



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 NUMBER: 18 0-0088

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DATE: Feb. 16, 2000

SOUND ABSORPTION - ASTM C423-90a

INTRODUCTION:

This report presents the results of a Noise Reduction Coefficient (NRC) test conducted on High Impact Acoustical Wall Panels submitted on February 4, 2000 with the testing completed on February 15, 2000.

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TEST METHOD:

ASTM C 423-90a, "Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method" was followed in every respect.

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.

The temperature and relative humidity of the chamber during the tests were 72°F and 52%, respectively.

TEST EQUIPMENT:

<u>Manufacturer</u>	<u>Model</u>	<u>Serial #</u>	<u>Description</u>
Norwegian Electronics	NE830	11511	Real Time Spectrum Analyzer
Brüel & Kjær	3923	815424	Rotating Microphone Boom
Larson-Davis	2560	1032	Pressure Condenser Microphone

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SPECIMEN IDENTIFICATION TEST TWO:

Manufacturer : Rendered by Manufacturer for Acoustical Surfaces Inc.
 Type : High Impact Acoustical Wall Panel
 Nom Dimensions (W x H x D) : 4' x 8' x 2-1/8"
 Weight : 41.0 lbs. (1.78 psf)
 Surface Area : 32.0 ft².
 Total Surface Area Tested : 64 ft². – consisting of 2 specimens.
 Mounting Type : Type E – 1/4" air space off floor.
 Specimen Description : 1/8". 16-20 PCF fiberglass impact layer bonded to 2" 6.0 PCF fiberglass core, 100% polyester fabric facing.

2-1/8" RESULTS – TEST TWO:

Frequency Hz	Abs. Coefficients	Uncertainty %
125	0.46	4.6
250	0.85	3.4
500	1.16	1.9
1000	1.16	1.5
2000	1.12	1.1
4000	1.09	0.9

Noise Reduction Coefficient (NRC) = 1.05

Freq. = Octave band center frequency.

Abs. Coefficient = Sound absorption coefficient (extended plane applications)

Uncertainty = % uncertainty of the absorption coefficient for 95% confidence

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