



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 110th Street P.O. Box 25
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
Quarry Tile Flooring over Two Layers of 5mm Cork / Recycled
Rubber Blended Underlayment**

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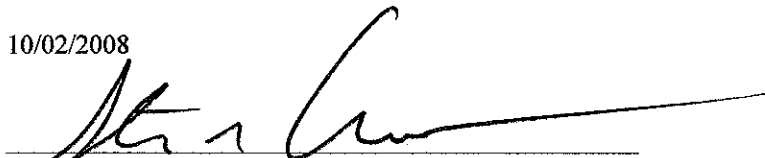
Report Number: NGC 5008071

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

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Report Number: NGC 5008071

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, 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/m² (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/m² (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/m² (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/m² (75.0 PSF).

The overall weight of the test assembly is 406.1 kg/m² (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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Sound Transmission Loss Test Data

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

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No. of test report: NGC5008071

Date: 9/9/2008

Size: 17.84 m²

Source room

Volume V = 53.2 m³
 Temperature [°C]: 22.0
 Humidity [%]: 59

Receiving room

Volume V = 63.9 m³
 Temperature [°C]: 22.2
 Humidity [%]: 51

Sound Transmission Class STC = 54 dB

Sum of unfavorable deviations: 22.0 dB

Max. unfavorable deviation: 8.0 dB at 250 Hz

Frequency [Hz]	STL [dB]	L1 [dB]	L2 [dB]	T [s]	Corr. [dB]	u.Dev. [dB]	ΔSTL
50	32	98.4	75.1	3.89	8.3	--	3.564
63	39	101.3	70.2	3.31	7.6	--	3.366
80	44	106.5	70.7	4.23	8.7	--	4.954
100	39	104.1	72.7	3.67	8.1	--	3.396
125	37	103.4	74.1	3.78	8.2	1	1.241
160	40	104.3	72.5	4.02	8.4	1	2.152
200	37	98.8	70.2	3.94	8.4	7	1.533
250	39	101.7	69.7	2.95	7.1	8	0.539
315	47	104.9	64.6	2.98	7.2	3	0.529
400	51	103.7	60.0	2.95	7.1	2	0.663
500	55	101.2	53.0	2.70	6.7	--	0.224
630	57	100.2	49.5	2.63	6.6	--	0.245
800	58	100.3	48.6	2.63	6.6	--	0.245
1000	60	99.4	45.9	2.45	6.3	--	0.424
1250	61	100.5	45.2	2.16	5.7	--	0.173
1600	62	99.2	42.8	2.05	5.5	--	0.316
2000	67	99.4	37.5	1.85	5.1	--	0.374
2500	68	100.7	37.0	1.69	4.7	--	0.424
3150	69	100.3	35.1	1.52	4.2	--	0.224
4000	70	100.3	33.8	1.33	3.6	--	0.574
5000	73	100.2	30.0	1.15	3.0	--	0.592

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

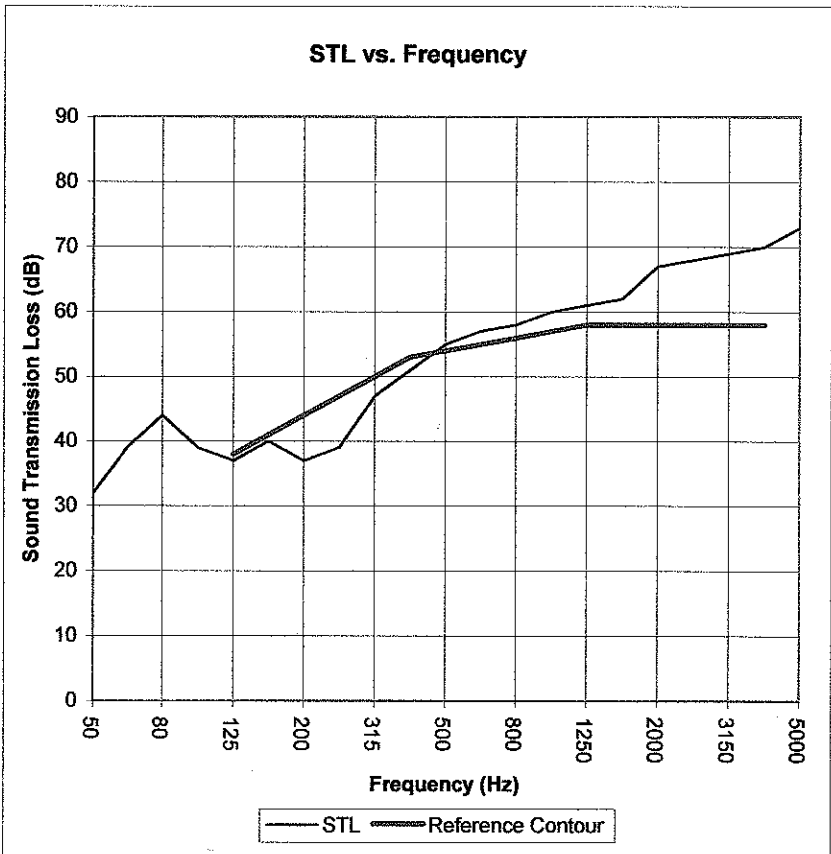
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Sound Transmission Loss Test Data Page 4 of 4
 Per: ASTM E 90 - 04 / ASTM E 413 - 04

No. of test report: NGC5008071
 Test Date: 9/9/2008
 Size: 17.84 m²

Sound Transmission Class STC = 54 dB

Frequency [Hz]	STL [dB]	ΔSTL
50	32	3.564
63	39	3.366
80	44	4.954
100	39	3.396
125	37	1.241
160	40	2.152
200	37	1.533
250	39	0.539
315	47	0.529
400	51	0.663
500	55	0.224
630	57	0.245
800	58	0.245
1000	60	0.424
1250	61	0.173
1600	62	0.316
2000	67	0.374
2500	68	0.424
3150	69	0.224
4000	70	0.574
5000	73	0.592



* 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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