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Acoustical Testing Laboratory

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TEST REPORT

for

Unifloor Underlay Systems BV
Munsterstraat 24
7418EV DEVENTER
The Netherlands
Gerry Maatjes/ 31 570 85 55 33

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

Floating MDF Laminate Floor Covering over REDUPAX Underlayment Installed over 6" Concrete Slab

Report Number: NGC 7003011

Assignment Number: G-171

Specimen Receipt Date: 03/17/2003

Test Date: 03/19/2003

Report Date: 03/26/2003

Submitted by: _____
Craig G. Cooper
Test 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.
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1650 Military Road · Buffalo, NY 14217-1198
(716)873-9750 · Fax (716)873-9753 · ngctest@nationalgypsum.com

Report Number: NGC 7003011

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.

Specimen Description: Floating MDF Laminated Floor Covering over UNIFLOOR bv Deventer 'REDUPAX' Underlayment installed over 6" Concrete Slab.

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

- 1 layer of MDF Laminate Lock T &G flooring boards, each 1200 mm (47-1/4") x 185.7 mm (7-5/16") x 7.9 mm (5/16"), 6.64 kg/m^2 (1.36PSF)
- 1 layer of 8 mm (0.31") thick 'REDUPAX' pressed fibrous material underlayment panels, 56 mm (22") x 79 mm (31"), 4.15 kg/m^2 (0.85 PSF) installed with the long dimension perpendicular to the finish floor board direction.
- 1 layer of 0.1 mm (0.004") plastic sheeting.
- 6" thick reinforced concrete slab, 366 kg/m^2 (75.00 PSF)

The overall weight of the test assembly is 376.9 kg/m^2 (77.21PSF).

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: 3.66 m x 4.88 m (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 - 90 / ASTM E 989 - 89

Test Number: NGC7003011 Date: 03/20/2003

Size: 17.8 m²

Source room

Temperature [°C]: 19.6

Humidity [%]: 37

Receiving room

Volume V = 49.0 m³

Temperature [°C]: 20.0

Humidity [%]: 59

Impact Insulation Class IIC = 52 dB

Sum of unfavourable deviations: 24.0 dB

Max. unfavourable deviation: 8.0 dB at 160 Hz

Frequency [Hz]	L_n [dB]	L2 [dB]	T [s]	Corr. [dB]	u.Dev. [dB]	ΔL_n
100	61.0	66.4	2.69	-5.4	1.0	0.222
125	64.0	68.9	2.64	-4.9	4.0	0.166
160	68.0	73.4	2.60	-5.4	8.0	0.225
200	66.0	71.3	2.93	-5.3	6.0	0.146
250	65.0	70.9	2.94	-5.9	5.0	0.121
315	57.0	62.4	2.94	-5.4	-.-	0.099
400	59.0	64.4	2.76	-5.4	-.-	0.084
500	56.0	60.8	2.46	-4.8	-.-	0.083
630	54.0	58.5	2.43	-4.5	-.-	0.071
800	47.0	51.8	2.64	-4.8	-.-	0.060
1000	43.0	48.5	2.61	-5.5	-.-	0.057
1250	37.0	41.2	2.13	-4.2	-.-	0.060
1600	33.0	36.6	1.96	-3.6	-.-	0.062
2000	28.0	31.8	1.76	-3.8	-.-	0.054
2500	22.0	25.1	1.57	-3.1	-.-	0.056
3150	17.0	19.9	1.44	-2.9	-.-	0.055
4000	15.0	17.5	1.26	-2.5	-.-	0.043
5000	12.0	13.8	1.13	-1.8	-.-	0.046

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

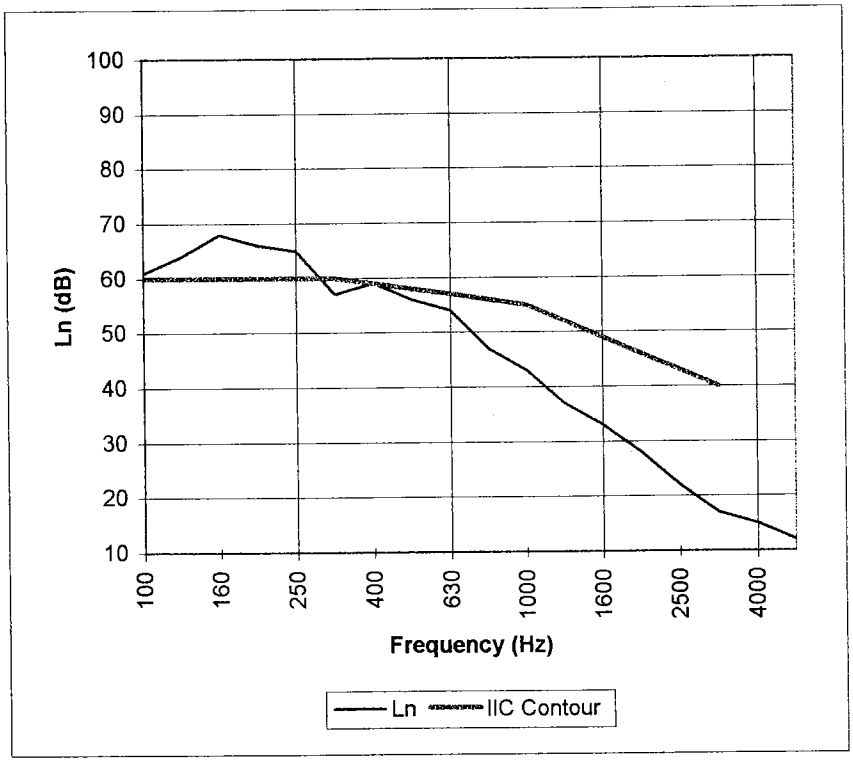
Test: ASTM E 492 - 90 / ASTM E 989 - 89

Test Number: NGC7003011

Date: 03/20/2003

Impact Insulation Class IIC = 52 dB

Frequency [Hz]	L_n [dB]	
100	61	
125	64	
160	68	
200	66	
250	65	
315	57	
400	59	
500	56	
630	54	
800	47	
1000	43	
1250	37	
1600	33	
2000	28	
2500	22	*
3150	17	*
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

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