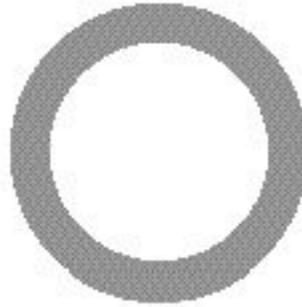


ASTM E-90-99 Laboratory Measurement of Airborne Sound Transmission of Building Partitions and Elements

ASTM E-413-87 Classification for Rating Sound Insulation

Orfield Laboratories Inc



Design Research Facilities
Acoustics / Vibration / Noise / Lighting / Architecture / Media Research

TEST

Manufacturer: **Audio Alloy L.L.C.**
Report Date: **September 1, 2005**
Test Date: **August 26, 2005**
Test Number: **OL 05-0833**

ACCREDITATION



For the scope of accreditation under NVLAP code 200248-0

RESULT SUMMARY

STC=59

CLIENT ADDRESS

Audio Alloy, L.L.C.
Fargo, ND USA
Phone: (989) 832-1602
email: tedwhite@audioalloy.com

PREPARED BY

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The information included in the following report are the results of a sound transmission class (STC) test conducted on one (1) interior wall assembly.

Prepared by:

David M. Berg
Laboratory Manager

Reviewed by:

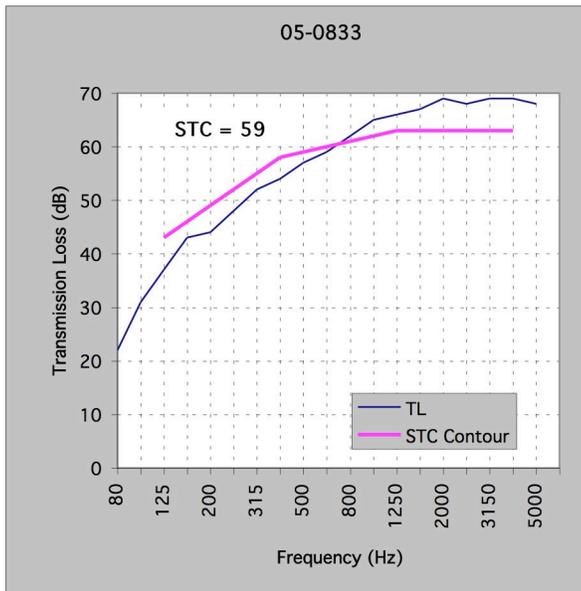
Elliott B. Dick
Quality Manager





TEST RESULTS

Manufacturer: **Audio Alloy, L.L.C.**
 Specimen: **Interior wall assembly**
 Date Tested: **August 26, 2005**
 Method: **ASTM E 90, ASTM E 413**
 Test Number: **OL 05-0833**



Freq. (Hz)	TL (dB)	Def. (dB)	*95% conf.
80	22	n/a	1.63
100	31	n/a	1.15
125	37	6	0.95
160	43	3	1.27
200	44	5	1.24
250	48	4	0.65
315	52	3	0.65
400	54	4	0.62
500	57	2	0.40
630	59	1	0.50
800	62	0	0.40
1000	65	0	0.25
1250	66	0	0.25
1600	67	0	0.32
2000	69	0	0.44
2500	68	0	0.35
3150	69	0	0.31
4000	69	0	0.49
5000	68	n/a	0.35
	28		

*from room qualification data



FOR THE SCOPE OF ACCREDITATION UNDER NVLAP LAB CODE 200248-0



SPECIMEN DESCRIPTION

Representatives of the client constructed and installed the specimen into the laboratory test opening. The Laboratory Manager inspected all construction details. The specimen assembly consisted of the following:

Source Room Sheeting

2 layers ½" gypsum laminated with Green Glue
2 Tubes (58 fl. Oz.) Green Glue between layers
screw spacing 16" on center, seams sealed with caulk

Wall Structure

3-5/8", 25 gauge steel studs @ 24" O.C.
3 1/2" R13 fiberglass insulation

Receiver Room Sheeting

2 layers ½" gypsum laminated with Green Glue
2 Tubes (58 fl. Oz.) Green Glue between layers
screw spacing 16" on center, seams sealed with caulk

The edges of the specimen were sealed to the test opening with a 1" wide strip of heavy Mortite putty.

The entire specimen weighed approximately 525 lbs. and measured 64.5 ft² in area.

TEST METHOD

The testing was conducted in accordance with ASTM Standard E90-02, "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements". The calculation of the single-number STC rating was obtained in accordance with ASTM E413.

Test results pertain to this sample only.

Orfield Laboratories, Inc. has been accredited by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST) under their National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure. This report shall not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

TEST CHAMBERS AND ENVIRONMENT

Source Room Volume: 4150 ft³
Receiver Room Volume: 8282 ft³

Data for test chamber flanking limits and reference specimen results are available upon request.



The following environmental conditions were maintained in the test chambers during testing:

Environmental Conditions

Date	August 26, 2005
Temperature	21° C
Relative humidity	50%

REMARKS

Representatives of the client demolished the test sample.

CONFIDENTIALITY

The client has full control over this information and any release of information will be only to the client. The specific testing results are deemed to be confidential exclusively for the client's use. Reproduction of this report, except in full, is prohibited.