

SOUND ABSORPTION TEST REPORT NO. AB12-139Madrid linear grille ceiling planks on 2" bonded acoustical cotton
("A" mounting)CLIENT: **Madrid, Inc.**
13905 Maryton Ave.
Santa Fe Springs, CA 90670Page 1 of 3
6 September 2012

TEST DATE: 9 August 2012

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 Madrid, Inc. linear grille ceiling assembly. The specimen consisted of nine grilles, each of which was approximately 2.46 m (97 inches) by 305 mm (12 inches) by 31.8 mm (1-1/4 inches) thick. Each grille consisted of four 52.4 mm (2-1/16 inch) by 19.0 mm (3/4 inch) slats with 25.4 mm (1 inch) spaces between them. The slats and spaces were maintained with 12.7 mm (1/2 inch) by 39.7 mm (1-9/16 inch) backer strips screwed to the back of the slats. The grilles were backed with nominal 50.8 mm (2 inch) thick 48.0 kg/m³ (3 lbs./ft³) density Bonded Acoustical Cotton (BAC). The BAC was placed directly on the test chamber floor. The grilles sat on the BAC and the edges of the specimen were covered with angle aluminum around the entire perimeter of the test specimen. The angle aluminum was taped to the chamber floor around the entire perimeter. According to the manufacturer the specimen was:

Linear grille ceiling planks on Bonded Logic Acoustical Black Recycled Cotton, 2" thick #3 lb density, Class A Fire Rated, 2' x 4' panels.

The net dimensions of the assembly were 2.79 m (110 inches) by 2.46 m (97 inches) by 82.6 mm (3-1/4 inches) thick. The overall weight of the specimen was 87.3 kg (192.5 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 795-05: Type A

Area tested: 74.1 ft² (6.88 m²)

Temperature: 78.1° F

Humidity: 43.9%

Pressure: 28.53 in. of Hg

TEST RESULTS

1/3 Octave Band Absorption Data

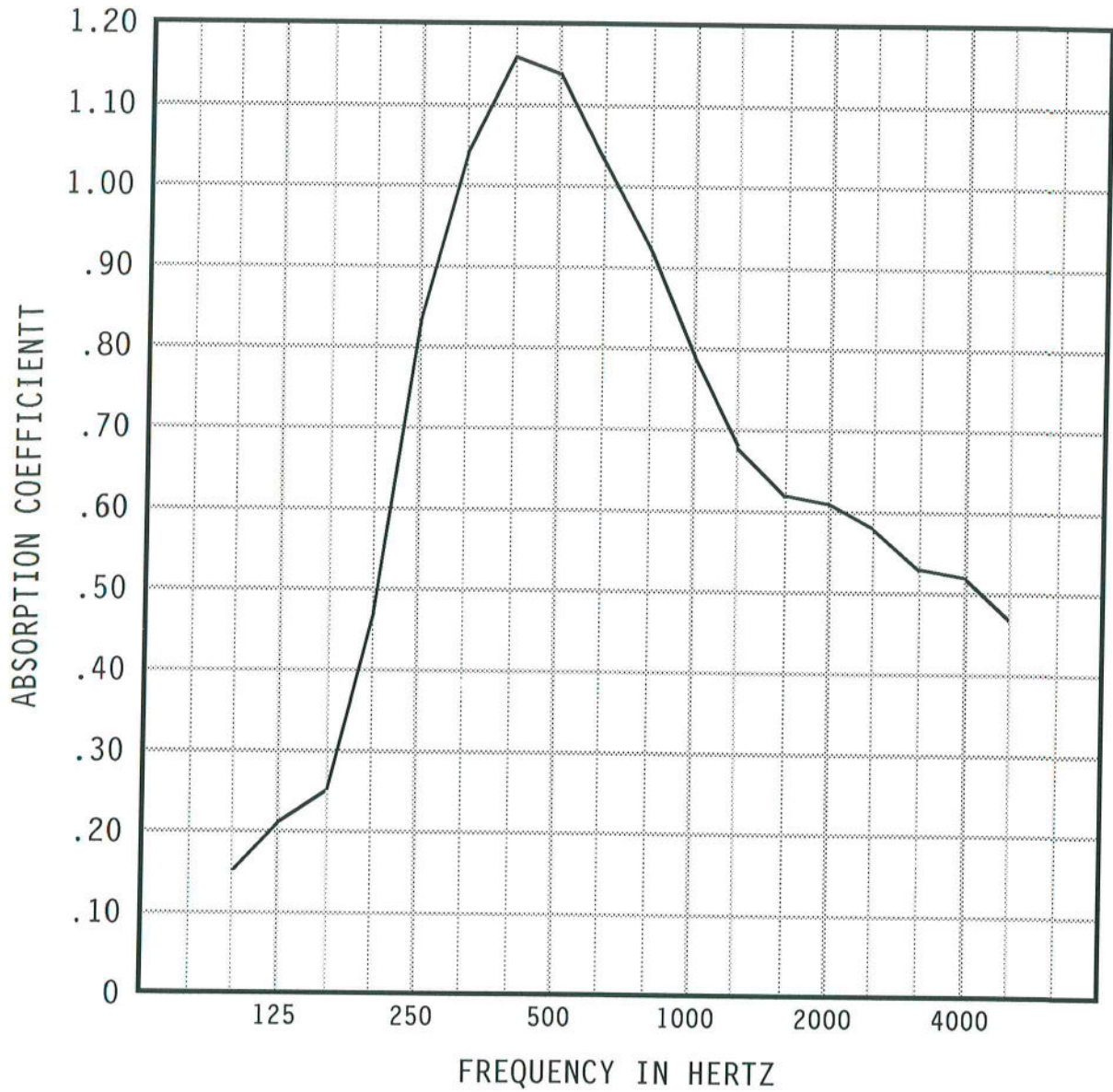
Frequency in Hz	Absorption in Sabins	Absorption Coefficients	Reproducibility R	Repeatability r
100	10.8	0.15	0.27	0.15
125	15.7	0.21	0.22	0.11
160	18.4	0.25	0.23	0.11
200	35.1	0.47	0.17	0.09
250	61.7	0.83	0.15	0.07
315	77.3	1.04	0.22	0.09
400	85.6	1.16	0.16	0.14
500	84.7	1.14	0.14	0.09
630	76.0	1.03	0.14	0.06
800	68.5	0.92	0.14	0.07
1000	58.6	0.79	0.12	0.06
1250	50.4	0.68	0.13	0.05
1600	46.3	0.62	0.14	0.05
2000	45.5	0.61	0.13	0.05
2500	43.2	0.58	0.14	0.06
3150	39.0	0.53	0.15	0.08
4000	38.3	0.52	0.16	0.11
5000	35.1	0.47	0.21	0.15

NRC 0.85
SAA 0.82

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Specimen Area: 74.1 sq.ft.
Temperature: 78.1 deg. F
Relative Humidity: 43.9 %

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