RIVERBANK ACOUSTICAL LABORATORIES

1512 S. BATAVIA AVENUE
GENEVA, ILLINOIS 60134

Alion Science and Technology

630/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

TEST REPORT

FOR: Auralex Acoustics, Inc.
Indianapolis, IN

Sound Absorption Test
RAL™-A01-010

ON: ProPanel 4"

CONDUCTED: 16 January 2001

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 C423-90a 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 manufacturer as ProPanel 4" wall panels. The overall dimensions of the specimen as measured were 2.44 m (96 in.) wide by 2.74 m (108 in.) high and 102 mm (4 in.) thick. The specimen consisted of three units. Two units measured 914 mm (36 in.) wide by 2.74 m (108 in.) long and 102 mm (4 in.) thick. The other unit measured 610 mm (24 in.) wide by 2.74 m (108 in.) long and 102 mm (4 in.) thick. The specimen was tested in the laboratory's 292 m^3 (10,311 ft^3) test chamber.

The manufacturer's description of the specimen was as follows: Each panel consisted of 102 mm (4 in.) thick, 6-7 pcf fiberglass covered with Guilford 2100 fabric. A visual inspection verified the manufacturer's description of the specimen.

The weight of the specimen as measured was 71.2 kg (157 lbs), an average of 10.7 kg/m^2 (2.2 lbs/ft^2). The area used in the calculations was 6.7 m^2 (72 ft^2). The room temperature at the time of the test was 21°C (69°F) and 58% relative humidity.

MOUNTING A

The test specimen was laid directly against the test surface.

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TEST RESULTS

1/3 Octave Center Frequency (Hz)	Absorption Coefficient	Total Absorption In Sabins	% Of Uncertainty With 95% Confidence Limit With Specimen
100	0.66	47.57	3.72
** 125	0.87	62.65	2.76
160	0.77	55.25	2.41
200	0.86	61.75	2.23
** 250	0.87	62.77	2.04
315	0.97	69.87	1.14
400	1.09	78.17	1.56
** 500	1.24	89.05	1.12
630	1.23	88.49	1.00
800	1.28	91.88	0.91
** 1000	1.26	90.68	0.81
1250	1.24	89.53	0.71
1600	1.26	90.94	0.67
** 2000	1.26	90.72	0.67
2500	1.26	90.85	0.57
3150	1.24	89.06	0.50
** 4000	1.25	90.35	0.54
5000	1.27	91.79	0.59

NRC= 1.15

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TEST RESULTS (Continued)

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 _____ Approved by _____

Dean Victor
Senior Experimentalist

David L. Moyer
Laboratory Manager

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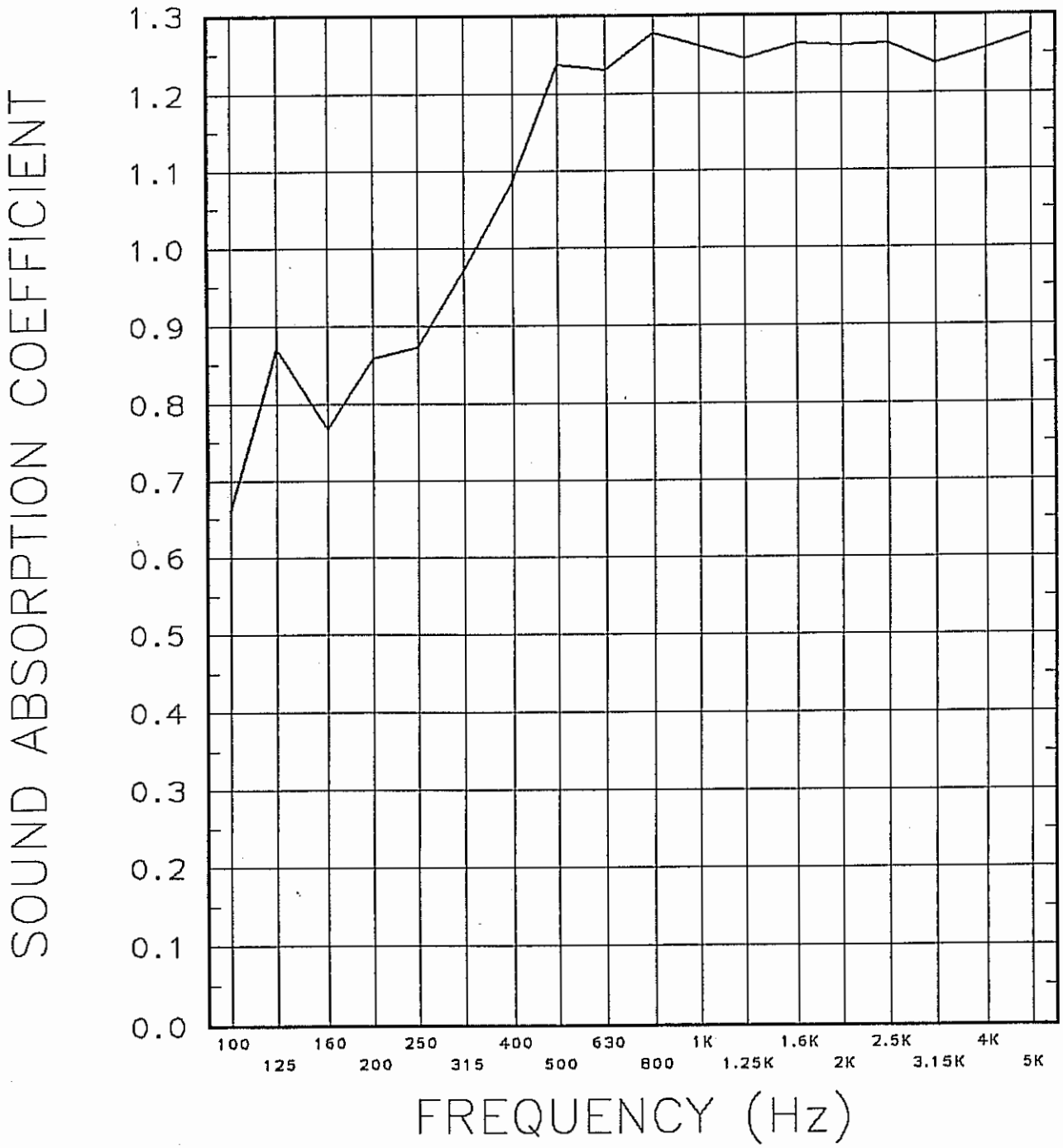
SOUND ABSORPTION REPORT

RAL – A01–10



NRC = 1.15