



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 Problem

STORK®

Materials Technology

Stork Twin City Testing Corporation

PROJECT NUMBER: 30160-08-93799-3
PAGE: 1 of 4
DATE: April 1, 2008

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Investigative Chemistry Geotechnical Construction Materials
Non Destructive Testing Failure Analysis Product Evaluation
Metallurgical Analysis Materials Testing Welder Qualification

**SOUND ABSORPTION TESTING CONDUCTED ON THE
ACOUSTI-METAL PANELS**

Prepared for:
Acoustical Surfaces, Inc
Attn: Mr. Mike Mohs
123 Columbia Court North, Suite 201
Chaska, MN 55318

Client Purchase Order Number: Contract

Prepared By:

Mathew N. Botz
Project Manager
Product Testing Department
(651) 659-7353

Reviewed By:

Kyle T. Hall
Sr. Engineering Technician
Product Testing Department

The test results contained in this report pertain only to the samples submitted for testing and not necessarily to all similar products.



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Noise Reduction Coefficient (ASTM C423-07)

INTRODUCTION:

This report presents the results of the sound absorption testing conducted on Acousti-Metal Panels. The test sample was submitted by Mr. Mike Mohs of Acoustical Surfaces, Inc (ASI). This work was completed on March 21, 2008.

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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 ASTM C423 test procedures. This report may not be used to claim product endorsement by NVLAP, NIST or any agency of the U.S. Government.

TEST RESULTS SUMMARY:

TYPE E400 NRC TEST

Test #	SAMPLE DESCRIPTION	ADDITIONAL INFORMATION	Test Results		
			NRC	SAA	--
3	Acousti-Metal Panels	with 1" Echo Eliminator Panels	0.85	0.87	--

See 'TEST DATA' section for detailed results.

SPECIMEN DESCRIPTION: (Also see "Test Results")

The test specimen was identified by ASI as Acousti-Metal Panels tested with 1" Echo Eliminator backer panels. Each Acousti-Metal panel had dimensions of 24" x 24" x 0.05" and weighed 1.5-lbs (0.38-psf). The Acousti-Metal panels contained 1/8" penetrations in a staggered formation. The panels sat into standard 2x2 T-bar gridwork. The test was completed with 1" Echo Eliminator backer panels behind the Acousti-Metal Panels.

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TEST PROCEDURE

Sound Absorption Test

ASTM C 423-07," Sound Absorption and Sound Absorption Coefficient by the Reverberation Room Method", was followed in every respect. The test sample was tested in a Type E400 Mounting style (ceiling tile box with a 16" airspace).

NRC was calculated by rounding the sound absorption coefficients for 250, 500, 1000 and 2000 Hz to the nearest 0.05. SAA was calculated by rounding the sound absorption coefficients for the twelve frequencies from 200 Hz to 2500 Hz to the nearest 0.01.

TEST EQUIPMENT:

<u>Manufacturer</u>	<u>Model</u>	<u>Description</u>	<u>S/N</u>
Norwegian Electronics	NE830	Real Time Analyzer	11511
Brüel & Kjær	3923	Rotating Microphone Boom	815424
Norsonic (Source Rm)	1230	Pressure Condenser Microphone	26361
Brüel & Kjær (Term Rm)	4192	Pressure Condenser Microphone	2360314

REMARKS:

The test sample will be retained for a period of **15-days** and then discarded unless notified by the client.

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TEST RESULTS:

Filename
test #3

ASTM C423 - Sound Absorption

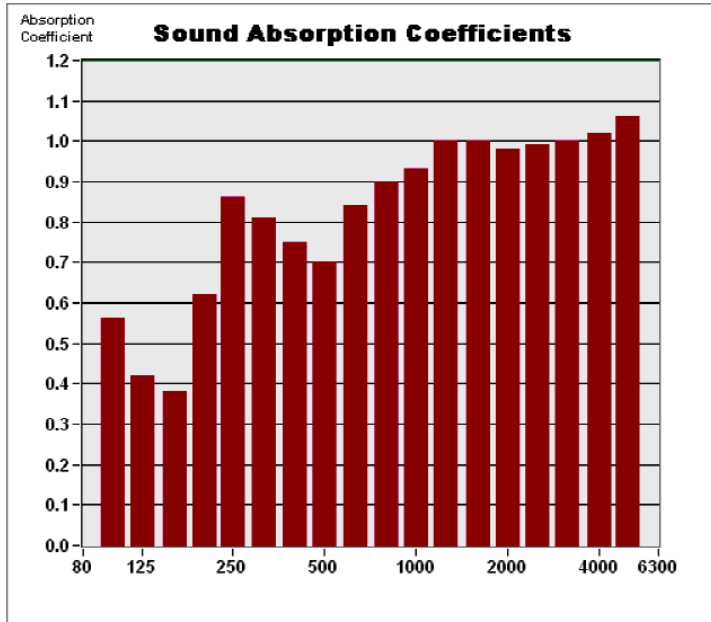
Client Acoustical	Product Ceiling Tiles	Model # Acoustimetal Panels	Quantity 1	Comment
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Sample Size - Wt. 96.0 in x 108.0 in x 1" - 36 lbs	Sample Description Acoustical Surfaces: 8' x 9' x 1" Sample Acoustimetal Panels with 1" Echo Eliminator Panels 18 Panels, 24" x 24" each :
--	--

Time Stamp
Fri, Mar 21, 2008 - 10:56 AM

Total Sample Area **72.0 ft²**

F (Hz)	Absorption Coefficient	Absorption (Sabins)*
100	0.56	40.24
125	0.42	30.03
160	0.38	27.58
200	0.62	44.93
250	0.86	62.05
315	0.81	58.04
400	0.75	54.09
500	0.70	50.14
630	0.84	60.54
800	0.90	64.56
1000	0.93	67.13
1250	1.00	72.06
1600	1.00	72.16
2000	0.98	70.65
2500	0.99	71.00
3150	1.00	71.72
4000	1.02	73.25
5000	1.06	76.34



Temp (°C) **21.0** R.H. (%) **56** ATM (mbar) **995**

SAA = 0.87 NRC = 0.85

* total absorption based on 72.0 ft²

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