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TEST REPORT

For

Amorim Cork Composites
26112 110th Street P.O. Box 25
Trevor, Wisconsin 53179
Larry Lyons / 262-862-2311

Impact Sound Transmission Test
ASTM E 492 – 04 / ASTM E 989 – 06
On

6 Inch (152mm) Concrete Slab Overlaid with Glued Down Engineered Wood Flooring over Glue Down 5mm Cork / Recycled Rubber Blended Underlayment

Report Number: NGC 7008139

Assignment Number: G-441

Test Date: 09/11/2008

Report Date: 10/03/2008

Submitted by: _____
Steven M. Armenia
Test Technician

Reviewed by: _____
Robert J. Menichetti
Director

Report Number: NGC 7008139

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; Glued down 10mm (0.393 in.) Engineered Hardwood Flooring over, glued down 5mm cork / recycled rubber underlayment.

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

- 1 layer of 10mm x 82.5mm x random length (3/8 in. x 3-1/4 in. x random length) Engineered Wood Flooring 5.76 kg/m^2 (1.18 PSF). Flooring was adhered to underlayment with Mapei Ultrabond® 980 Polyurethane Adhesive using 1/8 in. V-notched trowel, 0.74 kg/m^2 (0.15 PSF). Product number RO03R525B – Red Oak.
- 1 layer of 5.2mm (0.205 in.) Cork / Recycled Rubber blended underlayment. Sample weight was found to be 3.6 kg/m^2 (0.74 PSF). Underlayment was glued to the poly sheeting. Top joints were taped.
- Mapei Ultrabond® 980 Polyurethane Adhesive was used to adhere underlayment to poly sheeting, 1.86 kg/m^2 (0.38 PSF). A 6.3mm x 6.3mm x 3.2mm (1/4 in. x 1/4 in. x 1/8 in.) square-notch trowel was used.
- 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 378.1 kg/m^2 (77.45 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 - 06

Test Number: NGC7008139 Date: 9/11/2008
Size: 17.8 m²

Source room

Temperature [°C]: 21.2
Humidity [%]: 46

Receiving room

Volume V = 63.9 m³
Temperature [°C]: 21.9
Humidity [%]: 50

Impact Insulation Class IIC = 50 dB

Sum of unfavorable deviations: 25.0 dB
Max. unfavorable deviation: 6.0 dB at 250 Hz

Frequency [Hz]	L_n [dB]	L2 [dB]	T [s]	Corr. [dB]	u.Dev. [dB]	ΔL_n
50	58	63.8	3.89	-5.8	-.-	0.274
63	56	61.1	3.31	-5.1	-.-	0.284
80	56	61.8	4.23	-5.8	-.-	0.346
100	62	67.2	3.67	-5.2	-.-	0.537
125	64	70.0	3.78	-6.0	2	0.399
160	67	72.5	4.02	-5.5	5	0.166
200	67	72.4	3.94	-5.4	5	0.187
250	68	72.5	2.95	-4.5	6	0.116
315	64	69.1	2.98	-5.1	2	0.093
400	65	69.6	2.95	-4.6	4	0.090
500	61	65.2	2.70	-4.2	1	0.067
630	58	62.1	2.63	-4.1	-.-	0.055
800	53	56.8	2.63	-3.8	-.-	0.059
1000	47	51.0	2.45	-4.0	-.-	0.049
1250	41	44.6	2.16	-3.6	-.-	0.044
1600	36	38.6	2.05	-2.6	-.-	0.044
2000	30	32.9	1.85	-2.9	-.-	0.048
2500	25	26.9	1.69	-1.9	-.-	0.037
3150	24	26.2	1.52	-2.2	-.-	0.040
4000	24	25.6	1.33	-1.6	-.-	0.036
5000	22	22.5	1.15	-0.5	-.-	0.046

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

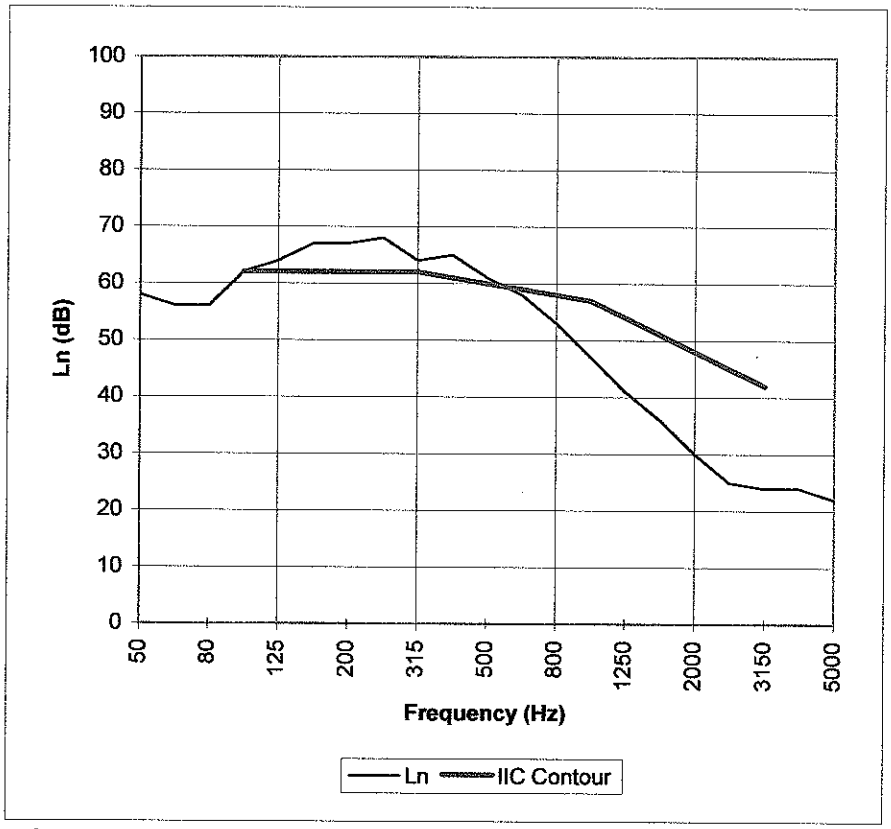
Test: ASTM E 492 - 04 / ASTM E 989 - 06

Test Number: NGC7008139

Date: 9/11/2008

Impact Insulation Class IIC = 50 dB

Frequency [Hz]	L_n [dB]
50	58
63	56
80	56
100	62
125	64
160	67
200	67
250	68
315	64
400	65
500	61
630	58
800	53
1000	47
1250	41
1600	36
2000	30
2500	25
3150	24
4000	24
5000	22



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

L_n = Normalized Sound Pressure Level, dB