



# Acoustical Testing Laboratory



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## TEST REPORT

For

Amorim Cork Composites  
26112 110<sup>th</sup> Street  
Trevor, Wisconsin 53179  
Larry Lyons / 262-862-2311

**Sound Transmission Loss Test**  
ASTM E 90 - 04 / E 413 - 04  
On

**8 Inch (203mm) Concrete Slab Overlaid with Vinyl Plank Flooring over 2.5mm AcoustiCORK® CorkPLUS 250 Underlayment**

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Report Number: NGC 5011043

Assignment Number: G-664

Test Date: 06/10/2011

Report Date: 08/09/2011

Submitted by:

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Test and Quality 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. 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 conforms explicitly with the American Society for Testing and Materials Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements - Designation: E 90 - 04 / E 413 - 04.

**Specimen Description:** 8 inch (203.2mm) concrete slab floor-ceiling assembly overlaid with, according to client, Vinyl Plank Flooring on 2.5mm AcoustiCORK® CorkPLUS 250 Underlayment.

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

- 76.2mm x 914.4mm x 3.3mm (3 in. x 36 in. x 0.129 in.) Roppe Vinyl Plank flooring /Greenwich Maple, adhered with ROP 635 Moisture Cure Polyurethane Adhesive using 1/16 in. (1.6mm) square notch trowel. Sample weight was 4.15 kg/m<sup>2</sup> (0.85 PSF).
- 1 layer of according to client: 2.5mm AcoustiCORK® CorkPLUS 250 Cork Underlayment.

Adhered with ROP 635 Moisture Cure Polyurethane Adhesive using 1/8 in. (3.2mm) V notch trowel.

- 8 inch (203.2mm) thick reinforced concrete slab 488.2 kg/m<sup>2</sup> (100 PSF).

The overall weight of the test assembly is 493.6 kg/m<sup>2</sup> (101.1 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:** 3657.6mm x 4876.8mm (12 ft x 16 ft.)

**Conditioning:** Concrete slab cured for a minimum of 28 days.  
Adhesive cured for a minimum of 24 hours.

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

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## Sound Transmission Loss Test Data

Test: ASTM E 90 - 04 / ASTM E 413 - 04

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Test Report: NGC5011043

Date: 6/10/2011

Specimen Size [m<sup>2</sup>]: 17.8

**Source room**

Volume [m<sup>3</sup>]: 53.2

Rm Temp [°C]: 24

Humidity [%]: 54

**Receiving room**

Volume [m<sup>3</sup>]: 63

Rm Temp [°C]: 22.5

Humidity [%]: 52

**Sound Transmission Class STC [dB]: 55**

Sum of Unfavorable Deviations [dB]: 32

Max. Unfavorable Deviation [dB]: 7 at 200 Hz

Frequency [Hz]	STL [dB]	L1 [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔSTL
100	34	107.8	81.5	17.0	7.7		3.21
125	38	107.2	76.6	18.4	7.4	1	1.74
160	42	109.7	76.6	14.9	8.9		2.70
200	38	108.8	79.2	14.7	8.4	7	1.85
250	45	108.7	71.2	18.4	7.5	3	0.94
315	44	105.1	68.3	18.7	7.2	7	0.59
400	49	104.8	63.3	19.2	7.5	5	1.07
500	52	104.8	60.0	21.1	7.2	3	0.47
630	52	104.3	58.8	22.7	6.5	4	0.33
800	55	103.5	55.5	23.2	7.0	2	0.63
1000	58	100.0	48.4	24.7	6.4		0.46
1250	59	98.9	45.5	27.6	5.6		0.28
1600	63	98.9	40.9	30.2	5.0		0.72
2000	67	101.5	39.7	33.4	5.2		0.58
2500	69	101.6	37.1	36.5	4.5		0.65
3150	72	99.8	32.0	40.7	4.2		1.25
4000	71	96.5	29.3	46.6	3.8		1.32
5000	72	88.9	19.4	53.2	2.6		1.20

STL = Sound Transmission Loss, dB  
 L1 = Source Room Level, dB  
 L2 = Receiving Room Level, dB  
 d = Decay Time, dB/second  
 Δ STL = Uncertainty for 95% Confidence Level

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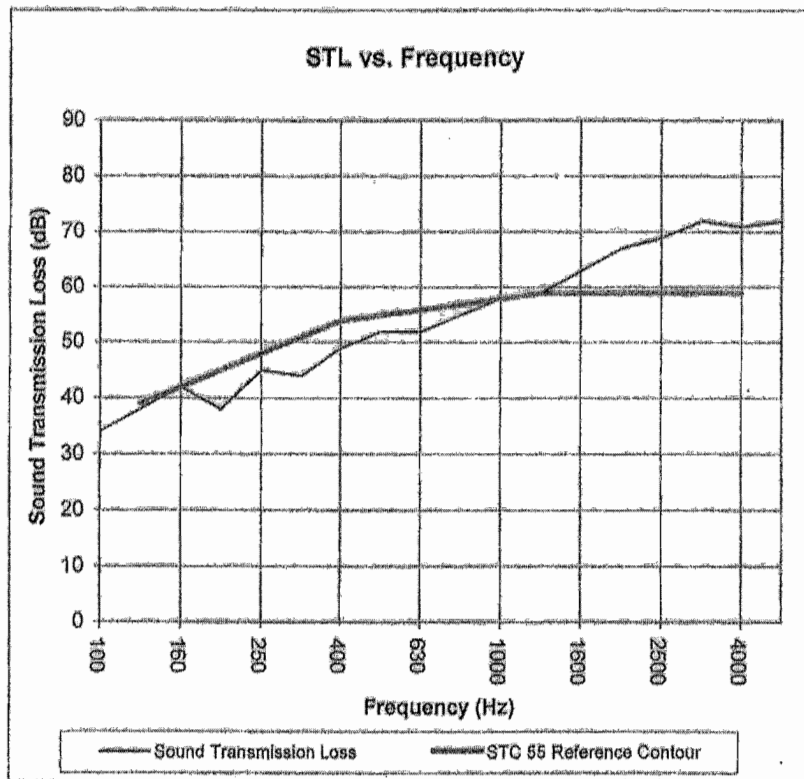
## Sound Transmission Loss Test Data

Per: ASTM E 90 - 04 / ASTM E 413 - 04

Test Report: NGC5011043  
 Test Date: 6/10/2011  
 Specimen Size [m<sup>2</sup>]: 17.8

**Sound Transmission Class STC = 55 dB**

Frequency [Hz]	STL [dB]	ΔSTL
100	34	3.21
125	38	1.74
160	42	2.70
200	38	1.85
250	45	0.94
315	44	0.59
400	49	1.07
500	52	0.47
630	52	0.33
800	55	0.63
1000	58	0.46
1250	59	0.28
1600	63	0.72
2000	67	0.58
2500	69	0.65
3150	72	1.25
4000	71	1.32
5000	72	1.20



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

STL = Sound Transmission Loss, dB  
 Δ STL = Uncertainty for 95% Confidence Level

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