



# Acoustical Testing Laboratory



Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code 200291

## TEST REPORT

For

Amorim Cork Composites  
26112 110<sup>th</sup> 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

**8 Inch (203mm) Concrete Slab Overlaid with  
Engineered Wood Flooring over 3mm Low Density  
Rubber Underlayment**

Page 1 of 4

Report Number: NGC 7008133

Assignment Number: G-441

Test Date: 09/02/2008

Report Date: 10/03/2008

Submitted by:

Steven M. Armenia  
Test Technician

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. This report may not be reproduced except in full, without the written approval of the laboratory. The laboratory's accreditation or any of its test reports in no way constitutes or implies product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.



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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 – 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; 10mm (0.393 in.) Engineered Hardwood Flooring over, 3mm Low Density 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<sup>2</sup> (1.18 PSF). Flooring was floating, no adhesive used. Product number RO03R525B – Red Oak.
- 1 layer of 3.2mm (0.125 in.) 400SP Low Density Rubber underlayment. Sample weight was found to be 1.8 kg/m<sup>2</sup> (0.36 PSF). The underlayment was loose laid on floor and joints were taped.
- 1 layer 4 mil poly sheeting attached to concrete with double sided tape at seams and Perimeter.
- 8 inch (203mm) thick reinforced concrete slab 417.9 kg/m<sup>2</sup> (85.6 PSF).

The overall weight of the test assembly is nominal 425.4 kg/m<sup>2</sup> (87.14 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:** Concrete slab cured for a minimum of 28 days.

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

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<b>Normalized impact sound pressure level</b>						
Test: ASTM E 492 - 04 / ASTM E 989 - 06						
Test Number: NGC7008133					Date: 9/2/2008	
Size: 17.8 m <sup>2</sup> <span style="float: right;">Page 3 of 4</span>						
<b>Source room</b>			<b>Receiving room</b>			
Temperature [°C]: 24.2			Volume V = 63.0 m <sup>3</sup>			
Humidity [%]: 52			Temperature [°C]: 23.0			
			Humidity [%]: 50			
<b>Impact Insulation Class IIC = 55 dB</b>						
Sum of unfavorable deviations: 26.0 dB						
Max. unfavorable deviation: 7.0 dB at 315 Hz						
Frequency	L <sub>n</sub>	L2	T	Corr.	u.Dev.	ΔL <sub>n</sub>
[Hz]	[dB]	[dB]	[s]	[dB]	[dB]	
100	59	64.8	3.66	-5.8	2	0.619
125	58	63.3	3.24	-5.3	1	0.326
160	62	68.2	4.28	-6.2	5	0.368
200	62	68.0	3.98	-6.0	5	0.162
250	61	65.5	3.04	-4.5	4	0.107
315	64	68.8	3.10	-4.8	7	0.101
400	58	62.9	3.02	-4.9	2	0.081
500	55	59.8	2.73	-4.8	--	0.083
630	51	54.8	2.52	-3.8	--	0.061
800	44	48.5	2.57	-4.5	--	0.064
1000	38	41.4	2.43	-3.4	--	0.047
1250	35	38.0	2.16	-3.0	--	0.050
1600	31	33.8	2.01	-2.8	--	0.042
2000	28	30.0	1.79	-2.0	--	0.042
2500	25	27.1	1.65	-2.1	--	0.036
3150	25	26.7	1.48	-1.7	--	0.043
4000	25	26.1	1.28	-1.1	--	0.035
5000	23	23.5	1.13	-0.5	--	0.047
<p>L<sub>n</sub> = Normalized Sound Pressure Level, dB            L2 = Receiving Room Level, dB            T = Reverberation Time, seconds            ΔL<sub>n</sub> = Uncertainty for 95% Confidence Level</p>						

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## Normalized impact sound pressure level

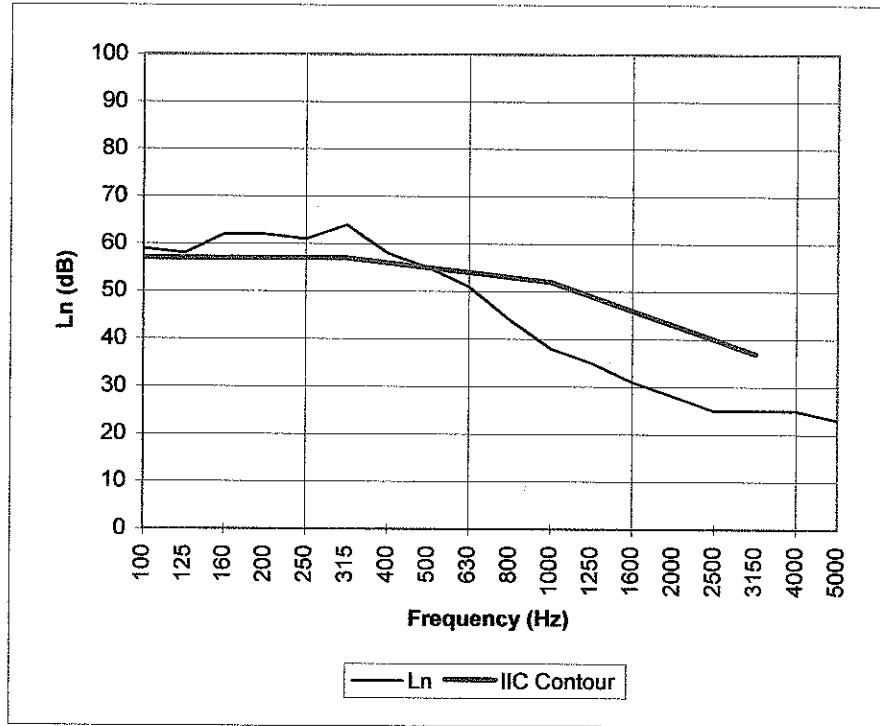
Test: ASTM E 492 - 04 / ASTM E 989 - 06

Test Number: NGC7008133

Date: 9/2/2008

**Impact Insulation Class IIC = 55 dB**

Frequency [Hz]	$L_n$ [dB]
100	59
125	58
160	62
200	62
250	61
315	64
400	58
500	55
630	51
800	44
1000	38
1250	35
1600	31
2000	28
2500	25
3150	25
4000	25
5000	23



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

$L_n$  = Normalized Sound Pressure Level, dB

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