TEST REPORT

for

Sound Seal
50 H.P. Almgren Drive
Agawam, MA 01001
Michael Keeney / 413-789-1770

Impact Sound Transmission Test

ASTM E 492 – 09 (2016) / ASTM E 989 – 18

On

6 Inch (152 mm) Concrete Slab Floor- Ceiling Assembly Overlaid with 3/8" Engineered Wood Flooring over CeraZorb 3mm 1.9# Underlayment

Report Number: NGC 7019157

Assignment Number: G-1649

Test Date: 12/04/2019

Report Date: 12/19/2019

Submitted by: _____
Anthony J. Rivers
Test Technician

Reviewed by: _____
Robert J. Menchetti
Director

Revision Summary:

Date	SUMMARY
Approval Date: 12/19/2019	Original issue date: 12/19/2019 Original NGCTS report: NGC 7019157

Report Number: NGC 7019157

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 (2016) / E 989-18.

The uncertainty limits of each tapping machine location met the precision requirements of section A1.4 of ASTM E 492-09 (2016).

Specimen Description: 6 inch concrete slab floor ceiling assembly overlaid with, according to client, 3/8" Engineered Wood Flooring over CeraZorb 3mm 1.9# underlayment.

The test specimen was a floor assembly and was observed to consist of the following:
All weights and dimension are averaged:

- 1 layer of, 3/8" Engineered Wood flooring. The flooring was floating on the CeraZorb 3mm 1.9# underlayment. Measured thickness: 9.65 mm (0.38 in.). Measured weight: 5.78 kg/m^2 (1.18 PSF)

- 1 layer of, CeraZorb 3mm 1.9# underlayment. The underlayment was floating on the concrete slab. Measured thickness: 3.05 mm (0.12 in.). Measured weight: 0.10 kg/m^2 (0.02 PSF)

- 152.4 mm (6 in.) thick reinforced concrete slab, weighing: 366.2 kg/m^2 (75.00 PSF)

The overall weight of the test assembly is: 372.01 kg/m^2 (76.20 PSF)

The perimeter of the test frame was sealed with a rubber gasket and a sand filled trough.

The test frame was 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 4 and 5 of the report.

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Normalized impact sound pressure level

Test: ASTM E 492 - 09 (2016) / ASTM E 989 - 18

Test Report: NGC7019157 Date: 12/4/2019
Specimen Size [m²]: 17.8

Source room
Rm Temp [°C]: 23
Humidity [%]: 56

Receiving room
Volume [m³]: 128
Rm Temp [°C]: 22
Humidity [%]: 56

Impact Insulation Class IIC [dB]: 51
Sum of Unfavorable Deviations [dB]: 30
Max. Unfavorable Deviation [dB]: 8 at 125 Hz

Frequency [Hz]	L_n [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔL_n
80	56	56.7	23.46	-0.7		1.79
100	59	59.7	22.86	-0.7		1.18
125	69	70.9	18.88	-1.9	8	2.29
160	66	68.8	14.70	-2.8	5	1.59
200	66	69.6	14.35	-3.6	5	0.52
250	68	70.9	15.94	-2.9	7	1.48
315	63	66.2	15.43	-3.2	2	0.53
400	63	64.8	17.34	-1.8	3	0.50
500	57	59.3	18.16	-2.3		0.43
630	53	54.8	17.77	-1.8		0.40
800	46	48.0	18.90	-2.0		0.48
1000	42	44.2	18.67	-2.2		0.63
1250	41	42.5	19.61	-1.5		0.46
1600	37	38.1	21.26	-1.1		0.70
2000	31	31.7	23.41	-0.7		0.65
2500	27	28.0	25.60	-1.0		0.72
3150	24	23.9	28.19	0.1		0.70
4000	21	20.6	32.70	0.4		0.77
5000	17	17.1	37.26	-0.1		0.85

L_n = Normalized Sound Pressure Level, dB
L2 = Receiving Room Level, dB
d = Decay Rate, dB/second
ΔL_n = Uncertainty for 95% Confidence Level

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Normalized impact sound pressure level

Test: ASTM E 492 - 09 (2016) / ASTM E 989 - 18

Test Report: NGC7019157
Test Date: 12/4/2019
Specimen Size [m²]: 17.8

Impact Insulation Class IIC [dB]: 51

Frequency [Hz]	L_n [dB]
80	56
100	59
125	69
160	66
200	66
250	68
315	63
400	63
500	57
630	53
800	46
1000	42
1250	41
1600	37
2000	31
2500	27
3150	24
4000	21
5000	17

* 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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