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TEST REPORT

For

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Impact Sound Transmission Test

ASTM E 492 – 04 / ASTM E 989 – 06
On

8 In. (203mm) Concrete Slab Overlaid with Quarry Tile on 9.5mm AcoustiCORK® CRC 950 Cork / CorkRubber Composite Underlayment

Reissued 08/27/2007

Report Number: NGC 7007070

Assignment Number: G-355

Test Date: 05/18/2007

Report Date: 07/26/2007

Submitted by: _____
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Report Number: NGC 7007070 Reissued 08/07/2007

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 – 04 / E 989 - 89. The uncertainty limits of each tapping machine location met the precision requirements of section 11.3 of ASTM E 492-04.

Specimen Description: 8 inch (203mm) Concrete Slab Overlaid with; 12.7mm (1/2 in.) Quarry Tile over, 9.5mm AcoustiCork® CRC 950 Cork Top / CorkRubber Bottom Composite Sheet Underlayment.

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

- 1 layer of 152mm x 152mm x 12.7mm (6 in. x 6 in. x ½ in.) unglazed clay quarry tile 27.3 kg/m^2 (5.6 PSF) installed using latex-modified Thin-set mortar and latex-modified sanded grout mixtures 4.9 kg/m^2 (1.0 PSF).
- 1 layer of 9.5mm AcoustiCORK® CRC 950 Cork Top / CorkRubber Bottom Composite sheet underlayment, observed to be 9.78mm (0.385 in.) thick, 600mm (24 in.) wide x 910mm (36 in.) long sheets. Seams duct taped. Installed with the cork side up. Sample weight was 3.8kg/m^2 (0.78 PSF). Underlayment was adhered to poly with Mapei 990 Polyurethane Adhesive using 1/8 in. V-notched trowel.
- 1 layer 4 mil poly sheeting attached to concrete with double sided tape at seams and Perimeter.
- 8 inch thick reinforced concrete slab 417.9 kg/m^2 (85.6 PSF).

The overall weight of the test assembly is 453.93 kg/m^2 (92.98 PSF).

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

Specimen size: 3658mm x 4877mm (12 ft x 16 ft.)

Conditioning: Adhesive cured for a minimum 24 hours. Mortar and Grout cured for 7 days. Concrete slab cured for a minimum of 28 days.

Test samples were submitted by client and tested as received.

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

Normalized impact sound pressure level

Test: ASTM E 492 - 04 / ASTM E 989 - 89

Test Number: NGC7007070 Date: 5/18/2007
Size: 17.84 m²

Source room

Temperature [°C]: 19.4
Humidity [%]: 43

Receiving room

Volume V = 63.0 m³
Temperature [°C]: 20.2
Humidity [%]: 58

Impact Insulation Class IIC = 52 dB

Sum of unfavorable deviations: 26.0 dB
Max. unfavorable deviation: 7.0 dB at 400 Hz

Frequency [Hz]	L_n [dB]	L2 [dB]	T [s]	Corr. [dB]	u.Dev. [dB]	ΔL_n
100	62.0	67.0	3.09	-5.0	2.0	0.491
125	54.0	59.0	3.49	-5.0	-.-	0.253
160	62.0	67.8	4.07	-5.8	2.0	0.208
200	64.0	69.2	3.54	-5.2	4.0	0.146
250	64.0	68.9	3.03	-4.9	4.0	0.086
315	65.0	70.0	2.88	-5.0	5.0	0.084
400	66.0	70.5	2.77	-4.5	7.0	0.081
500	60.0	63.7	2.51	-3.7	2.0	0.067
630	54.0	57.7	2.33	-3.7	-.-	0.076
800	50.0	53.3	2.37	-3.3	-.-	0.054
1000	46.0	49.9	2.25	-3.9	-.-	0.045
1250	45.0	47.7	2.01	-2.7	-.-	0.048
1600	42.0	44.8	1.85	-2.8	-.-	0.048
2000	40.0	42.6	1.67	-2.6	-.-	0.038
2500	38.0	40.1	1.54	-2.1	-.-	0.032
3150	37.0	38.0	1.37	-1.0	-.-	0.041
4000	34.0	34.7	1.23	-0.7	-.-	0.044
5000	29.0	29.6	1.10	-0.6	-.-	0.043

L_n = Normalized Sound Pressure Level, dB
L2 = Receiving Room Level, dB
T = Reverberation Time, seconds
ΔL_n = Uncertainty for 95% Confidence Level

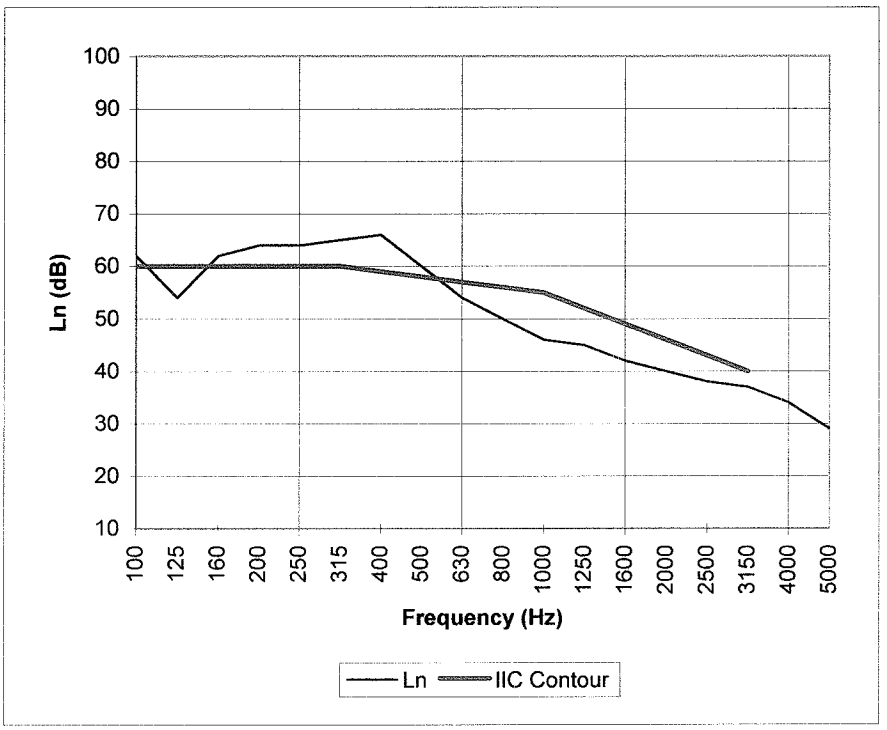
Normalized impact sound pressure level

Test: ASTM E 492 - 04 / ASTM E 989 - 89

Test Number: NGC7007070 Date: 5/18/2007

Impact Insulation Class IIC = 52 dB

Frequency [Hz]	L_n [dB]
100	62
125	54
160	62
200	64
250	64
315	65
400	66
500	60
630	54
800	50
1000	46
1250	45
1600	42
2000	40
2500	38
3150	37
4000	34
5000	29



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

L_n = Normalized Sound Pressure Level, dB