



Acoustical Testing Laboratory



Accredited by the National Voluntary
Laboratory Accreditation Program
for the specific scope of accreditation
under Lab Code 200291

TEST REPORT

for

American Fiber Cushion
2410 South Dixie Highway
Dalton, GA 30720
Mr. Bob Waddell/ 706-217-1900

Impact Sound Transmission Test
ASTM E 492 - 09 / ASTM E 989 - 06

On

**152 mm (6 Inch) Concrete Slab Floor –
Suspended Gypsum Board Ceiling Assembly
Overlaid with;
Laminate Floor Over Silent Moisture Guard**

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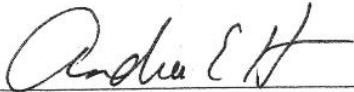
Report Number: NGC 7012120

Assignment Number: G-813

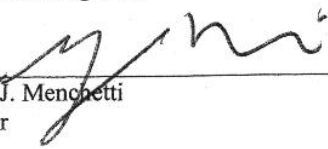
Test Date: 7/18/2012

Report Date: 8/7/2012

Submitted by:


Andrew E. Heuer
Senior Test Engineer

Reviewed by:


Robert J. Menchetti
Director

The results reported above apply to specific samples submitted for measurement.
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Report Number: NGC 7012120

Test Method: This test method is in accordance with American Society for Testing and Materials Standard Test Method for Laboratory Measurement of Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine - Designation: E 492-09/ E 989-06.

The uncertainty limits of each tapping machine location met the precision requirements of section A1.4 of ASTM E 492-09.

Specimen Description: 152.4 mm (6 in.) concrete slab floor-ceiling assembly, including a suspended gypsum board ceiling, overlaid with, according to client, Laminate Floor Over Silent Moisture Guard.

The test specimen was a floor-ceiling assembly consisting of the following:

- 1 layer of, according to client, Laminate Floor, nominal plank size: 304.8 mm x 304.8 mm x 10.0 mm (12 in. x 12 in. x 0.39 in.). Sample weight was 9.66 kg/m² (1.98 PSF).
- 1 layer of 4.98 mm (0.196 in.) thick, according to client, Silent Moisture Guard. The underlayment seams were butted and taped together vapor barrier down. Sample weight was 0.683 kg/m² (0.14 PSF).
- 6 inch (152.4mm) thick reinforced concrete slab, weighing 366.21 kg/m² (75.0 PSF).
- 88.9 mm (3.5 in.) unfaced fiberglass batt insulation. Sample weight was 1.12 kg/m² (0.23 PSF). The insulation was laid over the suspended grid system parallel with the main tees.
- Gypsum board ceiling grid suspension system. System is comprised of main tees and cross tees. The main tees were placed 1219.2 mm (48 in.) on center and the cross tees were placed 609.6 mm (24 in.) on center. 16 gauge galvanized tie wire was used to attach the main tees to concrete anchors, located 1219.2 mm (48 in.) on center along the longitudinal axis, suspending the grid 304.8 mm (12 in.) below the concrete slab.
- 1 layer of 15.9 mm (5/8 in.) Type X gypsum board. The board was attached parallel to the suspended grid suspension system mains using 31.8 mm (1.25 in.) Type S drywall screws 304.8 mm (12 in.) on center. The board joints were taped. Suspended gypsum board grid ceiling weight was 11.23 kg/m² (2.3 PSF).

The overall weight of the test assembly is 388.90 kg/m² (79.65 PSF).

The perimeter of the concrete slab was sealed with a rubber gasket and a sand filled trough. The test assembly is structurally isolated from the receiving room.

Specimen size: 3657.6 mm x 4876.8 mm (12 ft. x 16 ft.)
Conditioning: Concrete slab cured for a minimum of 28 days.
Test Results: The results of the tests are given on pages 3 and 4.

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Normalized impact sound pressure level						
Test: ASTM E 492 - 09 / ASTM E 989 - 06						
Test Report: NGC7012120					Date: 7/18/2012	
Specimen Size [m ²]: 17.8					Page 3 of 4	
Source room			Receiving room			
Rm Temp [°C]: 28.5			Volume [m ³]: 61.2			
Humidity [%]: 58			Rm Temp [°C]: 24.5			
			Humidity [%]: 57			
Impact Insulation Class IIC [dB]: 70						
Sum of Unfavorable Deviations [dB]: 32						
Max. Unfavorable Deviation [dB]: 8 at 125 Hz						
Frequency	L _n	L ₂	d	Corr.	u.Dev.	ΔL _n
[Hz]	[dB]	[dB]	[dB/s]	[dB]	[dB]	
100	48	50.2	36.6	-2.2	6	1.37
125	50	54.6	25.0	-4.6	8	2.84
160	48	53.3	17.7	-5.3	6	2.01
200	48	53.8	16.6	-5.8	6	0.93
250	48	53.5	17.7	-5.5	6	0.76
315	41	46.5	18.1	-5.5		0.43
400	34	40.9	18.9	-6.9		0.30
500	29	36.5	19.4	-7.5		0.50
630	29	35.5	22.1	-6.5		0.64
800	24	29.0	22.5	-5.0		0.36
1000	26	29.6	25.3	-3.6		0.28
1250	23	26.2	27.9	-3.2		0.36
1600	14	18.4	29.5	-4.4		1.02
2000	14	18.0	33.1	-4.0		0.97
2500	11	14.8	36.9	-3.8		1.06
3150	10	14.1	38.5	-4.1		0.86
4000	9	13.0	42.6	-4.0		0.96
5000	7	10.4	48.2	-3.4		0.97

L _n	=	Normalized Sound Pressure Level, dB
L ₂	=	Receiving Room Level, dB
d	=	Decay Time, dB/second
ΔL _n	=	Uncertainty for 95% Confidence Level

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Normalized impact sound pressure level

Test: ASTM E 492 - 09 / ASTM E 989 - 06

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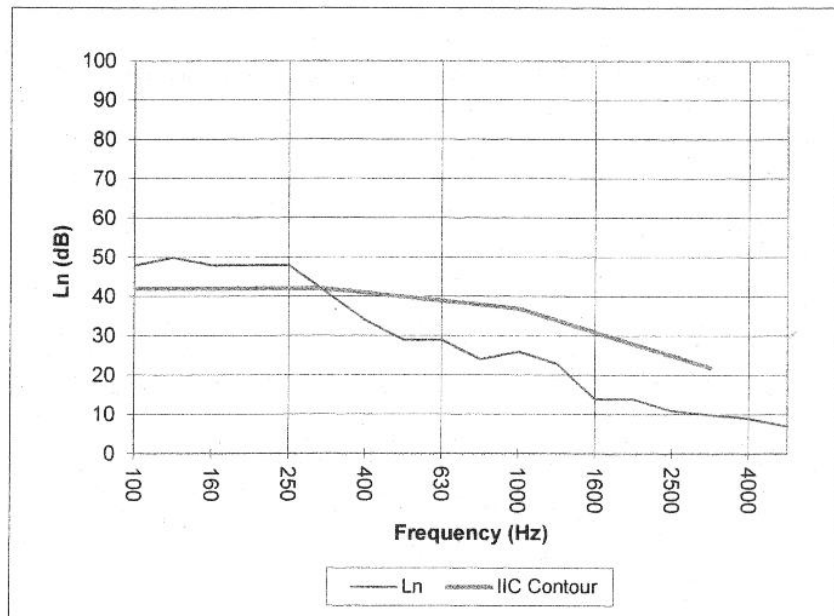
Test Report: NGC7012120

Test Date: 7/18/2012

Specimen Size [m²]: 17.8

Impact Insulation Class IIC [dB]: 70

Frequency [Hz]	L _n [dB]
100	48
125	50
160	48
200	48
250	48
315	41
400	34
500	29
630	29
800	24
1000	26
1250	23
1600	14
2000	14
2500	11
3150	10
4000	9
5000	7



* Due to high insulating value of specimen, background levels limit results at these frequencies.

L_n = Normalized Sound Pressure Level, dB

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