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Acoustical Testing Laboratory

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TEST REPORT

For

Proflex Products, Incorporated
3406 Dean Street
Naples, FL 34104
Gerard Gigon / 617-749-5648

Sound Transmission Loss Test

ASTM E 90 – 04 / E 413 - 04
On

6 Inch (152mm) Concrete Slab Overlaid with Quarry Tile Flooring over a Layer of 0.500 Inch (12.7mm) Proflex RCU 500 Underlayment

Report Number: NGC 5009043

Assignment Number: G-508

Test Date: 06/23/2009

Report Date: 07/27/2009

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.
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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, according to client, unglazed clay quarry tile flooring on a layer of 0.500 inch (12.7mm) Proflex RCU-500 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 installed using a latex-modified thin set mortar mixture meeting ANSI Specification 118.11 and a polymer enhanced sanded grout mixture meeting ANSI Specification 118.6 and 118.7. Mortar troweled on with 1/4 in. by 3/8 in. notch trowel. Mortar and grout mixtures sample weight was 32.2 kg/m^2 (6.6 PSF).
- 1 layer of 12.7mm (0.500 in.) thick Proflex RCU 500 underlayment. Sample weight was found to be 6.3 kg/m^2 (0.1.30 PSF). Sample thickness measured 11.6mm (0.456 in.).
- 152mm (6 in.) thick reinforced concrete slab 366.1 kg/m^2 (75.0 PSF).
- No ceiling

The overall weight of the test assembly is 404.7 kg/m^2 (82.90 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 cured minimum of 28 days.
Tile mortar and grout cured for 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

No. of test report: NGC5009043 Date: 6/23/2009
Size: 17.84 m²

Source room
Volume V = 53.2 m³
Temperature [°C]: 22.5
Humidity [%]: 63

Receiving room
Volume V = 63.9 m³
Temperature [°C]: 22.0
Humidity [%]: 57

Sound Transmission Class STC = 53 dB
Sum of unfavorable deviations: 30.0 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	33	106.0	80.9	3.39	7.7	-.-	6.621
63	35	100.6	73.3	3.17	7.4	-.-	1.783
80	44	107.1	71.7	3.95	8.4	-.-	3.237
100	34	104.4	79.1	4.23	8.7	-.-	2.345
125	38	105.7	75.2	3.51	7.9	-.-	1.086
160	36	107.8	79.7	3.97	8.4	4	1.127
200	37	106.8	78.3	3.83	8.2	6	0.616
250	38	105.4	74.4	3.03	7.2	8	0.985
315	42	105.5	70.9	2.91	7.0	7	1.140
400	47	105.6	65.6	2.82	6.9	5	0.714
500	53	104.9	58.8	2.70	6.7	-.-	0.843
630	55	103.9	55.8	2.54	6.5	-.-	0.592
800	55	102.8	54.0	2.50	6.4	-.-	0.412
1000	57	100.8	50.3	2.38	6.2	-.-	0.469
1250	58	101.8	49.1	2.11	5.7	-.-	0.510
1600	60	102.3	48.1	2.03	5.5	-.-	0.469
2000	64	104.4	45.5	1.92	5.2	-.-	0.663
2500	66	105.7	44.9	1.74	4.8	-.-	0.707
3150	66	105.5	44.0	1.55	4.3	-.-	0.831
4000	66	104.6	42.2	1.33	3.6	-.-	1.523
5000	70	104.4	37.7	1.19	3.1	-.-	1.330

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: NGC5009043
Test Date: 6/23/2009
Size: 17.84 m²

Sound Transmission Class STC = 53 dB

Frequency [Hz]	STL [dB]	ΔSTL
50	33	6.621
63	35	1.783
80	44	3.237
100	34	2.345
125	38	1.086
160	36	1.127
200	37	0.616
250	38	0.985
315	42	1.140
400	47	0.714
500	53	0.843
630	55	0.592
800	55	0.412
1000	57	0.469
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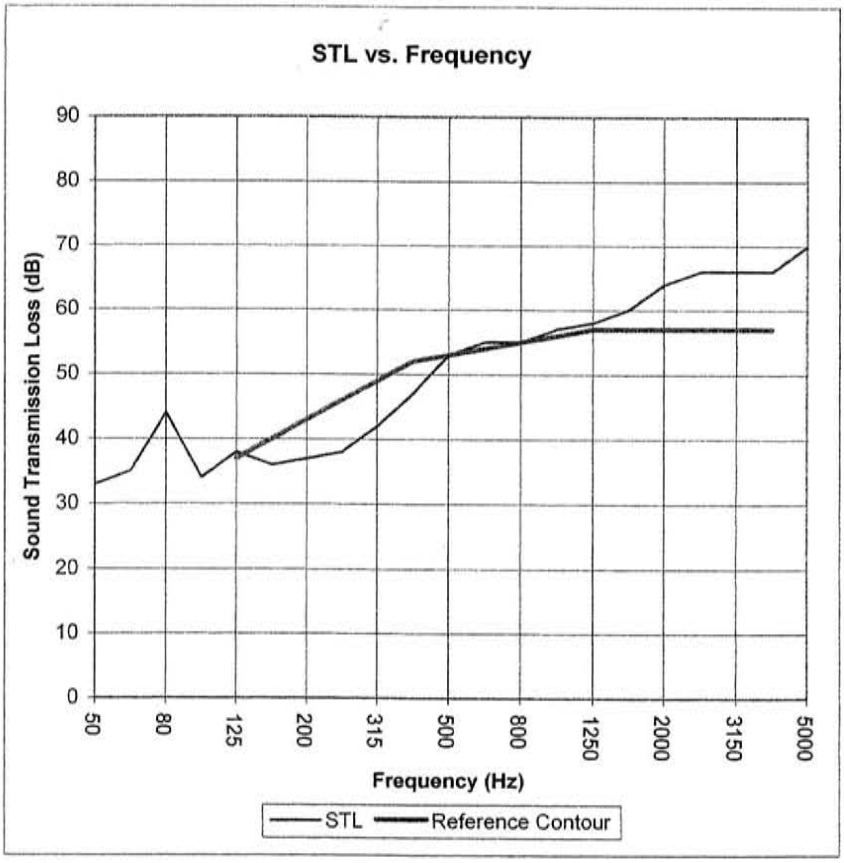

* Due to high insulating value of specimen, background levels limit results at these frequencies.

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

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