



Acoustical Testing Laboratory



Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code 200291

TEST REPORT

For

MP Global Products, LLC
PO Box 2283
2500 Old Hadar Road
Norfolk, NE 68701
Robert Pratt / 888-379-9695

Sound Transmission Loss Test

ASTM E 90 - 04 / E 413 - 04

On

**Engineered Wood Flooring over Quiet Walk™ Underlayment on
8 In. (203mm) Concrete Slab with Suspended Gypsum Board Ceiling**

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Report Number: NGC 5007047

Assignment Number: G-383

Test Date: 07/16/2007

Report Date: 08/22/2007

Submitted by: Craig G. Cooper
Craig G. Cooper
Test Engineer

Reviewed by: Robert J. Merichetti
Robert J. Merichetti
Director

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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: 8 inch (203mm) concrete slab floor-ceiling assembly overlaid with, 9/16 in. Engineered Wood Flooring and Quiet Walk™ Underlayment, with suspended grid ceiling system and 5/8 in. (15.9mm) gypsum board ceiling.

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

- 1 layer of Engineered wood flooring, Twin Brazilian Cherry Classic. 14mm (9/16 in.) thick, 180mm (7 in.) wide and 2200mm (86.6 in.) long planks. The sample weight was 9.37 kg/m² (1.92 PSF).
- 1 layer of nominal 3.00mm (0.125 in.) Quiet Walk™ underlayment. Observed to be 4.5mm (0.178 in.) thick. The sample weight was 0.88 kg/m² (0.18 PSF). Sample made of nonwoven fibers with layer of polyethylene film attached to up side. Joints were taped.
- 8 inch thick reinforced concrete slab 417.9 kg/m² (85.6 PSF).
- Gypsum board ceiling grid suspension system consisting of concrete anchors located 1219mm (48 in.) o.c. along the longitudinal axis secure the 16 gauge galvanized tie wire which supports the grid system. A 305mm (12 in.) plenum is created and a layer of 89mm (3-1/2 in.) fiberglass insulation 0.78 kg/m² (0.16 PSF) is laid over grid. A single layer of 15.9mm (5/8 in.) type X gypsum board 11.2 kg/m² (2.3 PSF) attached with 25.4mm (1 in.) screws, 305mm (12 in.) o.c. to suspended grid suspension system mains and runners.

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.

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: NGC5007047

Date: 7/16/2007

Size: 17.8 m²

Source room

Volume V = 53.2 m³

Temperature [°C]: 22.7

Humidity [%]: 59

Receiving room

Volume V = 60.0 m³

Temperature [°C]: 22.6

Humidity [%]: 51

Sound Transmission Class STC = 66 dB

Sum of unfavorable deviations: 27.0 dB

Max. unfavorable deviation: 6.0 dB at 250 Hz

Frequency	STL	L1	L2	T	Corr.	u.Dev.	ΔSTL
[Hz]	[dB]	[dB]	[dB]	[s]	[dB]	[dB]	
100	46.0	99.0	58.9	1.92	5.5	--	1.738
125	46.0	95.5	55.9	2.23	6.2	4.0	0.583
160	53.0	101.4	55.7	3.22	7.7	--	1.356
200	51.0	96.4	52.8	3.31	7.9	5.0	1.114
250	53.0	95.7	51.0	3.38	8.0	6.0	0.781
315	58.0	94.8	44.7	3.18	7.7	4.0	0.762
400	60.0	98.5	45.9	2.93	7.3	5.0	0.735
500	65.0	98.2	40.7	2.86	7.2	1.0	0.510
630	65.0	97.7	39.8	2.66	6.9	2.0	0.458
800	68.0	97.0	35.6	2.68	7.0	--	0.400
1000	73.0	97.3	31.2	2.48	6.6	--	0.458
1250	77.0	98.6	27.7	2.23	6.1	--	0.374
1600	78.0	97.9	25.8	2.12	5.9	--	0.374
2000	79.0	97.1	23.1	1.91	5.5	--	0.200
2500	79.0	97.4	23.0	1.70	5.0	--	0.316
3150	79.0	97.0	22.1	1.56	4.6	--	0.332
4000	83.0	99.3	20.9	1.40	4.1	--	0.224
5000	84.0	99.9	19.3	1.26	3.7	--	0.640

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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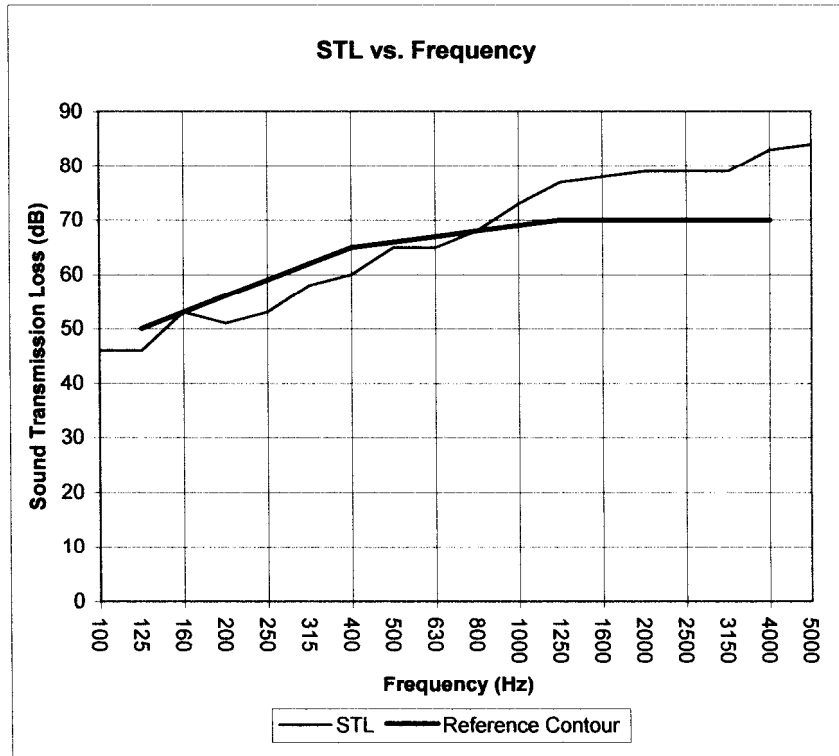
Sound Transmission Loss Test Data

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

No. of test report: NGC5007047
 Test Date: 7/16/2007
 Size: 17.8 m²

Sound Transmission Class STC = 66 dB

Frequency [Hz]	STL [dB]	ΔSTL
100	46	1.738
125	46	0.583
160	53	1.356
200	51	1.114
250	53	0.781
315	58	0.762
400	60	0.735
500	65	0.510
630	65	0.458
800	68	0.400
1000	73	0.458
1250	77	0.374
1600	78	0.374
2000	79	0.200
2500	79	0.316
3150	79	0.332
4000	83	0.224
5000	84	0.640



* 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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