



# WESTERN ELECTRO - ACOUSTIC LABORATORY

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TESTING • CALIBRATION • RESEARCH

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## SOUND ABSORPTION TEST REPORT NO. AB06-112 revision 1

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

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25 May 2006

TEST DATE: 27 March 2006  
TEST SPECIMEN: Linear Wood Panels

### INTRODUCTION

The methods and procedures used for this test conform to the provisions and requirements of ASTM Procedure C 423-02a, *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. Any advertising that utilizes this test report or test data must not imply product certification or endorsement by WEAL, NVLAP, NIST or the U.S. Government.

### DESCRIPTION OF TEST SPECIMEN

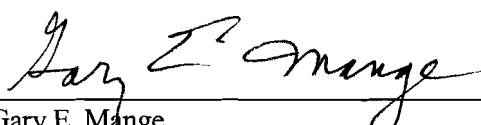
The test specimen was a 9Wood Linear Wood acoustical panel assembly. The specimen consisted of 9 panels which were each approximately 8 ft. (2.44 m) by 1 ft. (305 mm). When assembled, the specimen was a series of 3-1/4 inch (82.6 mm) boards and 3/4 inch (19.1 mm) spaces. The boards and spaces were maintained with 1/2 inch (12.7 mm) by 1 inch (25.4 mm) backer strips screwed to the back of the boards. Attached to the back of the panels was 1-1/2 inch (38.1 mm) 2 lbs./ft<sup>3</sup> (32.0 kg/m<sup>3</sup>) fiberglass duct liner board. The specimen was placed in an E-400 mounting jig consisting of four wooden sides around the perimeter of the specimen. The panels sat on an angle aluminum grid such that the top of the boards 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:

2100 Series SKU 2114-3 Linear Wood Panels with preattached acoustic ductliner and 3-1/4" x 5/8" solid Hemlock members.

The net dimensions of the panel assembly were 108 inches (2.74 m) by 96 inches (2.44 m) by 2-5/8 inches (66.7 mm) thick. The percent open area was 18.8%. The overall weight of the specimen was 124 lbs. (56.2 kg).

Test results are presented on the following page.

Respectfully submitted,  
Western Electro-Acoustic Laboratory

  
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Gary E. Mange  
Laboratory Manager

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

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

Temperature: 66.1° F

Humidity: 45%

## TEST RESULTS

### 1/3 Octave Band Absorption Data

Frequency in Hz	Absorption in Sabins	Absorption Coefficients
100	67.0	0.93
125	69.6	0.97
160	75.8	1.05
200	73.1	1.01
250	69.0	0.96
315	63.2	0.88
400	55.5	0.77
500	55.4	0.77
630	64.9	0.90
800	55.3	0.77
1000	49.2	0.68
1250	40.5	0.56
1600	36.0	0.50
2000	31.5	0.44
2500	28.5	0.40
3150	28.2	0.39
4000	28.0	0.39
5000	26.7	0.37

**NRC 0.70**  
**SAA 0.72**

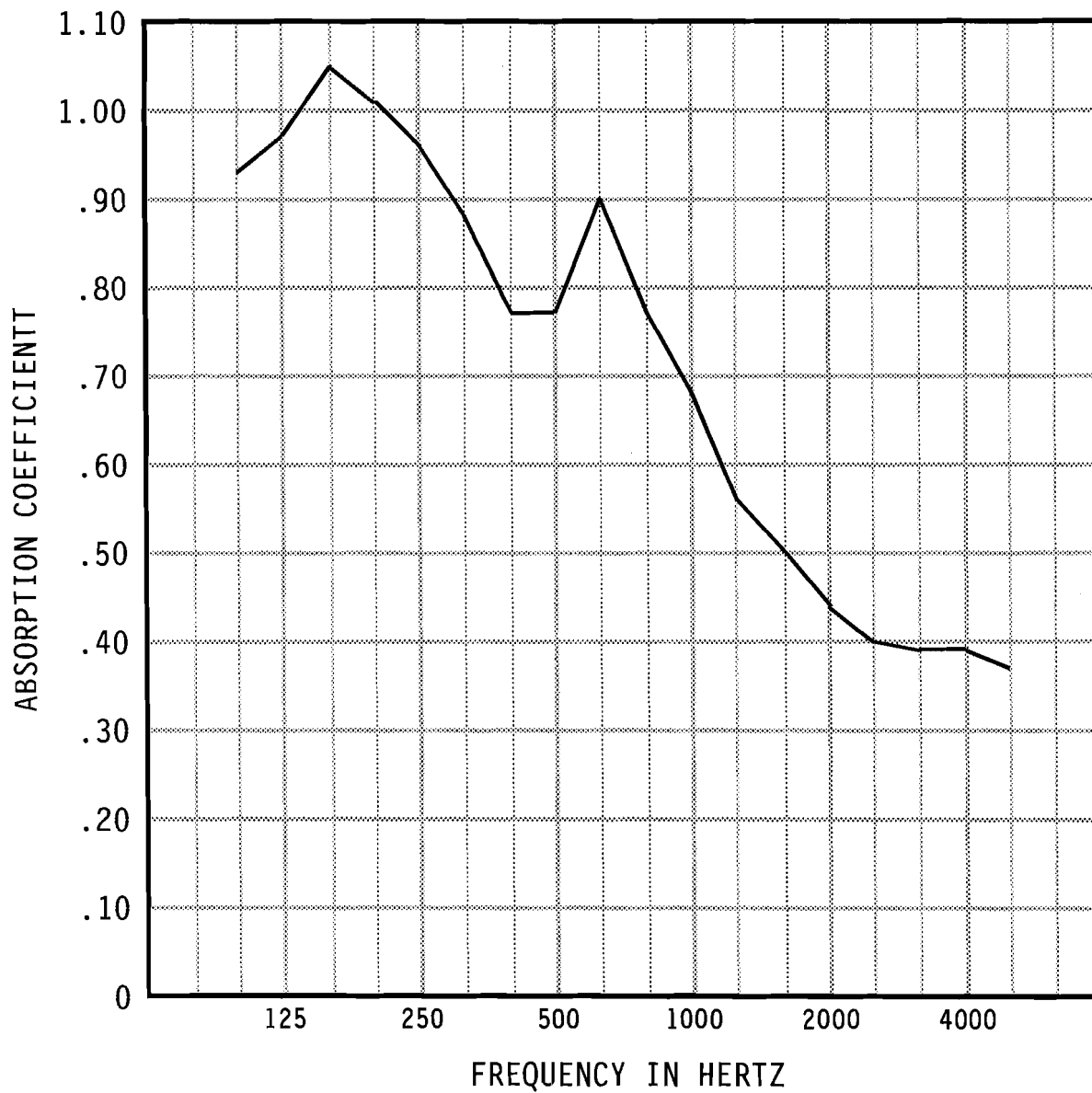
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Specimen Area: 72 sq.ft.  
Temperature: 66.1 deg. F  
Relative Humidity: 45 %

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