NGC Testing Services

Acoustical Testing Laboratory

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TEST REPORT

For

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

Impact Sound Transmission Test

ASTM E 492 – 04 / ASTM E 989 – 06
On

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

Report Number: NGC 7007098

Assignment Number: G-383

Test Date: 07/16/2007

Report Date: 08/22/2007

Submitted by: _____
Craig G. Cooper
Test Engineer

Reviewed by: _____
Robert J. Monchetti
Director

Report Number: NGC 7007098

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 – 04 / E 989 - 89. The uncertainty limits of each tapping machine location met the precision requirements of section 11.3 of ASTM E 492-04.

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/m^2 (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/m^2 (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/m^2 (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/m^2 (0.16 PSF) is laid over grid. A single layer of 15.9mm (5/8 in.) type X gypsum board 11.2 kg/m^2 (2.3 PSF) attached with 25.4mm (1 in.) screws, 305mm (12 in.) o.c. to suspended grid suspension system mains and runners.

The overall weight of the test assembly is nominal 440.2 kg/m^2 (90.16 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 slab cured for a minimum of 28 days.

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 - 04 / ASTM E 989 - 89

Test Number: NGC7007098 Date: 7/16/2007

Size: 17.84 m²

Source room

Temperature [°C]: 22.6

Humidity [%]:60

Receiving room

Volume V = 60.0 m³

Temperature [°C]: 22.6

Humidity [%]: 52

Impact Insulation Class IIC = 68 dB

Sum of unfavorable deviations: 22.0 dB

Max. unfavorable deviation: 5.0 dB at 100 Hz

Frequency [Hz]	L_n [dB]	L2 [dB]	T [s]	Corr. [dB]	u.Dev. [dB]	ΔL_n
100	49.0	52.3	1.92	-3.3	5.0	0.226
125	45.0	48.8	2.23	-3.8	1.0	0.272
160	46.0	51.0	3.22	-5.0	2.0	0.254
200	46.0	51.8	3.31	-5.8	2.0	0.147
250	46.0	51.2	3.38	-5.2	2.0	0.114
315	47.0	52.3	3.18	-5.3	3.0	0.078
400	43.0	48.0	2.93	-5.0	-.-	0.063
500	37.0	42.1	2.86	-5.1	-.-	0.056
630	37.0	41.9	2.66	-4.9	-.-	0.072
800	34.0	38.5	2.68	-4.5	-.-	0.062
1000	32.0	36.4	2.48	-4.4	-.-	0.039
1250	33.0	37.1	2.23	-4.1	-.-	0.052
1600	33.0	36.9	2.12	-3.9	-.-	0.045
2000	31.0	34.0	1.91	-3.0	1.0	0.051
2500	29.0	31.8	1.70	-2.8	2.0	0.041
3150	28.0	30.1	1.56	-2.1	4.0	0.028
4000	26.0	28.0	1.40	-2.0	-.-	0.030
5000	23.0	23.7	1.26	-0.7	-.-	0.042

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

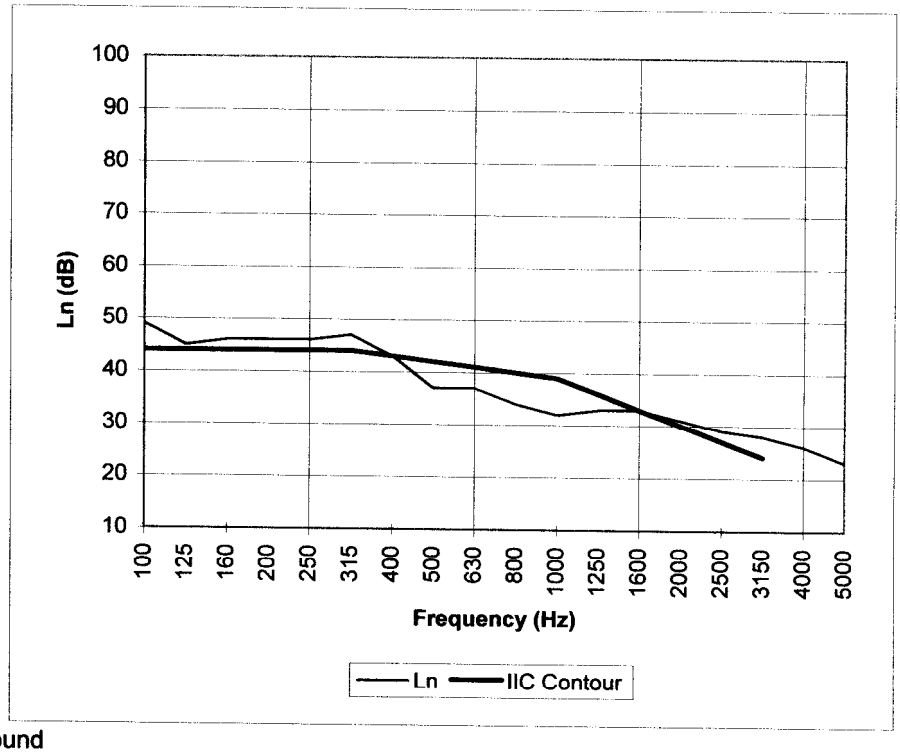
Test: ASTM E 492 - 04 / ASTM E 989 - 89

Test Number: NGC7007098

Date: 7/16/2007

Impact Insulation Class IIC = 68 dB

Frequency [Hz]	L_n [dB]	
100	49	
125	45	*
160	46	
200	46	
250	46	
315	47	
400	43	
500	37	
630	37	*
800	34	
1000	32	
1250	33	
1600	33	
2000	31	
2500	29	
3150	28	
4000	26	
5000	23	



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

L_n = Normalized Sound Pressure Level, dB

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