November 15, 1989

LABORATORY NO: 4143 89-0437-1 P.O. NO: n/a

INTRODUCTION:

This report presents the results of a sound absorption test conducted on a 2" Pyramid style wall sound absorber. The test was requested by Mr. Steve Anderson, of Architectural Surfaces, Inc., on June 26, 1989, with the test conducted on July 17, 1989.

Twin City Testing Corporation has accredited by the U.S. Department of Commerce National Institute of Standards and Technology (NIST, formally 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 NRC of the sample described herein was 0.50.
(See individual frequency values under TEST RESULTS).

SPECIMEN IDENTIFICATION:

Manufacturer:	Rendered by Manufacturer and Released to Architectural Surfaces Inc./Acoustical Surfaces Inc.
Type:	2" Polyurethane Foam
Style #:	Pyramid"
Size:	2" x 48" x 48"
Weight:	7.0 lb. (two panels)
Weight / Area:	0.22 lb. / ft2
Density:	1.31 lb. / ft3 (nominal 2.0 lb. / ft3)

TEST PROCEDURE:

The test was conducted in accordance with ASTM: C423(84a) “Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.” The sample was placed near, but not at the center of a 5300 cubic foot reverberation chamber. Reverberation times of the empty chamber are compared to the reverberation times of the chamber with the specimen installed, to obtain absorption coefficients at the six octave band test frequencies as prescribed by the standard. Absorption coefficients are the fraction of diffuse incident sound absorbed by the specimen. The fraction of absorbed sound is measured in Sabins per square foot of specimen.
The Noise Reduction Coefficient (NRC) is the average coefficients for 250, 500, 1000 and 2000 Hertz. The average is expressed to the nearest integral of 0.05.

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TEST RESULTS CONT'D

The sound absorption coefficient for each frequency was calculated by the following equation.

$$a = [(A2 - A1) /S]$$

Where

A= Absorption coefficient of test specimen, Sabins/ft2
A1= Absorption of empty room, Sabins
A2= Absorption of room with specimen, Sabins
S= Surface area, ft2

TEST EQUIPMENT:

Manufacturer	Model	Description	S/N
Bruel & Kjaer	3347	Real Time Spectrum Analyzer	487013
Bruel & Kjaer	4710	Control & Display Unit	490447
Bruel & Kjaer	3923	Rotating Microphone Boom	263439
Larson – Davis	2560	Pressure Condenser Microphone	1032
Allison Labs	650R	Random Noise Source	1
Allison Labs	2ABR	Variable Cutoff Filter	1061
Commodore	VIC20	Computer	P825447

TEST RESULTS:

FREQ	COEFFICIENT SABINS/FT2	C.L.	FREQ	COEFFICIENT SABINS/FT2	C.L.
125	0.15	0.12	1000	0.73	0.06
250	0.17	0.03	2000	0.66	0.07
500	0.49	0.04	4000	0.68	0.09

FREQ = Frequency - Octave Band (Hz)
Coefficient = Sound Absorption Coefficient, Sabins / ft2
C.L. = Uncertainty, Sabins / ft2 (95% Confidence Limit)

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REPORT OF: SOUND ABSORPTION TEST

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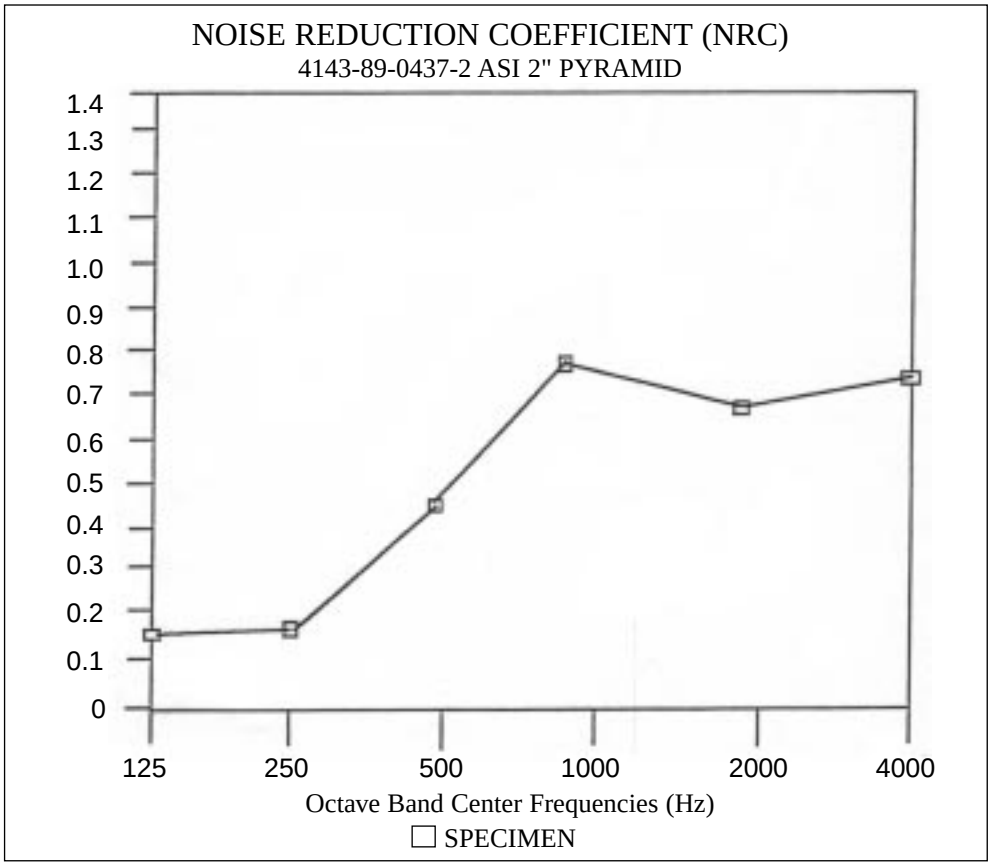
TEST RESULTS CONT'D

Test Conditions: 23.5 C 48% RH 29.80 in HG



NRC = 0.50

TWIN CITY TESTING CORPORATION

Kathryn W. Hatlestad

Kathryn W. Hatlestad
Acoustical/Vibration Engineer
Acoustical;/Fenestration Dept

Reviewed by:

Richard O Thomalla
Supervisor
Acoustical/Fenestration Dept.