Acoustical • Analytical • Fire • Structural
NGC Testing Services©

Acoustical Testing Laboratory

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

TEST REPORT

for

Diversified Foam Products
5117 Central Highway
Pennsauken NJ 08109
Craig Keane / 856-662-2273

Impact Sound Transmission Test

ASTM E 492 – 04 / ASTM E 989 – 89
On

Wood Laminate Flooring over
Floor Muffler with Advanced Cell Technology Underlayment on
6 Inch (152 mm) Concrete Slab Floor-Ceiling Assembly with
Suspended Gypsum Board Ceiling

Reissued 01/10/2008

Test Numbers: NGC 7006057

Assignment Number: G-315

Test Date: 07/18/2006

Report Date: 08/09/2006

Submitted by: _____
Craig G. Cooper
Test Engineer

Reviewed by: _____
Robert J. Menichetti
Director

Report Number: NGC 7006057

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.

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

Specimen Description: Floor-ceiling assembly. 6 inch (152mm) concrete slab with suspended gypsum ceiling covered with, according to client; wood laminate flooring over Floor Muffler with Advanced Cell Technology Underlayment.

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

- 1 layer of T&G wood laminate flooring, 9.9mm (0.39) in. thick, 197mm (7-3/4 in.) wide planks, 49.8mm (1.96 PSF).
- 1 layer of 2.3mm (0.09 in.) yellow "Floor Muffler with Advanced Cell Technology" foam underlayment ID: DLPYEL.08.0615020, 0.098 kg/m^2 (0.02 PSF).
- 152mm (6 in.) thick reinforced concrete slab 366 kg/m^2 (75.0 PSF).
- Drywall grid suspension system consisting of 15.9mm (5/8 in.) type X gypsum board 11.2 kg/m^2 (2.3 PSF) attached with 28.6mm (1-1/8in.) screws, 305mm (12 in.) o.c. to suspended grid suspension system. 305mm (12 in.) plenum with 89mm (3-1/2 in.) lay-in fiberglass insulation 0.78 kg/m^2 (0.16 PSF).

The overall weight of the test assembly is 387.8 kg/m^2 (79.44 PSF) nominal.

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

Specimen size: 3658mm x 4877mm (12 ft x 16 ft).

Test samples were submitted by client and tested as received.

Conditioning: Assembly was stored under room conditions prior to testing.
Cure Times:
Concrete 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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ASTM E 492 – 04 / ASTM E 989 – 89
On

Wood Laminate Flooring over DFPYEL.08.0615020 Underlayment on 6 Inch (152 mm) Concrete Slab Floor-Ceiling Assembly with Suspended Gypsum Board Ceiling

Test Numbers: NGC 7006057

Assignment Number: G-315

Test Date: 07/18/2006

Report Date: 08/09/2006

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Normalized impact sound pressure level

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

Test Number: NGC7006057 Date: 7/18/2006

Size: 17.8 m²

Source room

Temperature [°C]: 23.8

Humidity [%]: 54

Receiving room

Volume V = 40 m³

Temperature [°C]: 26.3

Humidity [%]: 54

Impact Insulation Class IIC = 74 dB

Sum of unfavorable deviations: 28.0 dB

Max. unfavorable deviation: 7.0 dB at 100 Hz

Frequency [Hz]	L_n [dB]	L2 [dB]	T [s]	Corr. [dB]	u.Dev. [dB]	ΔL_n
100	45.0	50.7	2.51	-5.7	7.0	0.32
125	45.0	51.1	2.89	-6.1	7.0	0.03
160	44.0	51.5	3.50	-7.5	6.0	0.28
200	39.0	46.0	3.09	-7.0	1.0	0.16
250	44.0	50.6	3.24	-6.6	6.0	0.95
315	35.0	41.9	3.16	-6.9	0.0	0.17
400	32.0	38.9	2.92	-6.9	0.0	0.12
500	32.0	38.1	2.71	-6.1	0.0	0.06
630	30.0	36.2	2.61	-6.2	0.0	0.07
800	23.0	29.2	2.66	-6.2	0.0	0.05
1000	21.0	27.3	2.60	-6.3	0.0	0.06
1250	21.0	26.9	2.31	-5.9	0.0	0.05
1600	20.0	25.0	2.17	-5.0	0.0	0.04
2000	18.0	23.0	1.84	-5.0	0.0	0.05
2500	19.0	23.2	1.63	-4.2	0.0	0.04
3150	19.0	22.6	1.56	-3.6	1.0	0.05
4000	15.0	18.5	1.43	-3.5	0.0	0.04
5000	12.0	14.6	1.30	-2.6	0.0	0.04

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

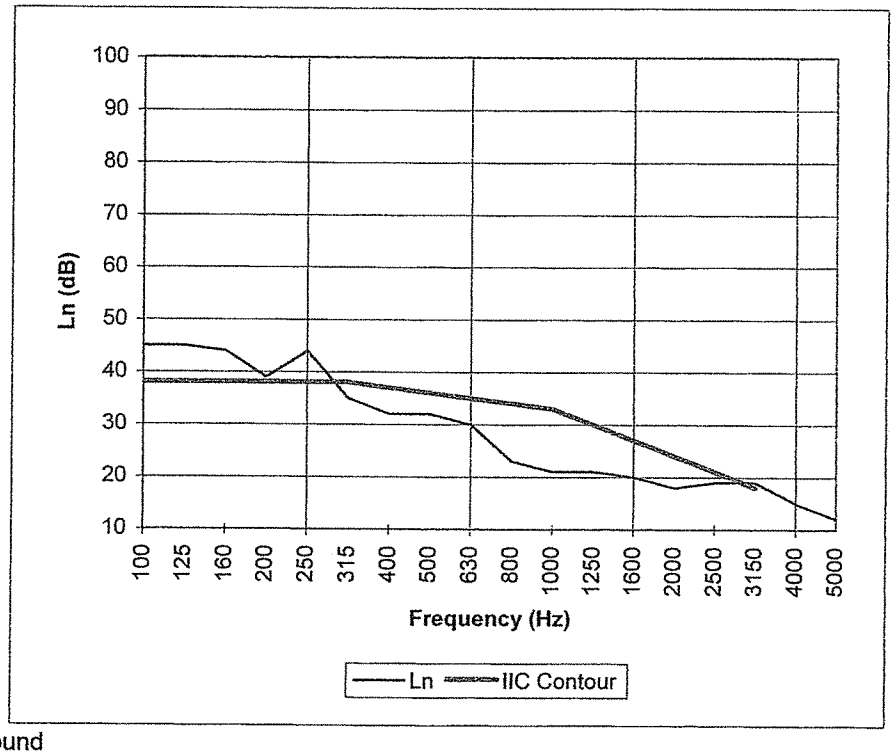
Test: ASTM E 492 - 04 / ASTM E 989 - 89

Test Number: NGC7006057

Date: 7/18/2006

Impact Insulation Class IIC = 74 dB

Frequency [Hz]	L_n [dB]	
100	45	
125	45	*
160	44	
200	39	
250	44	
315	35	
400	32	
500	32	*
630	30	*
800	23	*
1000	21	*
1250	21	
1600	20	
2000	18	
2500	19	
3150	19	
4000	15	
5000	12	*



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

L_n = Normalized Sound Pressure Level, dB