

WESTERN ELECTRO - ACOUSTIC LABORATORY

A division of Veneklasen Associates, Inc.

TESTING CALIBRATION RESEARCH

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SOUND TRANSMISSION LOSS TEST REPORT NO. TL09-538

CLIENT:

TEST DATE:

DMFCWBS, LLC 9100 Centre Pointe Drive, Suite 210 West Chester, OH 45069 14 September 2009

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INTRODUCTION

The methods and procedures used for this test conform to the provisions and requirements of ASTM E 90-04, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions. Copies of the test standard are available at www.astm.org. The test chamber source and receiving room volumes are 204 and 148.4 cubic meters respectively. Western Electro-Acoustic Laboratory is accredited by NVLAP (National Voluntary Laboratory Accreditation Program) Lab Code 100256-0 for this test procedure. NVLAP is part of the United States Department of Commerce, National Institute of Standards and Technology (NIST). 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 wall assembly constructed from metal studs and type X gypsum board. The studs and tracks were ProSTUD-015 (25 GA equivalent) 3-5/8 inch (92 mm) metal. The studs were spaced horizontally at 24 inches (610 mm) O.C. The frame was isolated from the test opening with 1/4 inch (6.4 mm) neoprene pads. 3-1/2 inch (89 mm) thick, 23 inch (584 mm) wide R-13 unfaced fiberglass batts were installed in the stud cavities. On both sides, two layers of 5/8 inch (15.9 mm) thick type X gypsum board were screwed to the studs at 16 inches (203 mm) O.C. around the perimeter and in the field. The first layer used 1-1/4 inch (31.8 mm) #6 drywall screws and the second layer used 1-5/8 inch (41.3 mm) #6 drywall screws. All gypsum board was oriented vertically and joints were staggered on opposite sides of the wall and between layers. All joints and perimeters were sealed with a bead of caulking and metal foil tape. Screw heads were covered with metal foil tape. The overall dimensions of the wall assembly were 96 inches (2.44 m) wide by 96 inches (2.44 m) high by 6-5/8 inches (168 mm) thick. The overall weight of the assembly was estimated to be 617 lbs (280 kg) for a calculated surface density of 9.64 lbs./ ft^2 $(47.1 \text{ kg/m}^2).$

RESULTS OF THE MEASUREMENTS

One-third octave band sound transmission loss values are plotted and tabulated on the attached sheet. ASTM minimum volume requirements are met at 80 Hz and above. The Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-54.

Approved:

EMange

Gary E. Mange Laboratory Director

Respectfully submitted, Western Electro-Acoustic Laboratory

Raul Martinez Acoustical Test Technician

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1/3 OCT BND CNTR FREQ 63 80 100 125 160 200 250 315 400 500 TL in dB 15 18 28 37 41 45 46 48 50 53 95% Confidence in dB 1.42 1.92 2.07 1.47 0.89 0.76 0.80 0.52 0.36 0.38 deficiencies 1 1.42 1.92 2.07 1.47 0.89 0.76 0.80 0.52 0.36 0.38 1/3 OCT BND CNTR FREQ 630 800 1000 1250 1600 2000 2500 3150 4000 5000 TL in dB 56 58 58 60 61 51 51 55 58 61 95% Confidence in dB 0.29 0.44 0.38 0.39 0.36 0.56 0.55 0.31 0.32 0.50 gt 01TC 55 36 56 58 54 54 54 54 54 55 36 36 Specimen Area: 64													
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