RIVERBANK ACOUSTICAL LABORATORIES
OF
IIT RESEARCH INSTITUTE
1512 BATAVIA AVENUE
NEVA, ILLINOIS 60134
630/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

REPORT

FOR: Auralex™ Acoustics

Sound Absorption Test
RAL™-A99-94

ON: 2" Pyramid SF-24 Foam

CONDUCTED: 28 July 1999

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. The microphone used was a Bruel & Kjaer serial number 1440522.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as 2" Pyramid SF-24 Foam. The overall dimensions of the specimen as measured were 2.44 m (96 in.) wide by 2.41 m (95 in.) high and 51 mm (2 in.) thick. The specimen consisted of eight units that measured 610 mm (24 in.) wide by 1.21 m (47.5 in.) long. 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: The Pyramid SF-24 foam was an open-cell polyurethane foam. The weight of the specimen as measured was 4 kg (9 lbs) an average of 0.68 kg/m^2 (0.14 lbs/ft^2). The area used in the calculations was 5.9 m^2 (63.3 ft^2). The room temperature at the time of the test was 22°C (71°F) and 59% 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	0.11	6.85	3.01
**	125	0.13	8.13	2.48
	160	0.09	5.90	2.10
	200	0.13	8.17	1.56
**	250	0.18	11.13	1.38
	315	0.27	17.20	1.18
	400	0.34	21.77	1.13
**	500	0.57	36.38	0.95
	630	0.73	46.18	0.85
	800	0.90	57.27	0.79
**	1000	0.96	60.91	0.80
	1250	1.05	66.68	0.68
	1600	1.07	67.42	0.60
**	2000	1.03	65.08	0.56
	2500	0.98	62.03	0.56
	3150	0.96	61.04	0.46
**	4000	0.98	62.12	0.46
	5000	1.05	66.39	0.45

NRC = 0.70

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TEST RESULTS (con't)

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.

Submitted by _____ Reviewed by _____

Dean Victor
Senior Experimentalist

James E. Stangel
Laboratory Manager

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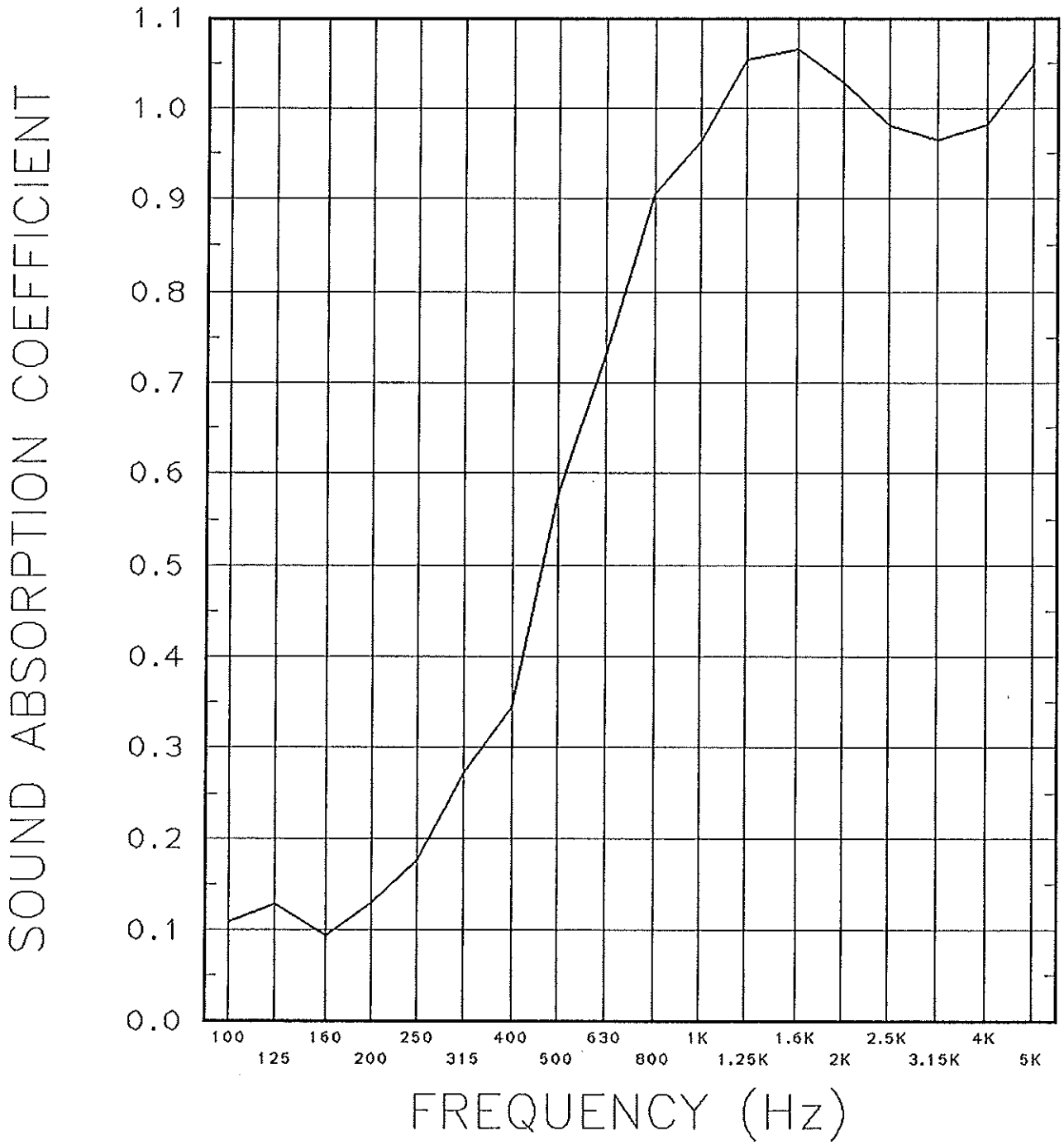
RAL – A99–94



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