NGC Testing Services

Acoustical Testing Laboratory

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TEST REPORT

For

Amorim Industrial Solutions
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Impact Sound Transmission Test

ASTM E 492 – 04 / ASTM E 989 – 06
On

6 Inch (152mm) Concrete Slab Overlaid with 6mm AcoustiCORK® PR60 Profiled Underlayment and 9/16 inch Glued Down Engineered Wood Flooring

Report Number: NGC 7007057
Reissued 08/07/2007

Assignment Number: G-355

Test Date: 04/30/2007

Report Date: 07/24/2007

Submitted by: _____
Craig G. Cooper
Test Engineer

Reviewed by: _____
Robert J. Menchetti
Director

The results reported above apply to specific samples submitted for measurement.
No responsibility is assumed for performance of any other specimen.
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Report Number: NGC 7007057 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: 6 inch (152mm) Concrete Slab Overlaid with; 14.3mm (9/16 in.) Owens Plankfloor Engineered Hardwood Flooring over, AcoustiCORK® PR60 Profiled Underlayment.

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

- 1 layer of 15mm x 102mm x random length (9/16 in. x 4 in. x random length) Engineered Owens Plankfloor "Strip" Flooring 11.9 kg/m^2 (2.44 PSF). Flooring was adhered to underlayment with Mapei 990 Polyurethane Adhesive using 1/8 in. V-notched trowel 1/2 in. center to center.
- 1 layer of 6mm AcoustiCORK® PR60 Profiled Underlayment, observed to be 5.75mm and 2.41mm (0.226 in. and 0.095 in.) thick in 1003mm (39-1/2 in.) wide rolls. Seams duct taped. Installed with the dimpled side down. Sample weight was 0.78 kg/m^2 (0.16 PSF). Underlayment was adhered to poly with Mapei 990 Polyurethane Adhesive using 1/8 in. x 1/8 in. square notched trowel.
- 1 layer 4 mil poly sheeting attached to concrete with double sided tape at seams and Perimeter.
- 152mm (6 in.) thick reinforced concrete slab 366.1 kg/m^2 (75.0 PSF).

The overall weight of the test assembly is 378.8 kg/m^2 (77.60 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. 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: NGC7007057 Date: 4/30/2007
Size: 17.84 m²

Source room	Receiving room
	Volume V = 63.9 m³
Temperature [°C]: 19.3	Temperature [°C]: 19.3
Humidity [%]: 46	Humidity [%]: 62

Impact Insulation Class IIC = 54 dB

Sum of unfavorable deviations: 31.0 dB
Max. unfavorable deviation: 7.0 dB at 160 Hz

Frequency [Hz]	L_n [dB]	L2 [dB]	T [s]	Corr. [dB]	u.Dev. [dB]	ΔL_n
50	51.0	57.5	4.18	-6.5	-.-	0.418
63	52.0	56.9	3.40	-4.9	-.-	0.196
80	51.0	58.1	4.91	-7.1	-.-	0.423
100	58.0	63.7	3.73	-5.7	-.-	0.546
125	60.0	65.5	3.70	-5.5	2.0	0.305
160	65.0	70.5	3.95	-5.5	7.0	0.221
200	60.0	65.8	3.83	-5.8	2.0	0.134
250	64.0	68.6	3.08	-4.6	6.0	0.121
315	61.0	65.2	2.95	-4.2	3.0	0.074
400	63.0	66.9	2.76	-3.9	6.0	0.101
500	60.0	64.0	2.60	-4.0	4.0	0.090
630	56.0	59.6	2.44	-3.6	1.0	0.076
800	51.0	54.4	2.39	-3.4	-.-	0.059
1000	47.0	50.3	2.21	-3.3	-.-	0.049
1250	42.0	45.2	1.93	-3.2	-.-	0.048
1600	36.0	38.7	1.76	-2.7	-.-	0.059
2000	32.0	34.3	1.63	-2.3	-.-	0.041
2500	30.0	31.9	1.52	-1.9	-.-	0.042
3150	28.0	29.6	1.35	-1.6	-.-	0.035
4000	28.0	28.4	1.21	-0.4	-.-	0.029
5000	27.0	27.1	1.10	-0.1	-.-	0.044

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

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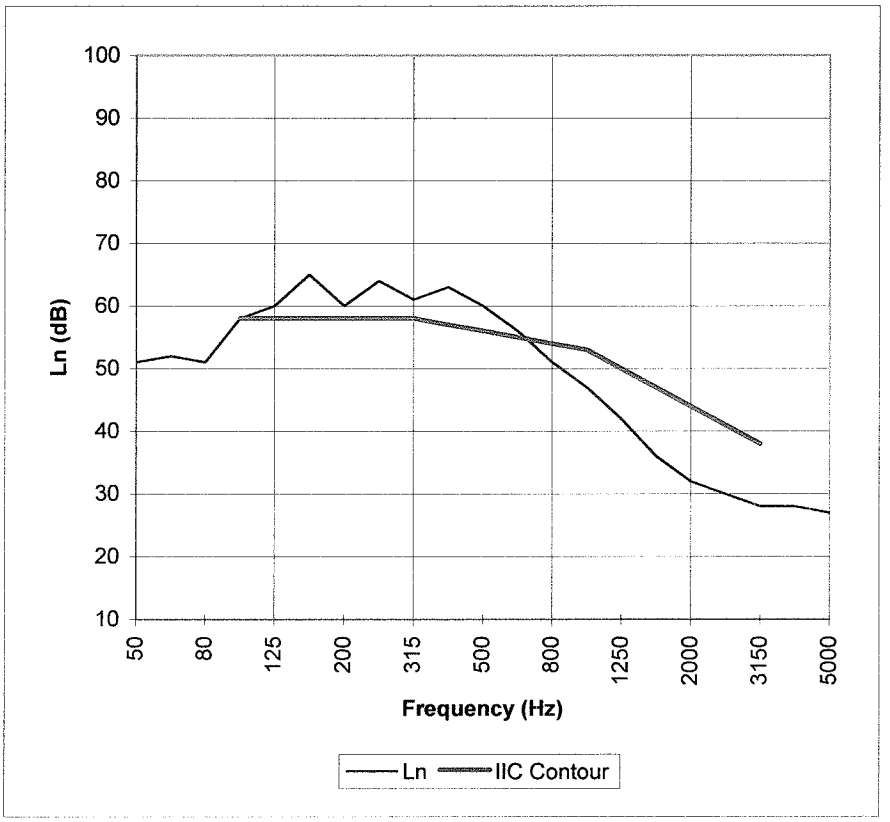
Normalized impact sound pressure level

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

Test Number: NGC7007057 Date: 4/30/2007

Impact Insulation Class IIC = 54 dB

Frequency [Hz]	L_n [dB]
50	51
63	52
80	51
100	58
125	60
160	65
200	60
250	64
315	61
400	63
500	60
630	56
800	51
1000	47
1250	42
1600	36
2000	32
2500	30
3150	28
4000	28
5000	27



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

L_n = Normalized Sound Pressure Level, dB