



# Acoustical Testing Laboratory



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## 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 and Suspended Acoustical Tile Ceiling Overlaid with:  
Quarry Tile over PROFLEX SSC 70 Super Sound Control Membrane Underlayment**

Report Number: NGC 5003019

Reissued 03/23/2012

Page 1 of 4

Assignment Number: G-771

Specimen Receipt NA  
Date:

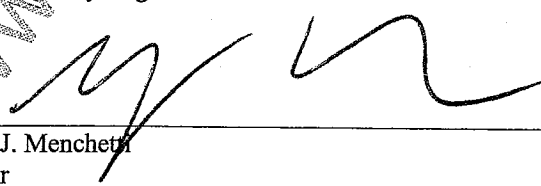
Test Date: 07/24/2003

Report Date: 08/04/2003

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. 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.

Report Number: NGC 5003019

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**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 Acoustical Tile Ceiling Overlaid with Quarry Tile over, according to client, PROFLEX SSC 70 Super Sound Control Membrane Underlayment. This specimen was originally submitted by Northern Elastomeric, Inc. identified as "Proflex SSC Membrane Underlayment" and tested on 7/24/2003. 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 0.077" thick PROFLEX SSC 70 membrane floor underlayment with fabric side up. (0.32 PSF) Membrane was self-adhered to kraft 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 24" by 24" USG 3/4" thick Acoustone Acoustical lay-in panels (1.44 PSF) installed into standard 15/16" face metal T grid ceiling tile suspension system. 10" plenum with 6" of fiberglass insulation (0.23 PSF).

The overall weight of the test assembly is 94.19 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.

**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

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

No. of test report: NGC5003019

Test Date: 7/24/2003

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

Temperature [°C]: 22.9

**Sound Transmission Class STC = 62 dB**

Sum of unfavourable deviations: 14.0 dB

Max. unfavourable deviation: 8.0 dB at 125 Hz

| Frequency<br>[Hz] | STL<br>[dB] | L1<br>[dB] | L2<br>[dB] | T<br>[s] | Corr.<br>[dB] | u.Dev.<br>[dB] | ΔSTL  |
|-------------------|-------------|------------|------------|----------|---------------|----------------|-------|
| 100               | 33          | 104.0      | 74.2       | 0.82     | 3.0           | --             | 1.229 |
| 125               | 38          | 99.0       | 64.9       | 0.93     | 3.6           | 8.0            | 1.296 |
| 160               | 48          | 100.6      | 57.6       | 1.16     | 4.5           | 1.0            | 0.721 |
| 200               | 49          | 98.9       | 54.4       | 1.18     | 4.6           | 3.0            | 0.548 |
| 250               | 55          | 100.0      | 49.6       | 1.24     | 4.8           | --             | 0.412 |
| 315               | 63          | 100.7      | 42.7       | 1.18     | 4.6           | --             | 0.714 |
| 400               | 63          | 104.0      | 45.2       | 0.97     | 3.7           | --             | 0.374 |
| 500               | 63          | 102.8      | 43.1       | 0.83     | 3.1           | --             | 0.700 |
| 630               | 61          | 100.7      | 41.7       | 0.69     | 2.2           | 2.0            | 0.332 |
| 800               | 64          | 100.3      | 38.4       | 0.60     | 1.6           | --             | 0.300 |
| 1000              | 72          | 99.2       | 28.4       | 0.53     | 1.1           | --             | 0.200 |
| 1250              | 73          | 99.9       | 27.2       | 0.47     | 0.6           | --             | 0.374 |
| 1600              | 75          | 100.4      | 25.8       | 0.46     | 0.5           | --             | 0.387 |
| 2000              | 80          | 101.8      | 22.4       | 0.45     | 0.4           | --             | 0.200 |
| 2500              | 86          | 103.4      | 17.8       | 0.42     | 0.1           | --             | 0.173 |
| 3150              | 91          | 103.5      | 12.8       | 0.41     | 0.0           | --             | 0.566 |
| 4000              | 92          | 102.8      | 10.6       | 0.40     | -0.1          | --             | 0.374 |
| 5000              | 87          | 97.6       | 10.1       | 0.39     | -0.2          | --             | 0.510 |

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

The results reported above apply to specific samples submitted for measurement.

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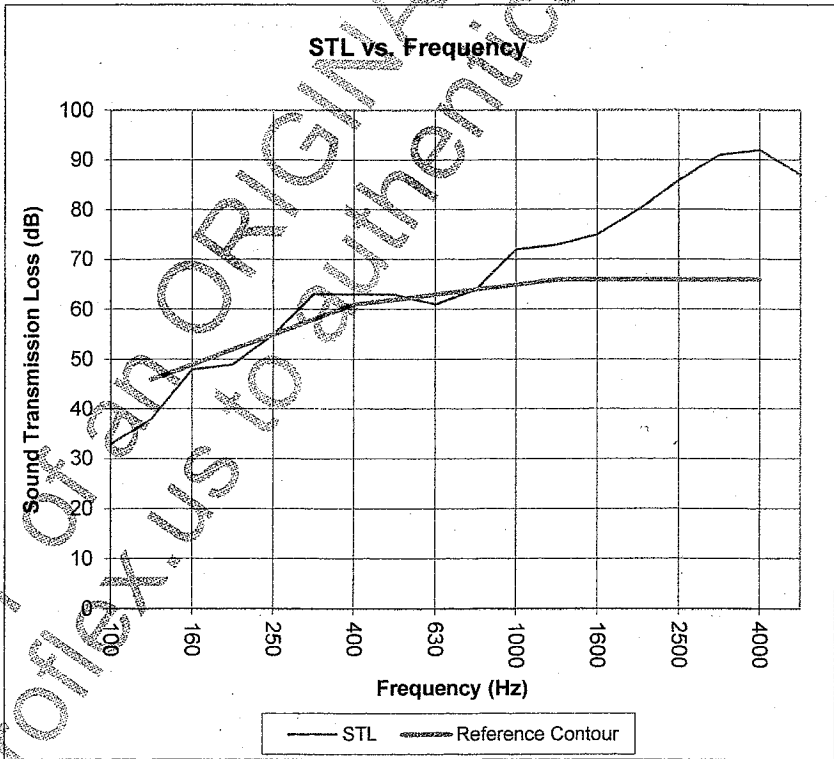
## Sound Transmission Loss Test Data

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

No. of test report: NGC5003019  
 Test Date: 7/24/2003  
 Size: 17.8 m<sup>2</sup>  
 Temperature [°C]: 22.9

**Sound Transmission Class STC = 62 dB**

| Frequency [Hz] | STL [dB] | ΔSTL  |
|----------------|----------|-------|
| 100            | 33       | 1.229 |
| 125            | 38       | 1.296 |
| 160            | 48       | 0.721 |
| 200            | 49       | 0.548 |
| 250            | 55       | 0.412 |
| 315            | 63       | 0.714 |
| 400            | 63       | 0.374 |
| 500            | 63       | 0.700 |
| 630            | 61       | 0.332 |
| 800            | 64       | 0.300 |
| 1000           | 72       | 0.200 |
| 1250           | 73       | 0.374 |
| 1600           | 75       | 0.387 |
| 2000           | 80       | 0.200 |
| 2500           | 86       | 0.173 |
| 3150           | 91       | 0.566 |
| 4000           | 92       | 0.374 |
| 5000           | 87       | 0.510 |



\* 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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