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

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

twin city testing corporation

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

TO:	Rendered by Manufacturer and Released to: Architectural Surfaces, Inc./Acoustical Surfaces Inc.	DATE: PROJECT NO:	January 4, 1991 4143 91-0177 C

PROJECT: Dual Wave Pattern 4" Foam Panels

NOISE REDUCTION COEFFICIENT TEST

INTRODUCTION:

Twin City Testing Corporation has been 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.

TEST RESULTS SUMMARY:

The NRC of the sample described herein is 1.25 (see individual frequency values below under TEST RESULTS).

SPECIMEN IDENTIFICATION:

Manufacturer: Rendered by Manufacturer and Released to Architectural Surfaces, Inc./Acoustical Surfaces Inc.
Type: DW Pattern 4" Polyurethane Foam
Size: Sample – 4" x 48" X 144" Specimen – 4" x 48" x 48"
Weight: 22 lbs. 0.47 psf

TEST PROCEDURE:

The test was conducted in accordance with ASTM:C423 (09a), "Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method." The Type A Mounting was used with the sample placed flat on the floor near, but not at the center of a 5300 cubic foot reverberation chamber. Reverberation times to obtain absorption coefficients at the six octave band test frequencies. 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 of the absorption coefficients for 250, 500, 1000, and 2000 Hertz. The average is expressed to the nearest integral of 0.05.

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

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

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

PROJECT NO. 4143 91-177 C
DATE: January 4, 1991
PAGE: 2

TWIN CITY TESTING corporation

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

TEST EQUIPMENT:

Manufacturer	Model	Description	S/N
Norwegian Electronics	NE830	Real Time Spectrum Analyzer	11511
Bruel & Kjaer	3923	Rotating Microphone Boom	263439
Larson-Davis	2560	Pressure Condenser Microphone	1032

TEST RESULTS:

FREQ HZ	COEFFICIENT (SABINS/FT2)	C.L.	FREQ HZ	COEFFICIENT (SABINS/FT2)	C.L.
125	0.32	0.06	1000	1.33	0.02
250	0.93	0.03	2000	1.29	0.01
500	1.43	0.03	4000	1.21	0.01

Noise Reduction Coefficient (NRC) = 1.25

FREQ = Frequency – Octave Band (Hz)

COEFFICIENT = Sound Absorption Coefficient, Sabins / ft2

C.L. = Uncertainty, Sabins / ft2 (95% Confidence Limit)

TWIN CITY TESTING CORPORATION: Reviewed by:

Daniel J. Larson
Engineering Technician
Acoustical/Fenestration Dept.

Richard O. Thomalla,
Manager
Acoustical/Fenestration Dept.

• Soundproofing Products • Sonex™ Ceiling & Wall Panels • Sound Control Curtains • Equipment Enclosures • Acoustical Baffles & Banners • Solid Wood & Veneer Acoustical Ceiling & Wall Systems • Professional Audio Acoustics • Vibration & Damping Control • Fire Retardant Acoustics • Hearing Protection • Moisture & Impact Resistant Products • Floor Impact Noise Reduction • Sound Absorbers • Noise Barriers • Fabric Wrapped Wall Panels • Acoustical Foam (Egg Crate) • Acoustical Sealants & Adhesives • Outdoor Noise Control • Assistive Listening Devices • OSHA, FDA, ADA Compliance • On-Site Acoustical Analysis • Acoustical Design & Consulting • Large Inventory • Fast Shipment • No Project too Large or Small • Major Credit Cards Accepted