



WESTERN ELECTRO - ACOUSTIC LABORATORY

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SOUND ABSORPTION TEST REPORT NO. AB11-207

Western Hemlock Panelized Linear SKU 2113-4 on 1.5" fiberglass duct liner
("E-400" mounting)

CLIENT: **9Wood**
999 South A Street
Springfield, OR 97477

Page 1 of 3
27 October 2011

TEST DATE: 26 October 2011

INTRODUCTION

The methods and procedures used for this test conform to the provisions and requirements of ASTM Procedure C 423-09a, *Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method*. Copies of the test standard are available at www.astm.org. The test chamber volume is 275 cubic meters. Western Electro-Acoustic Laboratory is accredited by the United States Department of Commerce, National Institute of Standards and Technology under the National Voluntary Accreditation Program (NVLAP) Lab Code 100256-0 for this test procedure. This test report relates only to the item(s) tested. This report must not be used to claim product certification, approval, or endorsement by WEAL, NVLAP, NIST or any agency of the federal government.

DESCRIPTION OF TEST SPECIMEN

The test specimen was a 9Wood Panelized Linear assembly. The specimen consisted of nine panels, each of which was approximately 2.44 m (96 inches) by 305 mm (12 inches) by 28.6 mm (1-1/8 inches) thick. Each panel consisted of four 57.2 mm (2-1/4 inch) by 15.9 mm (5/8 inch) slats with 19.1 mm (3/4 inch) spaces between them. The slats and spaces were maintained with 12.7 mm (1/2 inch) by 31.8 mm (1-1/4 inch) backer strips stapled to the back of the slats. The panels were backed with nominal 38.1 mm (1-1/2 inch) thick 24.0 kg/m³ (1.5 lbs./ft³) density fiberglass duct liner. The specimen was placed in an E-400 mounting jig consisting of four wooden sides around the perimeter of the specimen. The duct liner sat on an angle aluminum grid with the scrim side down. The panels sat on the duct liner such that the top of the panels were flush with the top of the jig, 400 mm (15-3/4 inches) above the test chamber floor. Closed cell foam gaskets are used to provide an air tight seal between the chamber floor and the bottom of the jig. According to the manufacturer the specimen was:

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The net dimensions of the assembly were 2.74 m (108 inches) by 2.44 m (96 inches) by 66.7 mm (2-5/8 inches) thick. The overall weight of the specimen was 49.0 kg (108 lbs.).

Test results are presented on the following page as well as the ASTM estimate of reproducibility, R, and repeatability, r, of the sound absorption coefficients of a specimen in a Type E-400 mounting.

Respectfully submitted,
Western Electro-Acoustic Laboratory


Gary E. Mange
Laboratory Manager

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SOUND ABSORPTION TEST REPORT NO. AB11-207

TEST DATE: 26 October 2011

Page 2 of 3
27 October 2011

Mounting per ASTM E 795-00: Type E-400

Area tested: 72.0 ft² (6.69 m²)

Temperature: 75.7° F

Humidity: 42.2%

Pressure: 28.67 in. of Hg

TEST RESULTS

1/3 Octave Band Absorption Data

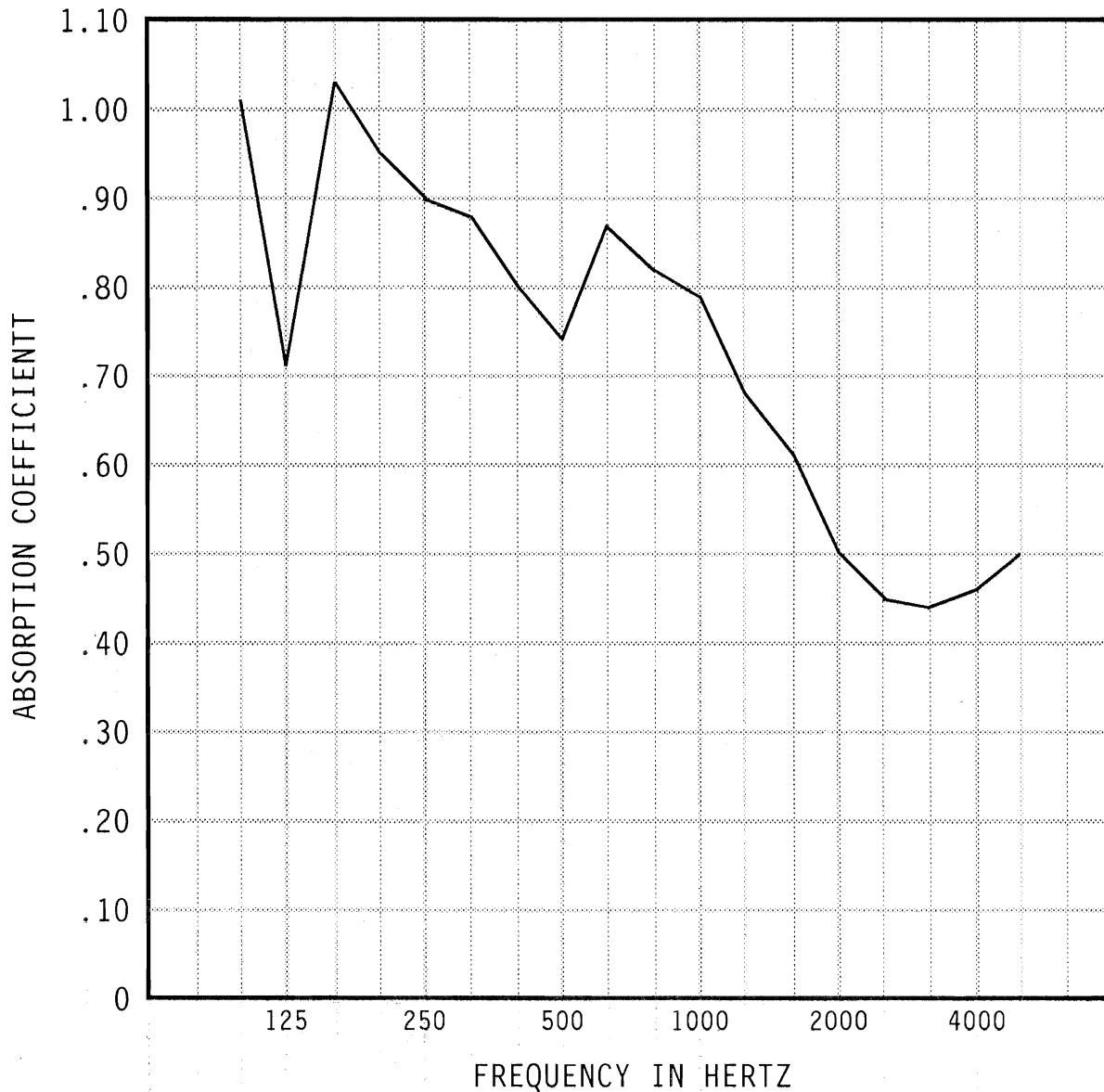
Frequency in Hz	Absorption in Sabins	Absorption Coefficients	Reproducibility R	Repeatability r
100	72.7	1.01	0.49	0.23
125	51.1	0.71	0.33	0.16
160	74.4	1.03	0.27	0.11
200	68.6	0.95	0.14	0.08
250	64.8	0.90	0.17	0.07
315	63.1	0.88	0.12	0.07
400	57.4	0.80	0.08	0.05
500	53.4	0.74	0.09	0.06
630	62.6	0.87	0.08	0.06
800	59.0	0.82	0.09	0.04
1000	56.7	0.79	0.09	0.03
1250	48.9	0.68	0.11	0.05
1600	44.2	0.61	0.13	0.04
2000	36.0	0.50	0.11	0.05
2500	32.7	0.45	0.09	0.04
3150	31.5	0.44	0.10	0.04
4000	33.1	0.46	0.10	0.07
5000	35.8	0.50	0.13	0.09

NRC 0.75
SAA 0.75

SOUND ABSORPTION TEST REPORT No. AB11-207

TEST DATE: 26 October 2011

Page 3 of 3
27 October 2011



Specimen Area: 72 sq.ft.
Temperature: 75.7 deg. F
Relative Humidity: 42.2 %

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