



# 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 Industrial Solutions  
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Trevor, Wisconsin 53179  
Larry Lyons / 262-862-2311

### Sound Transmission Loss Test ASTM E 90 – 04 / E 413 - 04 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 5007028

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Reissued 08/07/2007

Assignment Number: G-355

Test Date: 04/30/2007

Report Date: 07/26/2007

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

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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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Report Number: NGC 5007028

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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:** 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<sup>2</sup> (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<sup>2</sup> (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<sup>2</sup> (75.0 PSF).

The overall weight of the test assembly is 378.8 kg/m<sup>2</sup> (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:** Concrete slab cured for a minimum of 28 days. Adhesive cured for 24 hours.

Test samples were submitted by client and tested as received.

**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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No. of test report: NGC5007028

Date: 4/30/2007

Size: 17.8 m<sup>2</sup>

**Source room**

Volume V = 53.2 m<sup>3</sup>

Temperature [°C]: 18.5

Humidity [%]: 48

**Receiving room**

Volume V = 63.9 m<sup>3</sup>

Temperature [°C]: 19.5

Humidity [%]: 61

**Sound Transmission Class STC = 53 dB**

Sum of unfavorable deviations: 31.0 dB

Max. unfavorable deviation: 8.0 dB at 250 Hz

Frequency	STL	L1	L2	T	Corr.	u.Dev.	ΔSTL
[Hz]	[dB]	[dB]	[dB]	[s]	[dB]	[dB]	
50	29.0	98.2	78.0	4.18	8.6	--	2.402
63	38.0	105.1	74.5	3.40	7.7	--	2.874
80	44.0	109.3	74.3	4.91	9.3	--	2.713
100	39.0	106.1	75.0	3.73	8.1	--	2.289
125	36.0	100.9	72.6	3.70	8.1	1.0	0.424
160	40.0	105.7	74.5	3.95	8.3	--	1.044
200	38.0	101.6	71.7	3.83	8.2	5.0	0.889
250	38.0	101.4	70.9	3.08	7.3	8.0	0.300
315	43.0	102.6	66.6	2.95	7.1	6.0	0.557
400	44.0	103.8	66.4	2.76	6.8	8.0	0.600
500	50.0	102.5	58.9	2.60	6.5	3.0	0.283
630	56.0	102.4	52.3	2.44	6.3	--	0.648
800	59.0	102.1	48.8	2.39	6.2	--	0.447
1000	62.0	101.3	45.3	2.21	5.8	--	0.520
1250	62.0	102.0	45.1	1.93	5.2	--	0.141
1600	63.0	101.1	43.4	1.76	4.8	--	0.436
2000	68.0	99.9	36.3	1.63	4.5	--	0.245
2500	70.0	100.9	35.2	1.52	4.2	--	0.539
3150	73.0	99.9	30.6	1.35	3.7	--	0.412
4000	74.0	102.2	31.8	1.21	3.2	--	0.346
5000	76.0	101.8	28.4	1.10	2.8	--	0.245

STL = Sound Transmission Loss, dB  
 L1 = Source Room Level, dB  
 L2 = Receiving Room Level, dB  
 T = Reverberation Time, seconds  
 Δ STL = Uncertainty for 95% Confidence Level

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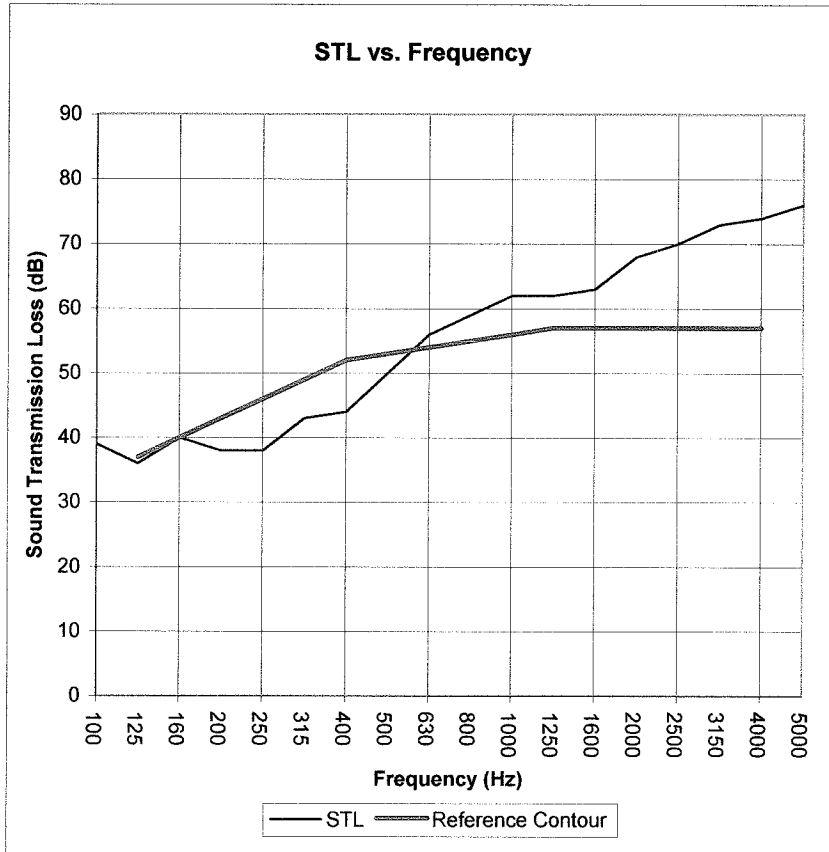
## Sound Transmission Loss Test Data

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

No. of test report: NGC5007028  
 Test Date: 4/30/2007  
 Size: 17.8 m<sup>2</sup>

**Sound Transmission Class STC = 53 dB**

Frequency [Hz]	STL [dB]	ΔSTL
50	29	2.402
63	38	2.874
80	44	2.713
100	39	2.289
125	36	0.424
160	40	1.044
200	38	0.889
250	38	0.300
315	43	0.557
400	44	0.600
500	50	0.283
630	56	0.648
800	59	0.447
1000	62	0.520
1250	62	0.141
1600	63	0.436
2000	68	0.245
2500	70	0.539
3150	73	0.412
4000	74	0.346
5000	76	0.245



\* 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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