

Acoustical Testing Laboratory



TESTING
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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

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Revision Summary:

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

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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/m² (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/m² (0.02 PSF)

- 152.4 mm (6 in.) thick reinforced concrete slab, weighing: 366.2 kg/m² (75.00 PSF)

The overall weight of the test assembly is: 372.01 kg/m² (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							
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Test Report:	NGC7019157			Date:	12/4/2019		
Specimen Size	[m²]:	17.8					
Source room					Receiving room	m	
			Volume [m³]: 128				
Rm Temp [°C]: 23					Rm Temp [°C]: 22		
Humidity [%]: 56 Humidity					Humidity [%]:	56	
Impact Insulati	on Class IIC	[dB]:	51				
Sum of Unfavorable	Deviations [dB]:	30					
Max. Unfavorable D	eviation [dB]:	8	at	125	Hz		
Frequency	Ln	L2	d	Corr.	u.Dev.	ΔLn	
[Hz]	[dB]	[dB]	[dB/s]	[dB]	[dB]		
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 = No	ormalized S	ound Pres	sure Level. dB		
L _n = Normalized Sound Pressure Level, dB L2 = Receiving Room Level, dB							
d = Decay Rate, dB/second							
$\Delta L_n = \text{Uncertainty for 95\% Confidence Level}$							

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Normalized impact sound pressure level

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

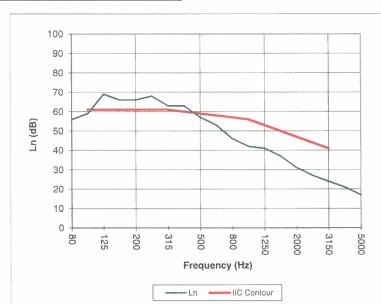
Test Report: NGC7019157

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

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Impact Insulation Class IIC [dB]:

Frequency	Ln			
[Hz]	[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 insulati 				



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

= Normalized Sound Pressure Level, dB

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