



Acoustical Testing Laboratory



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under Lab Code 200291

Test Report for

Flex-Guard Products, Inc./
BondTech Industries

DRP, INC

www.tiletool.net

561-2416678

Impact Sound Transmission Test
ASTM E 492 - 90 / ASTM E 989 - 89

on

6" Concrete Slab with Quarry Tile
Installed Over "BondTech/Flex-Guard Sheeting

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Report Number: NGC 7001018

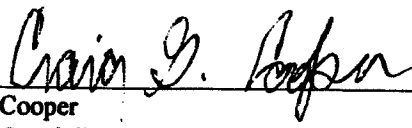
Assignment Number: G-136

Specimen Receipt Date: 06/06/2001

Test Date: 06/22/2001

Report Date: 06/25/2001

Submitted by:


Craig G. Cooper
Research Specialist

Reviewed by:


Robert J. Menchetti
Manager

The results reported above apply to specific samples submitted for measurement.
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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: Concrete Slab with Quarry Tile over 1 layer of 0.037" BondTech sheeting underlayment. (per client description) with suspended dry wall ceiling assembly with insulation.

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 installed using standard mortar and grout mixtures (5.82 PSF)
- 1 layer of 0.037" thick underlayment on the concrete slab. (0.20" PSF)
- 6" thick reinforced concrete slab (75.00 PSF)
- 12" ceiling plenum with 3 1/2" of unfaced 0.75 PCF fiberglass insulation (0.216 PSF) supported by the metal ceiling grid system.
- Suspended metal ceiling grid system (0.23 PSF) for gypsum board application with main tees at 48" o.c. and cross channels at 24" o.c..
- 5/8" type X gypsum board (2.485 PSF) screw applied, 12" o.c. to the suspended metal ceiling system.

The overall weight of the test assembly is 83.95 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: 10 ft x 14 ft.

Preconditioning: Tile, Mortar, and Grout cured for 7 days. 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 - 90 / ASTM E 989 - 89

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Test Number: NGC7001018

Date: 06/22/2001

Size: 13.02 m²

Source room

Receiving room

Volume V = 39.33 m³

Temperature [°C]: 23.2

Temperature [°C]: 23.0

Humidity [%]: 65

Humidity [%]: 54

Impact Insulation Class IIC = 71 dB

Sum of unfavourable deviations: 29.0 dB

Max. unfavourable deviation: 6.0 dB at 160 Hz

Frequency [Hz]	L _n [dB]	L ₂ [dB]	T [s]	Corr [dB]	U-Dev [dB]	ΔL _n
100	43.0	47.9	2.00	-4.9	2.0	0.290
125	46.0	51.8	2.56	-5.8	5.0	0.560
160	47.0	54.4	3.33	-7.4	6.0	0.337
200	40.0	46.6	3.04	-6.6	--	0.145
250	44.0	51.3	3.41	-7.3	3.0	0.184
315	38.0	45.5	3.25	-7.5	--	0.113
400	36.0	42.9	3.07	-6.9	--	0.082
500	37.0	43.2	2.89	-6.2	--	0.093
630	36.0	41.9	2.73	-5.9	--	0.071
800	30.0	36.6	2.81	-6.6	--	0.041
1000	27.0	33.8	2.73	-6.8	--	0.049
1250	27.0	32.8	2.45	-5.8	--	0.042
1600	29.0	34.2	2.23	-5.2	--	0.045
2000	31.0	35.3	1.84	-4.3	4.0	0.051
2500	29.0	33.3	1.65	-4.3	5.0	0.044
3150	25.0	29.0	1.57	-4.0	4.0	0.044
4000	24.0	27.5	1.41	-3.5	--	0.032
5000	16.0	19.2	1.27	-3.2	--	0.040

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

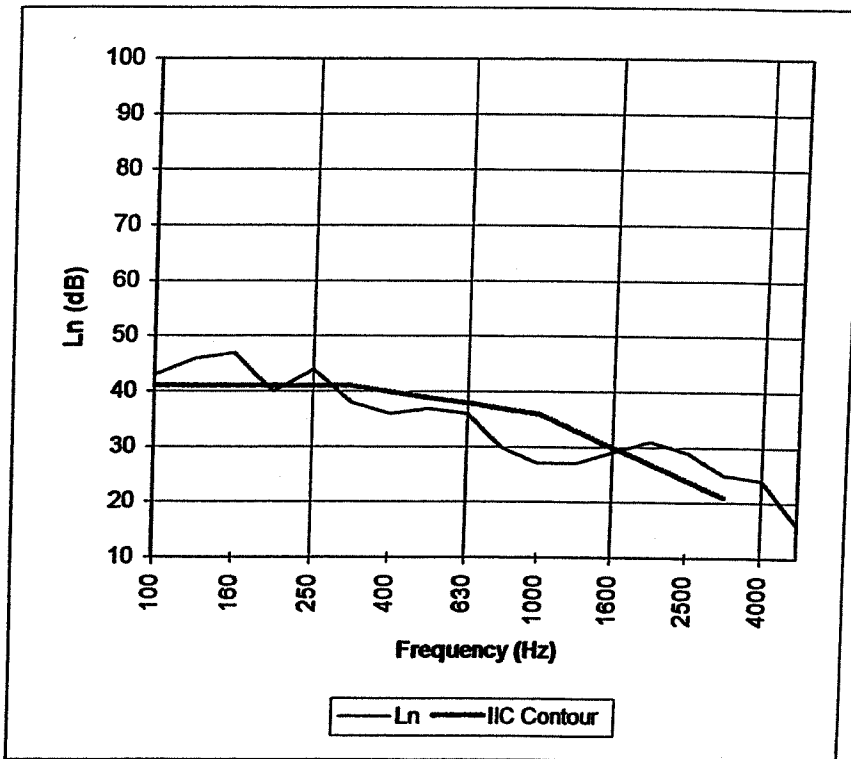
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Test Number: NGC7001018

Date: 06/22/2001

Impact Insulation Class IIC = 71 dB

Frequency	L_n
[Hz]	[dB]
100	43
125	46
160	47
200	40
250	44
315	38
400	36
500	37
630	36
800	30
1000	27
1250	27
1600	29
2000	31
2500	29
3150	25
4000	24
5000	16



* 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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