



# WESTERN ELECTRO - ACOUSTIC LABORATORY

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## SOUND ABSORPTION TEST REPORT NO. AB07-134

1000 Series SKU 1112-8 Cross Piece Wood Grilles with fiberglass duct liner ("E-400" mounting)

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

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15 March 2007

TEST DATE: 13 March 2007

### 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 Cross Piece Wood Grille assembly. The specimen consisted of 9 grilles, each of which was approximately 96 inches (2.44 m) by 12 inches (305 mm) by 3 inches (76.2 mm) thick. The grilles consisted of 1-3/8 inch (34.9 mm) by 5/8 inch (15.9 mm) slats on edge with 7/8 inch (22.2 mm) spaces between them. The slats and spaces were maintained with 1/2 inch (12.7 mm) by 1-1/4 inch (31.8 mm) backer strips screwed to the back of the slats. Attached to the back of the grilles was 1-1/2 inch (38.1 mm) 2 lbs./ft<sup>3</sup> (32.0 kg/m<sup>3</sup>) 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 grilles sat on an angle aluminum grid such that the top of the grilles 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:

1000 Series SKU 1112-8 Cross Piece Wood Grilles with fiberglass

The net dimensions of the assembly were 108 inches (2.74 m) by 96 inches (2.44 m) by 3 inches (76.2 mm) thick. The overall weight of the specimen was 123 lbs. (55.8 kg).

Test results are presented on the following page.

Respectfully submitted,  
Western Electro-Acoustic Laboratory

  
Gary E. Mange  
Laboratory Director

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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: 69.3° F

Humidity: 42%

## TEST RESULTS

### 1/3 Octave Band Absorption Data

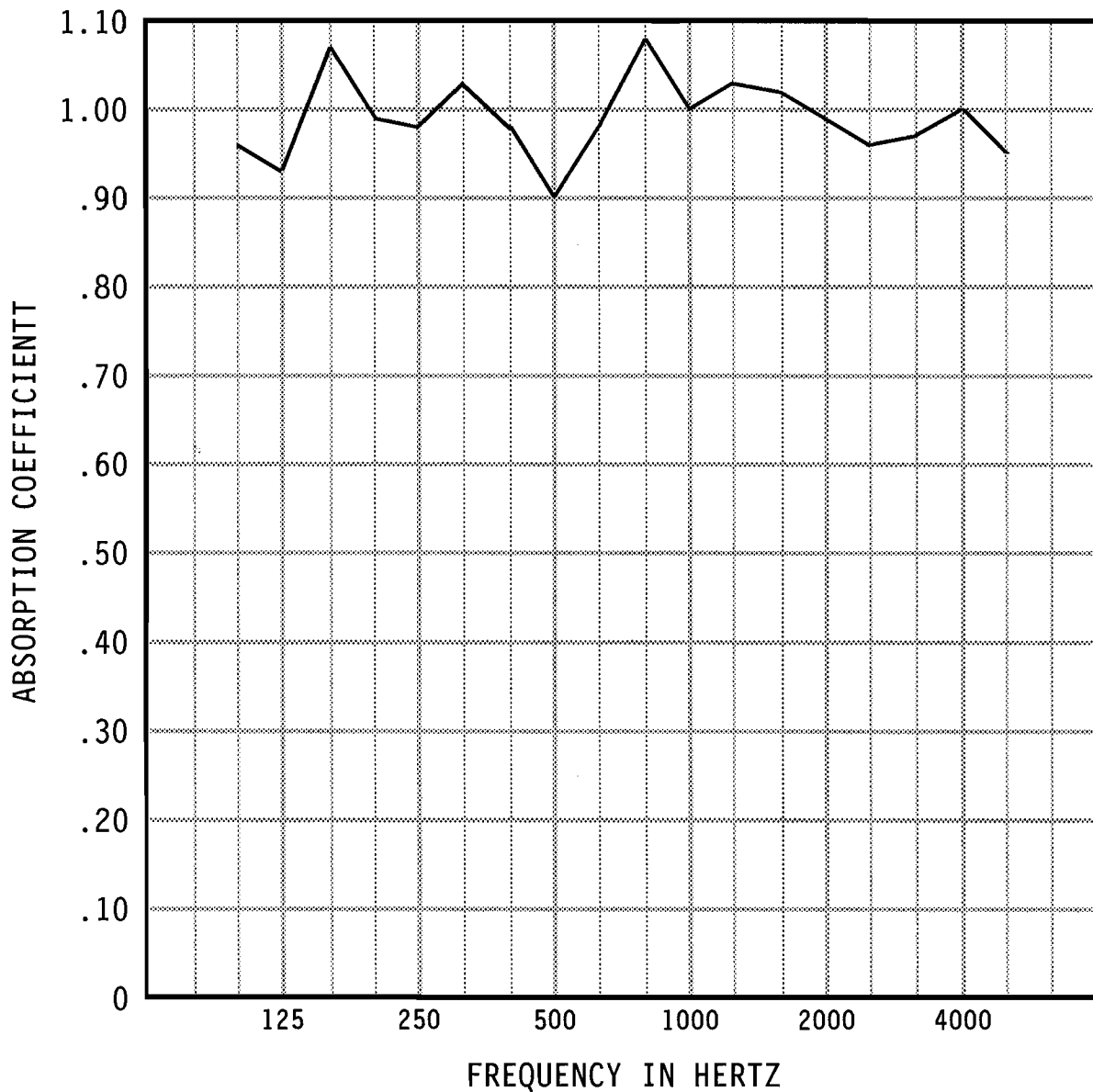
Frequency in Hz	Absorption in Sabins	Absorption Coefficients
100	68.9	0.96
125	66.7	0.93
160	76.7	1.07
200	71.1	0.99
250	70.9	0.98
315	74.3	1.03
400	70.5	0.98
500	64.6	0.90
630	70.9	0.98
800	77.9	1.08
1000	72.1	1.00
1250	74.0	1.03
1600	73.8	1.02
2000	71.4	0.99
2500	68.9	0.96
3150	69.9	0.97
4000	71.7	1.00
5000	68.5	0.95

**NRC 0.95**  
**SAA 0.99**

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Specimen Area: 72 sq.ft.  
Temperature: 69.3 deg. F  
Relative Humidity: 42 %

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