



Acoustical Surfaces, Inc.

SOUNDPROOFING, ACOUSTICS, NOISE & VIBRATION CONTROL SPECIALISTS

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

RIVERBANK ACOUSTICAL LABORATORIES

1512 BATAVIA AVENUE
GENEVA, ILLINOIS 60134

OF
IIT RESEARCH INSTITUTE

630/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

TEST REPORT

SPECIMEN: Vinyl/Sailcloth

Sound Absorption Test
RAL™-A00-46

Page 1 of 4

CONDUCTED: 13 March 2000

TEST METHOD

The test method conformed explicitly with the requirements of the ASTM Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method: ASTM C42390a and E795-93 Riverbank Acoustical Laboratories has been accredited by the U. S. Department of Commerce, National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure. A description of the measuring technique is available separately.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the client as a Vinyl/Sailcloth. The overall dimensions of the specimen as measured were nominal 2.44 m (96 in.) wide by 2.74 m (108 in.) long and 51 mm (2 in.) thick. The specimen consisted of two units. Each unit measured nominal 1.22 m (48 in.) wide by 603 mm 2.74 m (108 in.) long by 51 mm (2 in.) thick. The individual units were butted against each other with no gaps in between to form the test specimen. The specimen was tested in the laboratory's 292 m³ (10,311 ft³) test chamber.

The clients description of the specimen was as follows: The banner consisted of an inner core of 0.75 pcf density fiberglass encapsulated in a 3-mil thick plastic film. One side was perforated (18% open area), and the other side was not perforated. The specimen was tested with the perforated side facing the noise source. The weight of the specimen as measured was 6.4 kg (14 lbs), an average of 0.95 kg/m² (0.2 lbs/ft). The area used in the calculations was 6.7 m² (71.7 ft²). The room temperature at the time of the test was 21°C (70°F) and 60% relative humidity.

MOUNTING E-400

The test specimen was mounted with an airspace behind it. The number designates the distance in mm from the exposed face of the test specimen to the test surface.

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Page 2 of 4

TEST RESULTS

1/3 Octave Center Frequency (Hz)	Absorption Coefficient	Total Absorption In Sabins	% Of Uncertainty With 95% Confidence Limit With Specimen
100	0.81	58.24	3.47
125	0.86	61.77	2.65
160	0.79	56.78	2.56
200	0.94	67.15	2.06
250	0.89	63.62	1.89
315	0.94	67.67	1.16
400	0.89	63.46	1.47
500	0.89	64.02	1.16
630	0.99	71.15	1.08
800	1.03	73.81	0.80
1000	1.01	72.55	0.79
1250	1.01	72.50	0.76
1600	1.04	74.44	0.66
2000	1.02	73.19	0.61
2500	1.04	74.67	0.55
3150	1.06	76.03	0.48
4000	1.11	79.64	0.46
5000	1.13	81.26	0.51

NRC = 0.95

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RAL™-A00-46

Page 3 of 4

TEST METHOD (cont'd)

The percentage of uncertainty for the required 95% confidence limits indicated above must fall within the prescribed limits designated in par. 13.2 of ASTM C423-90a. It states that for the absorption of the reverberation room containing the specimen the testing laboratory shall obtain data with less than 4% uncertainty at 125 (hertz and 2% uncertainty at 250, 500, 1000, 2000, and 4000 (hertz). The method of calculation is described in ASTM STP 15D and outlined in section 13 of the standard.

The noise reduction coefficient (NRC) is the average of the coefficients at 250, 500, 1000 and 2000 Hz, expressed to the nearest integral multiple of 0.05.

Tested by _____

Dean Victor
Senior Experimentalist

Approved by _____

James E. Stangel
Laboratory Manager

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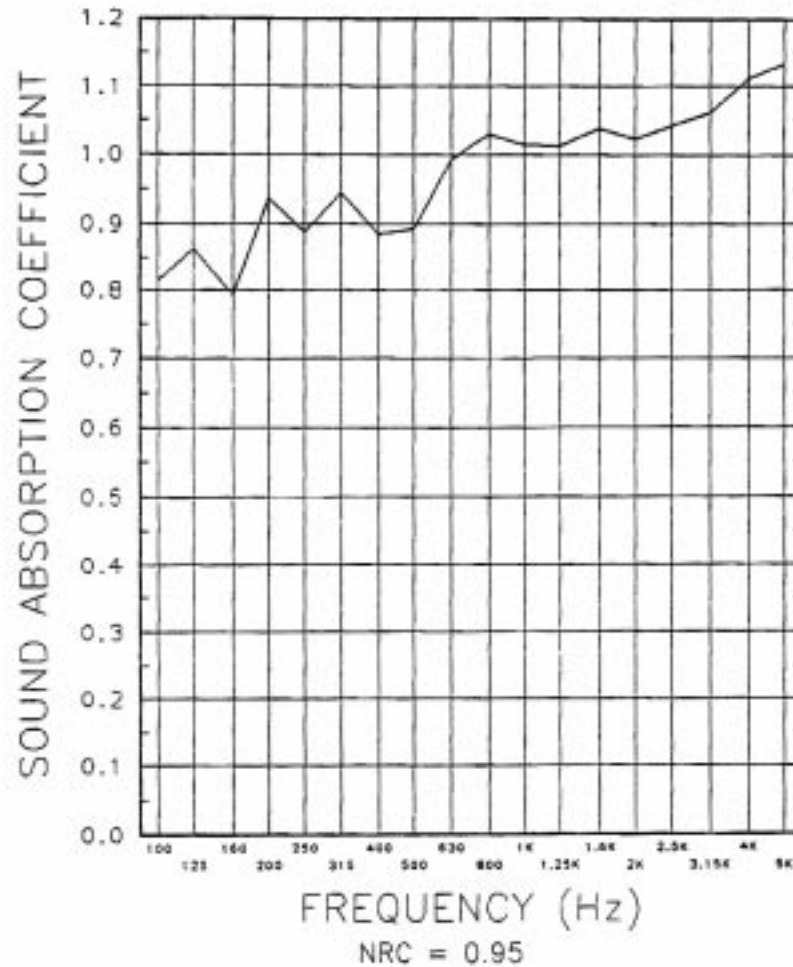
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SOUND ABSORPTION REPORT
RAL - A00-46 PAGE 4 OF 4



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