



Acoustical Testing Laboratory



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under Lab Code 200291

TEST REPORT

for

Proflex Products, Inc.
2500 Drane Field Road – Suite 105
Lakeland, FL 33811
Gerard L. Gigon / 863-937-9623

Sound Transmission Loss Test
ASTM E 90 - 02
On

**8" Concrete Slab Floor-Ceiling Assembly Overlaid with:
Quarry Tile over PROFLEX MSC 90 Mega Sound Control Membrane Underlayment**

Report Number: NGC 5004018

Reissued 03/23/2012

Page 1 of 4

Assignment Number: G-771

Specimen Receipt Date: NA

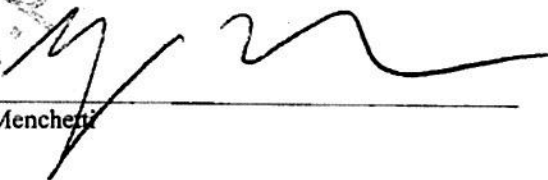
Test Date: 09/22/2004

Report Date: 10/04/2004

Submitted by:


Andrew E. Heuer
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.

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Acoustical Testing Laboratory

Report Number: NGC 5004018

Test Method: This test method generally follows * 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 - 02.

Specimen Description: 8" Concrete Slab and Suspended Gypsum Board Ceiling Overlaid with; Quarry Tile over, according to client, PROFLEX MSC 90 Mega Sound Control Membrane Underlayment. This specimen was originally submitted by Northern Elastomeric, Inc., identified as "Proflex 90 MSC Membrane Underlayment" and tested on 09/22/2004. This report reflects the current product name of the material tested.

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

- 1 layer of 6" x 6" x 1/2" unglazed clay quarry tile (5.6 PSF) installed using polymer modified MAPEI Kerabond mortar and polymer modified grout mixtures (1.0 PSF).
- 1 layer of 0.090" thick PROFLEX MSC 90 membrane floor underlayment with fabric side up. (0.50 PSF) Membrane was self-adhered to liner paper that is adhered to the concrete at the perimeter and tapping machine areas with double-sided tape.
- 8" thick reinforced concrete slab (85.6 PSF).
- Suspended ceiling system consisting of nominal 5/8" type X gypsum board (2.3 PSF) attached with 1-1/8" screws, 12" o.c. to suspended Rigid X ceiling grid system.
- 10" plenum with 3-1/2" of lay-in fiberglass insulation (0.16 PSF).

The overall weight of the test assembly is 95.16 PSF.

The perimeter of the concrete slab was sealed with fiber gasketing and a sand filled trough. The test assembly is structurally isolated from the receiving room. The ceiling joints were taped and the perimeter was sealed with acoustical caulk.

Specimen size: 12 ft x 16 ft.

Conditioning: Tile, mortar, and grout cured for a minimum of 7 days. Concrete slab cured for a minimum of 28 days.

Test samples were submitted by client and tested as received.

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

* Tests conducted in Floor-Ceiling chambers do not meet all requirements of the most recent ASTM E 90 Standard.

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Sound Transmission Loss Test Data

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Per: ASTM E 90 - 02 / ASTM E 413 - 87

No. of test report: NGC5004018

Test Date: 9/22/2004

Size: 17.8 m²

Temperature [°C]: 22.5

Sound Transmission Class STC = 72 dB

Sum of unfavorable deviations: 27.5 dB

Max. unfavorable deviation: 7.9 dB at 160 Hz

Frequency [Hz]	STL [dB]	L1 [dB]	L2 [dB]	T [s]	Corr. [dB]	u.Dev. [dB]	ΔSTL
100	55	107.3	60.4	2.32	8.1	--	1.196
125	50	99.3	57.8	2.63	8.6	5.9	1.072
160	51	99.2	58.7	3.68	10.1	7.9	2.083
200	56	97.9	50.8	3.09	9.3	5.9	0.283
250	60	98.7	47.7	3.21	9.5	4.9	0.510
315	68	99.7	40.9	3.13	9.4	--	0.775
400	74	102.2	37.6	2.95	9.1	--	0.173
500	73	100.1	36.3	2.72	8.8	--	0.671
630	70	98.1	37.0	2.61	8.6	2.9	0.400
800	76	98.7	31.2	2.66	8.7	--	0.346
1000	81	98.0	25.9	2.61	8.6	--	0.346
1250	83	97.4	22.2	2.34	8.1	--	0.424
1600	83	97.0	21.6	2.15	7.8	--	0.424
2000	87	97.6	17.6	1.84	7.1	--	0.300
2500	89	98.9	16.0	1.63	6.6	--	0.173
3150	92	99.1	13.3	1.56	6.4	--	0.424
4000	92	98.6	12.4	1.40	5.9	--	0.400
5000	92	95.7	9.2	1.27	5.5	--	0.529

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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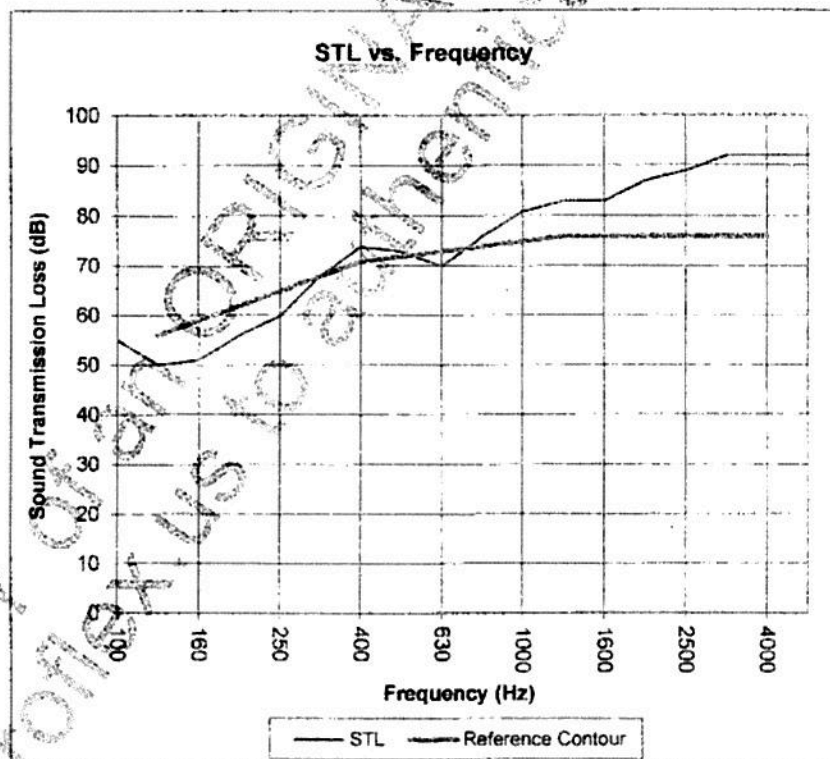
Test Date: 9/22/2004

Size: 17.8 m²

Temperature [°C]: 22.5

Sound Transmission Class STC = 72 dB

Frequency [Hz]	STL [dB]	ΔSTL
100	55	1.196
125	50	1.072
160	51	2.083
200	56	0.283
250	60	0.510
315	68	0.775
400	74	0.173
500	73	0.671
630	70	0.400
800	76	0.346
1000	81	0.346
1250	83	0.424
1600	83	0.424
2000	87	0.300
2500	89	0.173
3150	92	0.424
4000	92	0.400
5000	92	0.529



* 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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TEST REPORT

for

Proflex Products, Inc.
2500 Drane Field Road – Suite 105
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Impact Sound Transmission Test
ASTM E 492 – 90 / ASTM E 989 – 89
On

**8" Concrete Slab Floor-Ceiling Assembly Overlaid with:
Quarry Tile over PROFLEX MSC 90 Mega Sound Control Membrane Underlayment**

Report Number: NGC 7004062

Page 1 of 4
Reissued 03/23/2012

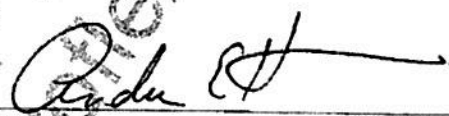
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Acoustical Testing Laboratory

Report Number: NGC 7004062

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 - 90.

The uncertainty limits of each tapping machine location met the provision requirements of section 10.3 of ASTM E 492-90.

Specimen Description: 8" Concrete Slab and Suspended Gypsum Board Ceiling overlaid with: Quarry Tile over, according to client PROFLEX MSC 90 Mega Sound Control Membrane Underlayment. This specimen was originally submitted by Northern Elastomeric, Inc., identified as "Proflex 90 MSC Membrane Underlayment" and tested on 09/27/2004. This report reflects the current product name of the material tested.

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The overall weight of the test assembly is 95.16 PSF.

The perimeter of the concrete slab was sealed with fiber gasketing and a sand filled trough. The test assembly is structurally isolated from the receiving room. The ceiling joints were taped and the perimeter was sealed with acoustical caulk.

Specimen size: 12' ft x 16 ft.

Conditioning: Tile, mortar, and grout cured for a minimum of 7 days. Concrete slab cured for a minimum of 28 days.

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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Normalized impact sound pressure level

Test: ASTM E 492 - 90 / ASTM E 989 - 89

Test Number: NGC7004062

Date: 9/22/2004

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Size: 17.84 m²

Source room

Temperature [°C]: 22.0

Humidity [%]: 63

Receiving room

Volume V = 40.00 m³

Temperature [°C]: 22.5

Humidity [%]: 54

Impact Insulation Class IIC = 68 dB

Sum of unfavorable deviations: 29.0 dB

Max. unfavorable deviation: 8.0 dB at 2500 Hz

Frequency	L _n	L ₂	T	Corr.	u.Dev.	ΔL _n
[Hz]	[dB]	[dB]	[s]	[dB]	[dB]	
100	38.0	44.0	2.32	-6.0	--	0.341
125	47.0	52.7	2.63	-5.7	3.0	0.315
160	40.0	47.4	3.68	-7.4	--	0.202
200	40.0	46.8	3.09	-6.8	--	0.135
250	36.0	43.1	3.21	-7.1	--	0.143
315	38.0	44.9	3.13	-6.9	--	0.090
400	34.0	40.4	2.95	-6.4	--	0.066
500	34.0	40.0	2.72	-6.0	--	0.080
630	35.0	41.4	2.61	-6.4	--	0.063
800	34.0	40.3	2.66	-6.3	--	0.051
1000	33.0	39.1	2.61	-6.1	--	0.045
1250	36.0	41.9	2.34	-5.9	--	0.042
1600	37.0	42.2	2.15	-5.2	4.0	0.048
2000	36.0	40.2	1.84	-4.2	6.0	0.035
2500	35.0	38.8	1.63	-3.8	8.0	0.040
3150	32.0	35.4	1.56	-3.4	8.0	0.038
4000	30.0	32.9	1.40	-2.9	--	0.030
5000	26.0	29.0	1.27	-3.0	--	0.035

L_n = Normalized Sound Pressure Level, dB

L₂ = Receiving Room Level, dB

T = Reverberation Time, seconds

ΔL_n = Uncertainty for 95% Confidence Level

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Normalized impact sound pressure level

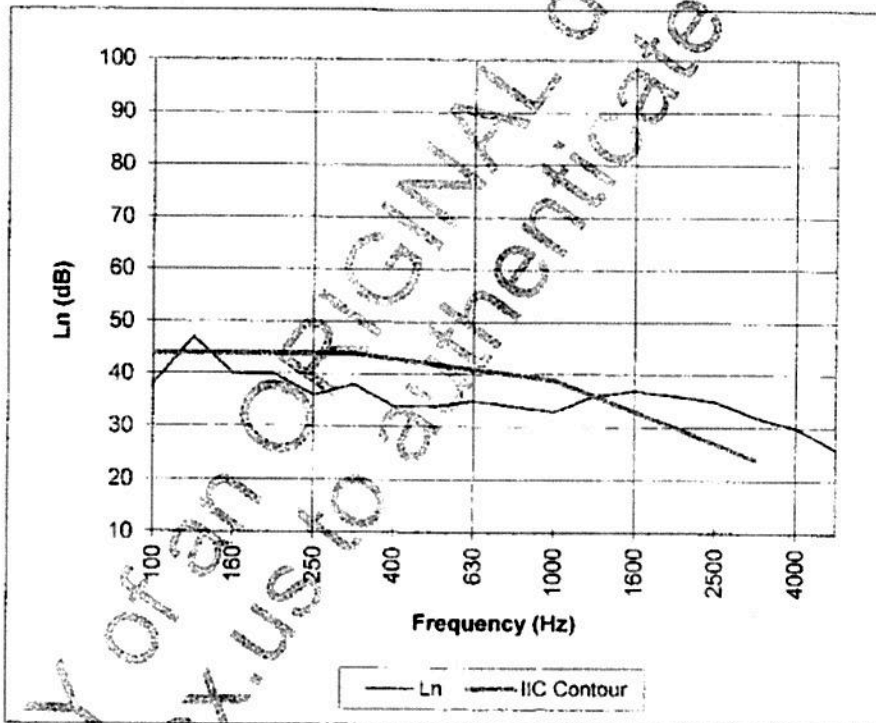
Test: ASTM E 492 - 90 / ASTM E 989 - 89

Test Number: NGC7004062

Date: 9/22/2004

Impact Insulation Class IIC = 68.0 dB

Frequency	L_n
[Hz]	[dB]
100	38
125	47
160	40
200	40
250	36
315	38
400	34
500	34
630	35
800	34
1000	33
1250	36
1600	37
2000	36
2500	35
3150	32
4000	30
5000	26



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

= Normalized Sound Pressure Level, dB

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