



# WESTERN ELECTRO - ACOUSTIC LABORATORY

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## SOUND ABSORPTION TEST REPORT NO. AB10-181

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

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

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31 August 2010

TEST DATE: 27 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](http://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

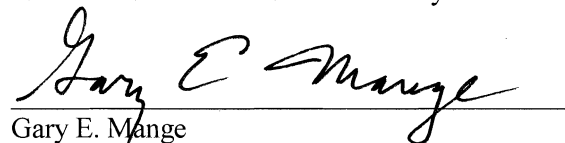
The test specimen was a 9Wood 3100 Acoustic Plank. Fourteen planks, approximately 19 mm (3/4 inch) thick by 200 mm (8 inches) wide by 2.44 m (8 feet) long were assembled over 38.1 mm (1.5 in.) of 32 kg/m<sup>3</sup> (2 lb/ft<sup>3</sup>) fiberglass duct liner. One additional plank, 51 mm (2 inches) wide 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 duct liner board was laid directly on the test chamber floor with 1 x 2 furring strips running along the outside edges and down the middle. The planks were laid side by side on the 1 x 2 furring strips above, but also touching the fiberglass. The edges were covered with angle aluminum around the entire perimeter of the specimen and the angle aluminum was taped to the chamber floor around the entire perimeter. According to the manufacturer the specimen was:

Series 3100 SKU 3116-2 Acoustic Plank with a 2 lb/ft<sup>3</sup> 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 A mounting.

Respectfully submitted,  
Western Electro-Acoustic Laboratory

  
Gary E. Mange  
Laboratory Manager

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Mounting per ASTM E 795-00: Type A

Area tested: 72.0 ft<sup>2</sup> (6.69 m<sup>2</sup>)

Temperature: 79.7° F

Humidity: 43.0%

Pressure: 28.48 in. of Hg

## TEST RESULTS

### 1/3 Octave Band Absorption Data

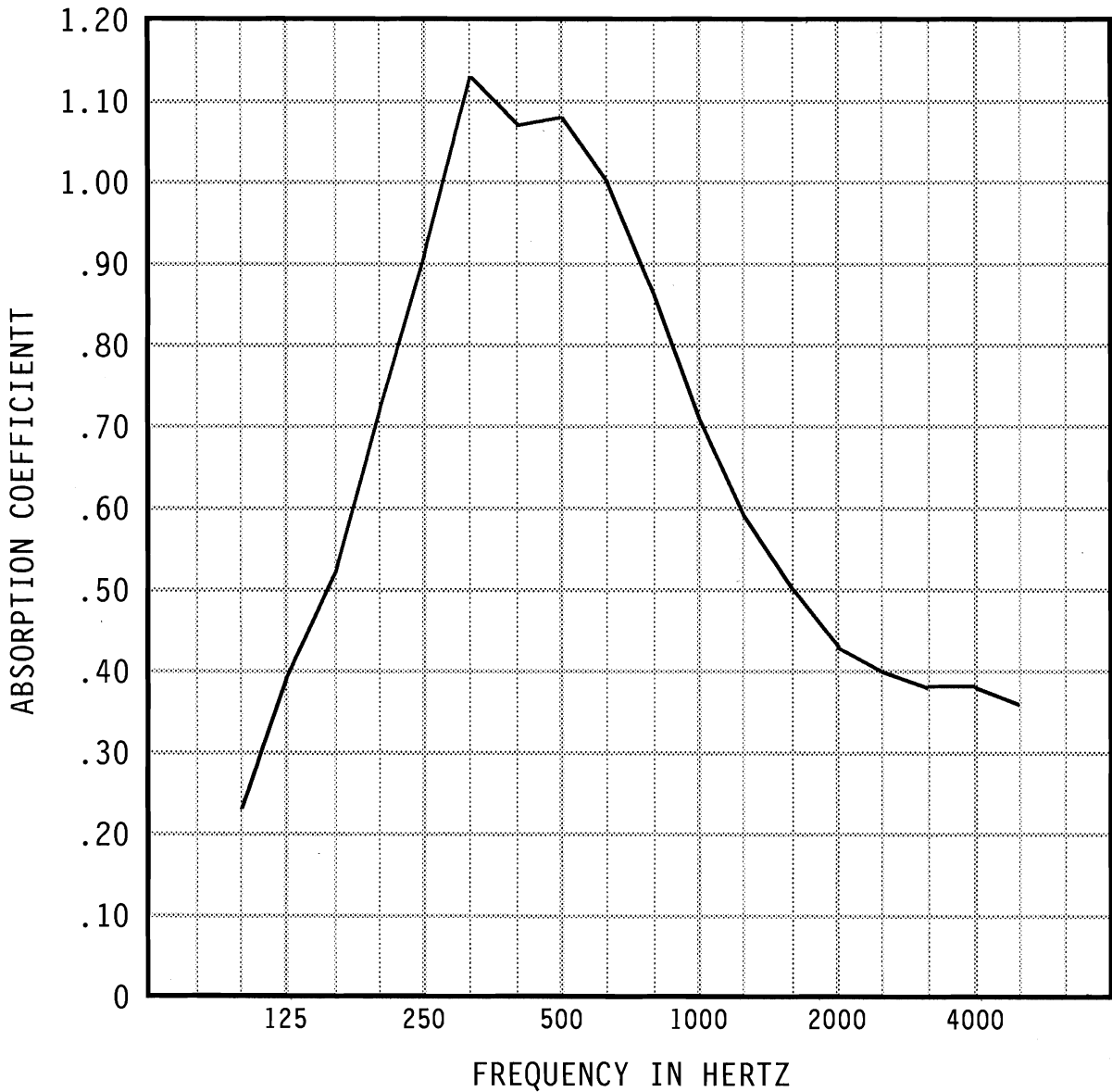
Frequency in Hz	Absorption in Sabins	Absorption Coefficients	Reproducibility R	Repeatability r
100	16.5	0.23	0.27	0.15
125	27.7	0.39	0.22	0.11
160	37.8	0.52	0.23	0.11
200	51.5	0.72	0.17	0.09
250	65.5	0.91	0.15	0.07
315	81.1	1.13	0.22	0.09
400	76.9	1.07	0.16	0.14
500	77.4	1.08	0.14	0.09
630	72.3	1.00	0.14	0.06
800	61.8	0.86	0.14	0.07
1000	51.2	0.71	0.12	0.06
1250	42.6	0.59	0.13	0.05
1600	35.9	0.50	0.14	0.05
2000	30.7	0.43	0.13	0.05
2500	28.5	0.40	0.14	0.06
3150	27.4	0.38	0.15	0.08
4000	27.1	0.38	0.16	0.11
5000	25.6	0.36	0.21	0.15

**NRC 0.80**  
**SAA 0.78**

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Specimen Area: 72 sq.ft.  
Temperature: 79.7 deg. F  
Relative Humidity: 43.0 %

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