RIVERBANK ACOUSTICAL LABORATORIES

1512 BATAVIA AVENUE
GENEVA, ILLINOIS 60134

IIT RESEARCH INSTITUTE

708/232-0104

OF

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

708/232-0104

REPORT

FOR: P.K. Insulation Mfg. Co., Inc.

Sound Absorption Test
RAL™491-257

ON: 1' PK II Spray On Plaster Board

CONDUCTED: 21 June 1991

TEST METHOD

The test method conformed explicitly with the requirements of the ASTM Standard Test Method 'or Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method: ASTM C423-90a and E795-83. 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 1330828.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as 1" PK II Spray on plaster board. The overall dimensions of the specimen as measured were nominally 2.36 m (92.8 -in.) wide by 2.40 m (94.5 in.) long and 38.1 m (1.5 in.) thick. The specimen consisted of two units. Each unit was nominally 1.18 m (46.4 in.) wide by 2.40 m (94.5 in.) long. The thickness of the spray on material was measured in ten randomly selected points. The average thickness was 22.9 mm (0.9 in.). The specimen was tested in the laboratory's 292 m3 (10,311 ft3) test chamber. The manufacturer’s description of the specimen was as follows: The specimen was a wood fiber cellulose spray-on material on plasterboard. The specimen was cured in excess of eight (8) months. A visual inspection verified the manufacturer's description of the specimen. The weight of the specimen as measured was 64.6 kg (142 .5 lbs) An average of 11 kg/m2 (2.3 lbs/ ft2). The area used in the calculations was 5.7 m 2 (61 ft2). The room temperature at the time of the test was 22°C (72°F) and 62% relative humidity.

MOUNTING A

The test specimen was laid directly against the test surface.

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TEST RESULTS

1/3 Octave Center Center Frequency (Hz)	Absorption Coeificient	Total Absorption In Sabins	% Of Uncertainty With 95% Confidence Limit
100	0.02	1.19	0.84
125	0.09	5.58	0.85
160	0.15	9.05	0.76
200	0.19	11.42	0.97
250	0.23	14.22	0.93
315	0.35	21.55	0.82
400	0.50	30.43	0.74
500	0.77	46.92	0.63
630	3.91	55.32	0.61
800	0.99	60.52	0.65
1000	1.01	61.48	0.66
1250	1.00	60.78	0.69
1600	1.03	62.83	0.66
2000	1.00	61.25	0.57
2500	1.02	62.01	0.67
3150	0.98	60.08	0.59
4000	1.05	64.13	0.52
5000	1.09	66.65	0.62

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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.

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.

Submitted by: Diane C. Perrone
Senior Technician

Reviewed by: Peter E. Straus
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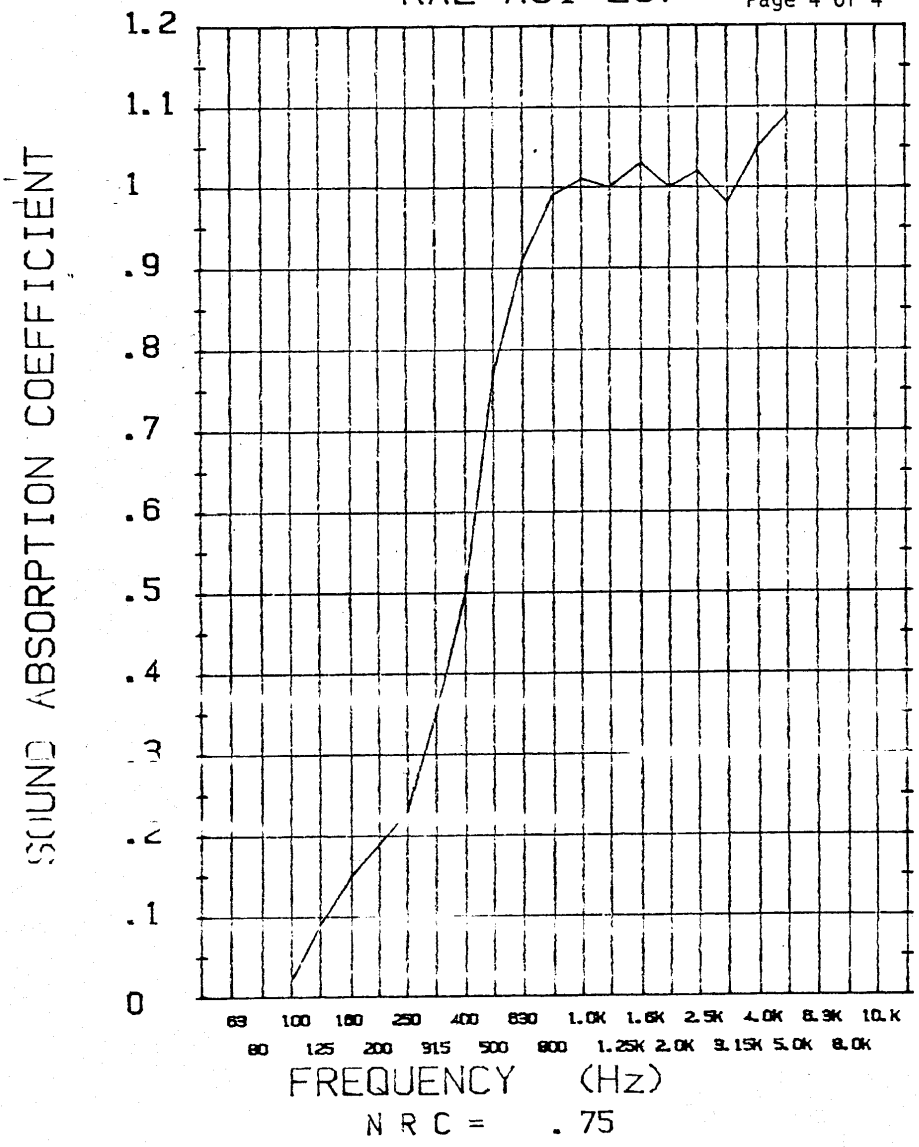

N R C = .75