NGC Testing Services

Acoustical Testing Laboratory

NVLAP

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TEST REPORT

For

LATICRETE International, Inc.
91 Amity Road
Bethany, CT 06524
Jay B. Conrod / 203-393-4600

Impact Sound Transmission Test

ASTM E 492 – 09 / ASTM E 989 – 06

On

Unglazed Porcelain Tile Using LATICRETE® SpectraLOCK® PRO Premium Grout over LATICRETE® 125 Sound and Crack Adhesive on 6 Inch (152mm) Concrete Slab

Report Number: NGC 7012159

Assignment Number: G-864

Test Date: 12/10/2012

Report Date: 12/11/2012

Submitted by: _____
Andrew E. Heuer
Senior Test Engineer

Reviewed by: _____
Robert J. Menchetti
Director

Report Number: NGC 7012159

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: 6 inch (152.4mm) concrete slab floor-ceiling assembly overlaid with, according to client, unglazed porcelain tile using LATICRETE® SpectraLOCK® PRO Premium Grout over LATICRETE® 125 Sound and Crack Adhesive applied with 1/2 in. x 1/2 in. square notch trowel.

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

- 298.5 mm x 298.5 mm x 23.81 mm (11 3/4 in. x 11 3/4 in. x 5/16 in.) Unglazed porcelain tile installed using LATICRETE® 125 Sound and Crack Adhesive applied with a 12.7 mm x 12.7 mm (1/2 in. x 1/2 in.) square notch trowel and LATICRETE® SpectraLOCK® PRO Premium Grout. Tile, adhesive and grout were installed meeting ANSI Specification A 118.13. Sample weight was 28.0 kg/m^2 (5.73 PSF).

- 6 inch (152.4 mm) thick reinforced concrete slab 366.1 kg/m^2 (75.0 PSF).

The overall weight of the test assembly is 394.1 kg/m^2 (80.73 PSF).

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

Specimen size: 3657.6mm x 4876.8mm (12 ft x 16 ft.)

Conditioning: Concrete slab cured for a minimum of 28 days. Tile mortar and grout cured for seven days.

Test Results: The results of the tests are given on pages 3 and 4.

Normalized impact sound pressure level

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

Test Report: NGC7012159 Date: 12/10/2012
Specimen Size [m²]: 17.8

Source room		Receiving room	
		Volume [m³]:	64.4
Rm Temp [°C]:	16	Rm Temp [°C]:	17
Humidity [%]:	57	Humidity [%]:	65

Impact Insulation Class IIC [dB]: 44

Sum of Unfavorable Deviations [dB]: 24
Max. Unfavorable Deviation [dB]: 5 at 3150 Hz

Frequency [Hz]	L_n [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔL_n
50	59	67.4	8.08	-8.4		2.11
63	53	57.8	16.88	-4.8		2.52
80	57	64.3	11.47	-7.3		2.06
100	58	63.4	16.04	-5.4		3.62
125	64	69.4	3.78	-5.4		2.25
160	66	72.0	4.63	-6.0		2.30
200	65	71.5	4.19	-6.5		0.80
250	69	74.7	3.60	-5.7	1	1.08
315	67	72.6	3.49	-5.6		0.62
400	68	72.8	3.37	-4.8	1	0.31
500	68	73.0	3.22	-5.0	2	0.26
630	69	73.3	3.00	-4.3	4	0.24
800	65	69.7	2.92	-4.7	1	0.29
1000	62	65.7	2.68	-3.7		0.31
1250	61	64.5	2.42	-3.5	1	0.28
1600	59	62.9	2.28	-3.9	2	0.23
2000	57	60.4	2.14	-3.4	3	0.21
2500	55	58.2	1.96	-3.2	4	0.18
3150	53	55.6	1.78	-2.6	5	0.32
4000	52	53.5	1.53	-1.5		0.34
5000	48	49.3	1.35	-1.3		0.31

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

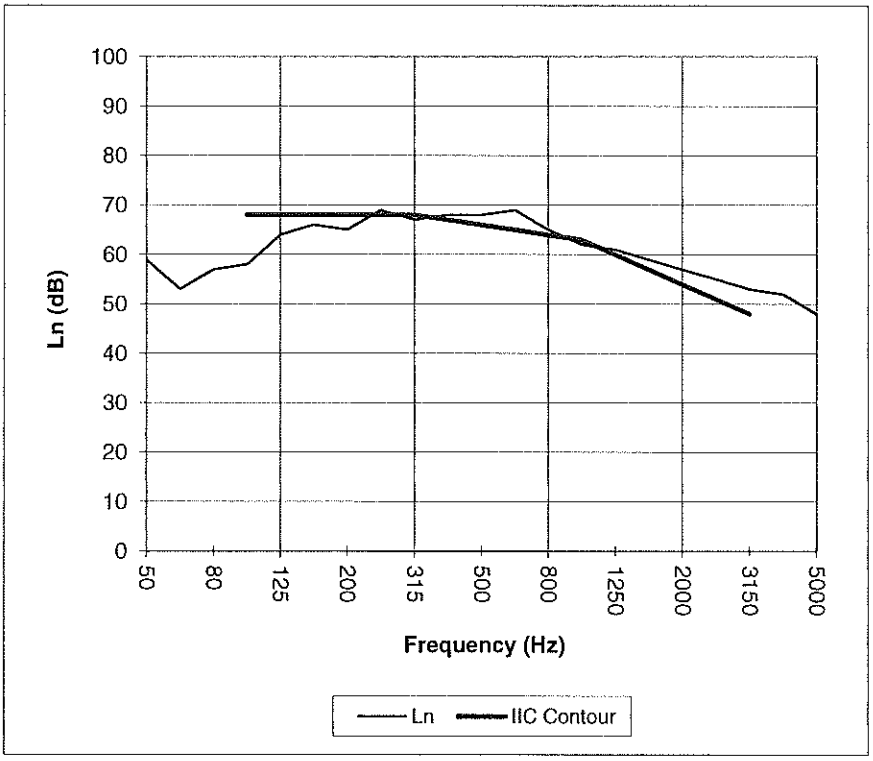
Normalized impact sound pressure level

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

Test Report: NGC7012159
Test Date: 12/10/2012
Specimen Size [m²]: 17.8

Impact Insulation Class IIC [dB]: 44

Frequency [Hz]	L_n [dB]
50	59
63	53
80	57
100	58
125	64
160	66
200	65
250	69
315	67
400	68
500	68
630	69
800	65
1000	62
1250	61
1600	59
2000	57
2500	55
3150	53
4000	52
5000	48



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

L_n = Normalized Sound Pressure Level, dB