



# Acoustical Testing Laboratory



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

## TEST REPORT

for

DEVINE COLOR® FLOOR  
333 South State St. V-304  
Lake Oswego, OR 97034  
Ashley Schwarz / 503-387-5840

### Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors Test

ASTM E 2179 – 03 (2009)

On

**6 Inch (152.4 mm) Concrete Slab Floor-Ceiling Assembly  
Overlaid with;  
DevineLock™ Floating Planks on Comfort Talent Underlayment**

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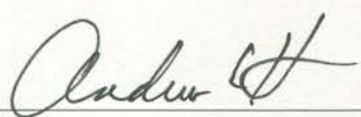
Report Number: NGC 7012038

Assignment Number: G-782


Test Date: 04/04/2012

Report Date: 05/25/2012

Submitted by: \_\_\_\_\_

  
Andrew E. Heuer  
Senior Test Engineer

Reviewed by: \_\_\_\_\_

  
Robert J. Menchetti  
Director

The results reported above apply to specific samples submitted for measurement.  
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Report Number: NGC 7012038

**Test Method:** This test method is in accordance with American Society for Testing and Materials Standard Test Method for Laboratory Measurement of Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors – Designation: E 2179 – 03 (2009).

A 30 second averaging time was used for measurement of sound pressure levels.

**Specimen Description:** 6 inch (152.4 mm) concrete slab floor-ceiling assembly overlaid with, according to client, DevineLock™ Floating Planks on Comfort Talent underlayment.

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

- 1 layer of, according to client, DevineLock™ Floating Planks; nominal plank size: 4.0mm (0.158 in.) thick, 177.8 mm (7 in.) wide, 1244.6 mm (49 in.) long. Sample weight was 7.52 kg/m<sup>2</sup> (1.54 PSF).
- 1 layer of, according to client, floating Comfort Talent underlayment; observed to be: 1.52 mm (0.06 in.) thick, weighing 1.17 kg/m<sup>2</sup> (0.24 PSF). The seams were butted and taped together.
- 6 inch (152.4 mm) thick reinforced concrete slab, weighing 366.2 kg/m<sup>2</sup> (75.0 PSF).

The overall weight of the test assembly is 374.8 kg/m<sup>2</sup> (76.78 PSF).

The perimeter of the concrete slab was sealed with a rubber gasket and a sand filled trough. The test assembly is structurally isolated from the receiving room.

**Specimen size:** 3657.6 mm x 4876.8 mm (12 ft. x 16 ft.)  
Category II

**Specimen size:** 3657.6 mm x 4876.8 mm (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 through 6.

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Test: ASTM E 2179 - 03 (2009)			Bare 6" Concrete Slab			
Test Report: NGC7012038			Date: 4/4/2012		Page 3 of 6	
Specimen Size [m <sup>2</sup> ]: 17.8						
<b>Source room</b>			<b>Receiving room</b>			
Rm Temp [°C]: 17.5			Volume [m <sup>3</sup> ]: 63.9			
Humidity [%]: 53			Rm Temp [°C]: 17.5			
			Humidity [%]: 53			
Frequency [Hz]	L <sub>n</sub> [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔL <sub>n</sub>
50	62	67.7	15.61	-5.7		1.9
63	60	63.9	21.96	-3.9		2.0
80	58	64.5	12.18	-6.5		2.6
100	59	66.4	11.32	-7.4		3.4
125	68	73.0	3.51	-5.0		2.8
160	68	74.4	4.00	-6.4		2.8
200	68	73.9	3.86	-5.9		1.0
250	70	74.7	3.05	-4.7		1.0
315	69	74.2	3.09	-5.2		0.9
400	70	74.4	2.91	-4.4		0.3
500	68	72.6	2.77	-4.6		0.3
630	70	73.7	2.65	-3.7		0.3
800	70	73.9	2.59	-3.9		0.3
1000	71	74.9	2.43	-3.9		0.3
1250	72	75.2	2.17	-3.2		0.1
1600	73	75.7	2.11	-2.7		0.1
2000	74	76.6	1.96	-2.6	1	0.3
2500	75	77.0	1.81	-2.0	5	0.3
3150	75	76.9	1.63	-1.9	8	0.4
4000	77	78.6	1.45	-1.6		0.6
5000	75	76.1	1.25	-1.1		0.7
<p>L<sub>n</sub> = Normalized Sound Pressure Level, dB  L2 = Receiving Room Level, dB  d = Decay Time, dB/second  ΔL<sub>n</sub> = Uncertainty for 95% Confidence Level</p>						

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Test: ASTM E 2179 - 03 (2009)		6" Concrete Slab with Specimen					Page 4 of 6
Test Report: NGC7012038		Date: 4/4/2012					
Specimen Size [m <sup>2</sup> ]: 17.8							
<b>Source room</b>			<b>Receiving room</b>				
Rm Temp [°C]: 17.5		Volume [m <sup>3</sup> ]: 63.9		Rm Temp [°C]: 17.5			
Humidity [%]: 53		Humidity [%]: 53					
Frequency [Hz]	L <sub>n</sub> [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔL <sub>n</sub>	
50	60	64.0	15.02	-6.0		2.27	
63	54	56.8	22.06	-3.8		1.52	
80	58	61.3	14.31	-6.3		2.03	
100	59	66.6	15.80	-5.6		2.41	
125	63	67.9	3.16	-4.9	1	2.05	
160	64	71.8	4.03	-5.8	4	2.38	
200	65	72.2	3.77	-5.2	4	0.69	
250	65	75.4	3.04	-4.4	7	0.72	
315	62	74.7	3.18	-4.7	3	0.56	
400	61	76.2	2.98	-4.2	5	0.43	
500	59	72.1	2.89	-4.1	3	0.31	
630	59	69.3	2.66	-4.3		0.42	
800	57	66.4	2.64	-4.4		0.20	
1000	56	60.4	2.44	-3.4		0.20	
1250	55	56.8	2.17	-2.8		0.19	
1600	52	52.7	2.03	-2.7		0.12	
2000	48	48.6	1.88	-2.6		0.09	
2500	45	46.2	1.71	-2.2		0.09	
3150	41	41.1	1.55	-2.1		0.12	
4000	37	32.9	1.37	-0.9		0.14	
5000	31	26.2	1.20	-0.2		0.15	
<p>L<sub>n</sub> = Normalized Sound Pressure Level, dB  L2 = Receiving Room Level, dB  d = Decay Time, dB/second  ΔL<sub>n</sub> = Uncertainty for 95% Confidence Level</p>							

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## EFFECTIVENESS OF FLOOR COVERINGS IN REDUCING IMPACT SOUND TRANSMISSION THROUGH CONCRETE FLOORS

Test: ASTM E 2179 - 03 (2009)

Test Report: NGC7012038

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Date: 4/4/2012

**Increase in Impact Insulation Class  $\Delta$ IIC = 22.0**

Frequency	$L_o$	$L_c$	$L_d$	$L_{ref}$	$L_{ref,c}$
[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]
100	59	59	0	67.0	67.0
125	68	63	5	67.5	62.5
160	68	64	4	68.0	64.0
200	68	65	3	68.5	65.5
250	70	65	5	69.0	64.0
315	69	62	7	69.5	62.5
400	70	61	9	70.0	61.0
500	68	59	9	70.5	61.5
630	70	59	11	71.0	60.0
800	70	57	13	71.5	58.5
1000	71	56	15	72.0	57.0
1250	72	55	17	72.0	55.0
1600	73	52	21	72.0	51.0
2000	74	48	26	72.0	46.0
2500	75	45	30	72.0	42.0
3150	75	41	34	72.0	38.0

$L_o$  = Normalized Sound Pressure Level for Bare Standard Concrete Floor, dB  
 $L_c$  = Normalized Sound Pressure Level for Covering over Concrete Floor, dB  
 $L_d$  =  $L_o - L_c$ , dB  
 $L_{ref}$  = Reference Floor Average Normalized Impact Sound Pressure Level, dB  
 $L_{ref,c}$  =  $L_{ref} - L_d$ , dB

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## EFFECTIVENESS OF FLOOR COVERINGS IN REDUCING IMPACT SOUND TRANSMISSION THROUGH CONCRETE FLOORS

Test: ASTM E 2179 - 03 (2009)

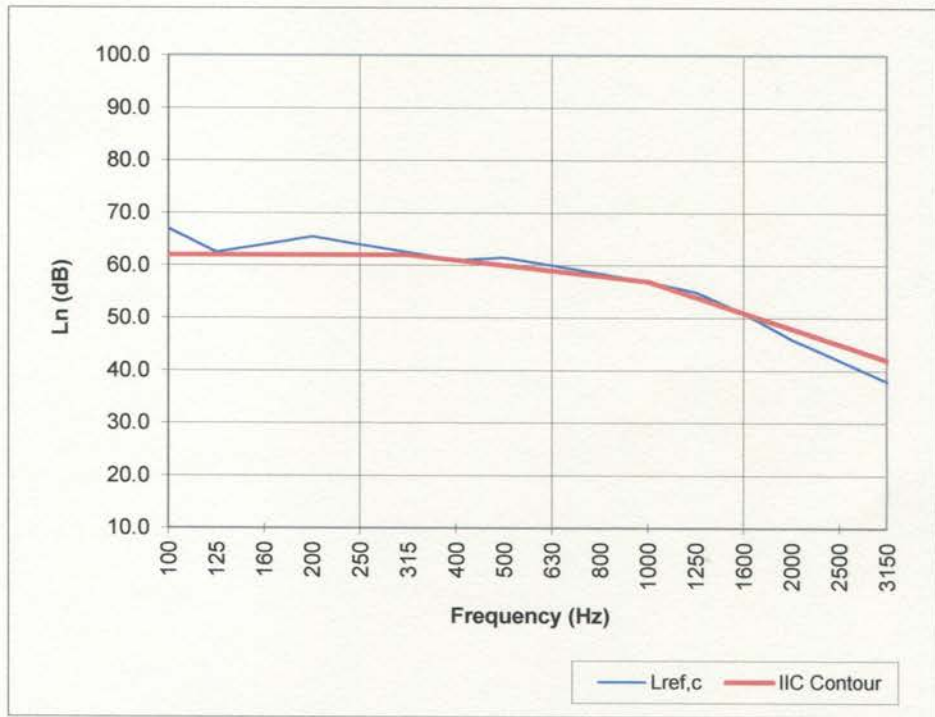
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Test Report: NGC7012038

Date: 4/4/2012

**Increase in Impact Insulation Class  $\Delta IIC = 22.0$**

Frequency [Hz]	Lref,c [dB]
100	67.0
125	62.5
160	64.0
200	65.5
250	64.0
315	62.5
400	61.0
500	61.5
630	60.0
800	58.5
1000	57.0
1250	55.0
1600	51.0
2000	46.0
2500	42.0
3150	38.0



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

Lref,c = Lref - Ld, dB

$L_n$  = Normalized Sound Pressure Level, dB

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