



# Acoustical Testing Laboratory



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under Lab Code 200291

## TEST REPORT

For

Amorim Cork Composites  
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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  
Quarry Tile Flooring over Two Layers of 5mm Cork / Recycled  
Rubber Blended Underlayment**

Report Number: NGC 7008137

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Assignment Number: G-441

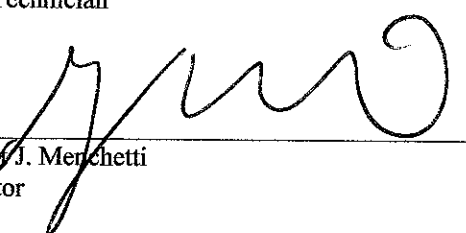
Test Date: 09/09/2008

Report Date: 10/02/2008

Submitted by: \_\_\_\_\_

  
Steven M. Armenia  
Test Technician

Reviewed by: \_\_\_\_\_

  
Robert J. Marchetti  
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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**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, according to client, quarry tile flooring on two layers of 5mm cork / recycled rubber underlayment.

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

- 152mm x 152mm x 12.7mm (6 in. x 6 in. x ½ in.) unglazed clay quarry tile 27.3 kg/m<sup>2</sup> (5.6 PSF) installed using Mapei® Kerabond™ Premium Dryset latex-modified thin-set mortar mixed with Mapei® Keralastic™ Premium Flexible Mortar Adhesive and latex-modified sanded grout mixtures 5.4 kg/m<sup>2</sup> (1.1 PSF). Mortar was troweled on with a ¼ in. x ¼ in. x 1/4 in. square notched trowel.
- 2 layers of 5.2mm (0.205 in.) Cork / Recycled Rubber blended underlayment. Sample weight was found to be 7.2 kg/m<sup>2</sup> (1.48 PSF). The layers were loose laid on floor and each other. Top joints were taped.
- 152mm (6 in.) thick reinforced concrete slab 366.1 kg/m<sup>2</sup> (75.0 PSF).

The overall weight of the test assembly is 406.1 kg/m<sup>2</sup> (83.18 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:** Mortar and grout cured for minimum of 7 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: NGC7008137					Date: 9/9/2008	
Size: 17.8 m <sup>2</sup>						
<b>Source room</b>			<b>Receiving room</b>			
Temperature [°C]: 21.8			Volume V = 63.9 m <sup>3</sup>			
Humidity [%]: 60			Temperature [°C]: 22.1			
				Humidity [%]: 52		
<b>Impact Insulation Class IIC = 50 dB</b>						
Sum of unfavorable deviations: 23.0 dB						
Max. unfavorable deviation: 8.0 dB at 200 Hz						
Frequency	L <sub>n</sub>	L2	T	Corr.	u.Dev.	ΔL <sub>n</sub>
[Hz]	[dB]	[dB]	[s]	[dB]	[dB]	
50	58	63.4	3.89	-5.4	--	0.274
63	57	61.9	3.31	-4.9	--	0.284
80	53	59.3	4.23	-6.3	--	0.346
100	60	65.4	3.67	-5.4	--	0.537
125	65	70.3	3.78	-5.3	3	0.399
160	66	71.9	4.02	-5.9	4	0.166
200	70	76.2	3.94	-6.2	8	0.187
250	68	72.9	2.95	-4.9	6	0.116
315	62	66.8	2.98	-4.8	--	0.093
400	63	67.6	2.95	-4.6	2	0.090
500	57	61.2	2.70	-4.2	--	0.067
630	54	57.9	2.63	-3.9	--	0.055
800	50	53.6	2.63	-3.6	--	0.059
1000	46	49.8	2.45	-3.8	--	0.049
1250	45	47.8	2.16	-2.8	--	0.044
1600	45	48.3	2.05	-3.3	--	0.044
2000	42	44.4	1.85	-2.4	--	0.048
2500	39	40.8	1.69	-1.8	--	0.037
3150	34	35.5	1.52	-1.5	--	0.040
4000	30	30.8	1.33	-0.8	--	0.036
5000	25	25.1	1.15	-0.1	--	0.046

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

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## Normalized impact sound pressure level

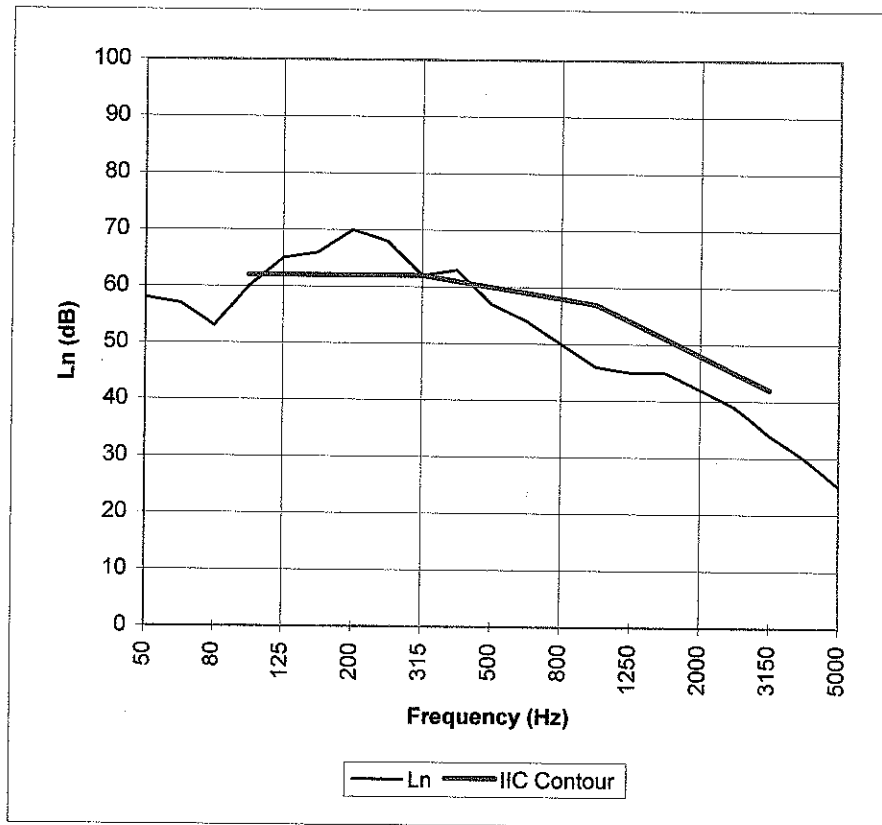
Test: ASTM E 492 - 04 / ASTM E 989 - 06

Test Number: NGC7008137

Date: 9/9/2008

**Impact Insulation Class IIC = 50 dB**

Frequency [Hz]	$L_n$ [dB]
50	58
63	57
80	53
100	60
125	65
160	66
200	70
250	68
315	62
400	63
500	57
630	54
800	50
1000	46
1250	45
1600	45
2000	42
2500	39
3150	34
4000	30
5000	25



\* 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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