WESTERN ELECTRO - ACOUSTIC LABORATORY
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T E S T I N G • C A L I B R A T I O N • R E S E A R C H

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SOUND ABSORPTION TEST REPORT NO. AB10-178

Acoustic Planks SKU 3116-2 with 1.5 mm Kerf Openings, 16 mm spacing over 1.5" Fiberglass
(Type "E-400" mounting)

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

31 August 2010

TEST DATE: 26 August 2010

INTRODUCTION

The methods and procedures used for this test conform to the provisions and requirements of ASTM Procedure C 423-08a, *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 3100 Acoustic Plank. Fourteen planks, approximately 19 mm (3/4 inch) thick by 200 mm (8 inches) wide by 2.44 m (8 feet) long were assembled over 38.1 mm (1.5 inches) of 32 kg/m^3 (2 lb/ft^3) fiberglass duct liner. One additional plank, 51 mm (2 inches) wide was used to complete the assembly. The planks were kerfed along the entire length of the plank (parallel to the grain) with 1.5 mm kerf openings on 16 mm centers. Each plank contained 25.4 mm (1 in.) by 159 mm (6.25 in.) oval acoustic dadoes filled with fiberglass pills on the backside of the plank. The specimen was placed in an E-400 test jig, with the face of the specimen flush with the top of the jig, 400 mm (15-3/4 in.) above the test chamber floor. The test jig consisted of four wooden sides around the perimeter of the specimen. Closed cell foam gaskets were used to provide an air tight seal between the chamber floor and the bottom of the jig. The fiberglass duct liner was supported on a frame consisting of 2x4s, aluminum supports and chicken wire such that the top of the fiberglass was 19 mm (3/4 inch) below the top of the jig. The planks were then placed on a separate angle aluminum grid above, but also touching the fiberglass. According to the manufacturer the specimen was:

Series 3100 SKU 3116-2 Acoustic Plank with a 2 lb/ft^3 fiberglass duct liner backing

The net dimensions of the assembly were 2.74 m (108 inches) by 2.44 m (96 inches) by 57 mm (2-1/4 inch) thick. The overall weight of the specimen was 72.1 kg (159 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

NVLAP LAB CODE 100256-0

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Mounting per ASTM E 795-00: Type E-400
Area tested: 72.0 ft^2 (6.69 m^2)
Temperature: 79.7° F
Humidity: 41.5%
Pressure: 28.49 in. of Hg

TEST RESULTS

1/3 Octave Band Absorption Data

Frequency in Hz	Absorption in Sabins	Absorption Coefficients	Reproducibility R	Repeatability r
100	69.2	0.96	0.49	0.23
125	64.5	0.90	0.33	0.16
160	78.5	1.09	0.27	0.11
200	70.4	0.98	0.14	0.08
250	68.2	0.95	0.17	0.07
315	63.1	0.88	0.12	0.07
400	54.3	0.75	0.08	0.05
500	55.4	0.77	0.09	0.06
630	61.8	0.86	0.08	0.06
800	56.1	0.78	0.09	0.04
1000	53.8	0.75	0.09	0.03
1250	48.7	0.68	0.11	0.05
1600	43.9	0.61	0.13	0.04
2000	38.3	0.53	0.11	0.05
2500	36.7	0.51	0.09	0.04
3150	33.6	0.47	0.10	0.04
4000	30.4	0.42	0.10	0.07
5000	29.8	0.41	0.13	0.09

NRC 0.75
SAA 0.75

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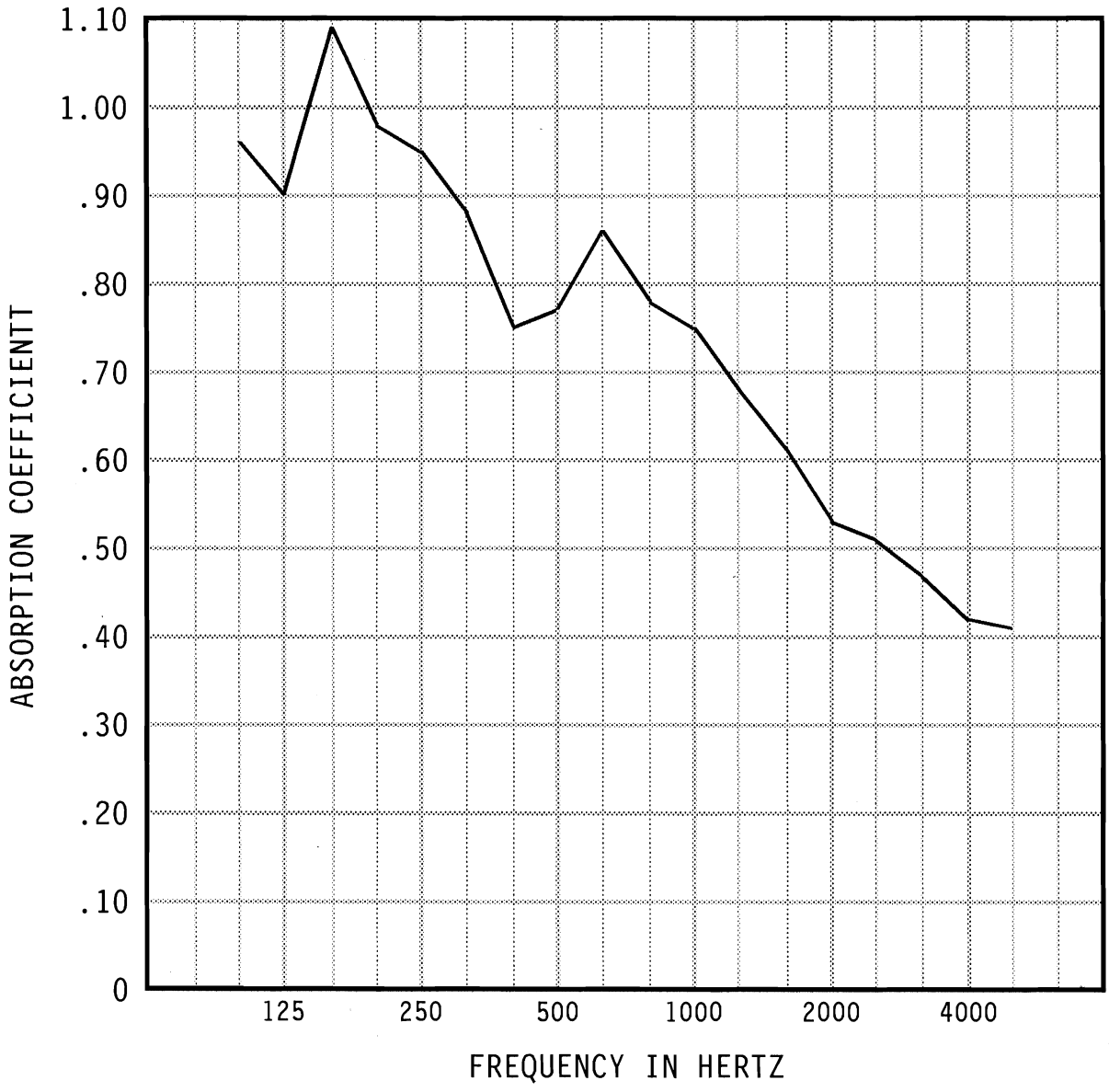

Specimen Area: 72 sq.ft.
Temperature: 79.7 deg. F
Relative Humidity: 41.5 %

NVLAP

NVLAP LAB CODE 100256-0