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

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

**PROJECT NUMBER:** 18 0-0088


**DATE:** Feb 16, 2000

## SOUND ABSORPTION - ASTM C423-90a

**INTRODUCTION:**

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

Stock / 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 METHOD:**

ASTM C 423-90a, “Sound Absorption and Sound Absorption Coefficients by th 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:**

| 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 |

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**SPECIMEN IDENTIFICATION TEST ONE:**

| | |
|---|---|
| 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 1-1/8" |
| Weight : | 25.0 lbs. (0.78 psf) |
| Surface Area : | 32.0 $ft^2$. |
| Total Surface Area Tested : | 64 $ft^2$. – 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 1" 6.0 PCF fiberglass core, 100% polyester fabric facing. |

**1-1/8"**
**RESULTS – TEST ONE:**

| Frequency Hz | Abs. Coefficients | Uncertainty % |
|---|---|---|
| **125** | 0.21 | 4.8 |
| **250** | 0.66 | 3.3 |
| **500** | 0.98 | 1.9 |
| **1000** | 1.06 | 1.5 |
| **2000** | 1.04 | 1.1 |
| **4000** | 1.10 | 0.9 |

**Noise Reduction Coefficient (NRC) = 0.95**

Freq. = Octave band center frequency.
Abs. Coefficient = Sound absorption coefficient (extended plane applications)
Uncertainty = % uncertainty of the absorption coefficient for 95% confidence