

TEST REPORT

for

**Regupol America
33 Keystone Drive
Lebanon, PA 17042
Bill Devin/ 717-675-2198**

Impact Sound Transmission Test

ASTM E 492 – 09 / ASTM E 989 – 06

On

**8 Inch (203mm) Concrete Slab Overlaid with
Engineered Hardwood Flooring Adhered with Sikabond-T35 Adhesive over
Regupol Sonus HS300, 3 mm Underlayment Adhered with Sikabond-T35 Adhesive
With Suspended Gypsum Board Ceiling**

Report Number: NGC 7011096_R2


Assignment Number: G-709

Test Date: 08/12/2011

Report Approval Date: 09/13/2011

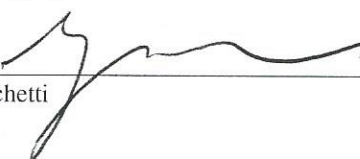
Reissue Date: 8/20/2014

Submitted by:



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The results reported above apply to specific samples submitted for measurement. No responsibility is assumed for performance of any other specimen. The laboratory's accreditation or any of its test reports in no way constitute or imply product certification, approval, or endorsement by NVLAP or any agent of the U.S. Government. This report may not be reproduced except in full, without written approval of the laboratory.

Revision Summary:

Date	SUMMARY
Approval Date: 9/13/2011	Original issue date. Original NGCTS report #: NGC 7011096
Reissue Date: 6/24/2014	Reissued Report #: NGC 7011096_R1 The report was reissued due to a client designated company name change.
Reissue Date: 8/20/2014	Reissue Report #: NGC 7011096_R2 The report was revised and reissued due to a client designate product name change and company name change.

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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 492-09 / E 989-06.
The uncertainty limits of each tapping machine location met the precision requirements of section A1.4 of ASTM E 492-09.

Specimen Description: 8 inch (203mm) Concrete Slab including suspended grid 5/8 inch gypsum board ceiling system, overlaid with, according to client, Engineered wood flooring with Sikabond-T35 adhesive over Regupol Sonus HS300, 3 mm underlayment adhered with Sikabond-T35 adhesive.

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

- 1 layer of 13.1mm (0.515 in.) Hard Maple Select V Engineered Hardwood flooring. Samples were 127mm (5 in.) wide, by random length planks. Sample weight was 7.5 kg/m² (1.54 PSF)
- 1 layer of Sikabond-T35 adhesive. Sample was troweled on using client supplied P5 trowel.
- 1 layer of, according to client, Regupol Sonus HS300, 3 mm underlayment. The underlayment was adhesively applied to the concrete with Sikabond-T35 adhesive. Measured thickness: 3.1 mm (0.12 in.)
Measured weight: 2.3 kg/m² (0.48 PSF).
- 1 layer of Sikabond-T35 adhesive. Sample was troweled on using client supplied P5 trowel.
- 203.2mm (8 in.) thick reinforced concrete slab 488.2 kg/m² (100.0 PSF).
- 88.9mm (3-1/2 in.) fiberglass unfaced batt insulation. Sample weight was 0.78 kg/m² (0.16 PSF). The insulation was laid over the suspended grid system parallel with the main tee's.
- Gypsum board ceiling suspension system. System is comprised of main tees and cross tees. The main tees were placed 1219.2mm (48 in.) on center and the cross tees were placed 609.6mm (24 in.) on center. 16 gauge galvanized tie wire was used to attach the main tees to concrete anchors, located 1219.2mm (48 in.) o.c. along the longitudinal axis, suspending the grid 304.8mm (12 in.) below the concrete slab.
- 1 layer of 15.9mm (5/8 in.) Type X gypsum board. Sample was observed to be 15.9mm (0.628 in.) thick and weighed 11.2 kg/m² (2.3 PSF). The board was attached 304.8mm (12 in.) o.c. parallel to suspended grid suspension system mains, using 31.8mm (1.250 in.) Type S drywall screws. The board joints were taped.

The overall weight of the test assembly is 510.1 kg/m² (104.48 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.

Test Floor Size: 3657.6mm x 4876.8mm (12 ft. x 16 ft.).

Conditioning: Adhesive cured for minimum of 24 hours. Concrete cured minimum of 28 days.

Test Results: The results of the tests are given on pages 4 and 5.

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Normalized impact sound pressure level						
Test: ASTM E 492 - 09 / ASTM E 989 - 06						
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Specimen Size [m ²]: 17.8					Date: 8/12/2011	
Source room			Receiving room			
Rm Temp [°C]: 23.5			Volume [m ³]: 60			
Humidity [%]: 52			Rm Temp [°C]: 22.5			
				Humidity [%]: 49		
Impact Insulation Class IIC [dB]:			74			
Sum of Unfavorable Deviations [dB]:			27			
Max. Unfavorable Deviation [dB]:			8 at 100 Hz			
Frequency	L _n	L2	d	Corr.	u.Dev.	ΔL _n
[Hz]	[dB]	[dB]	[dB/s]	[dB]	[dB]	
100	46	48.7	37.4	-2.7	8	1.60
125	42	46.3	23.4	-4.3	4	1.94
160	45	50.3	17.2	-5.3	7	1.64
200	43	48.9	15.8	-5.9	5	0.67
250	37	42.6	16.8	-5.6		0.66
315	40	45.3	17.6	-5.3	2	0.48
400	38	44.8	18.4	-6.8	1	0.39
500	34	41.0	18.9	-7.0		0.26
630	33	39.9	21.2	-6.9		0.60
800	25	30.8	21.8	-5.8		0.18
1000	27	31.4	23.8	-4.4		0.11
1250	24	27.2	26.9	-3.2		0.20
1600	14	18.8	29.0	-4.8		0.17
2000	14	18.5	32.1	-4.5		0.17
2500	11	15.3	36.3	-4.3		0.23
3150	10	14.5	38.5	-4.5		0.36
4000	11	14.1	44.5	-3.1		0.33
5000	8	11.0	50.5	-3.0		0.32
L _n = Normalized Sound Pressure Level, dB L2 = Receiving Room Level, dB d = Decay Time, dB/second ΔL _n = Uncertainty for 95% Confidence Level						

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Normalized impact sound pressure level

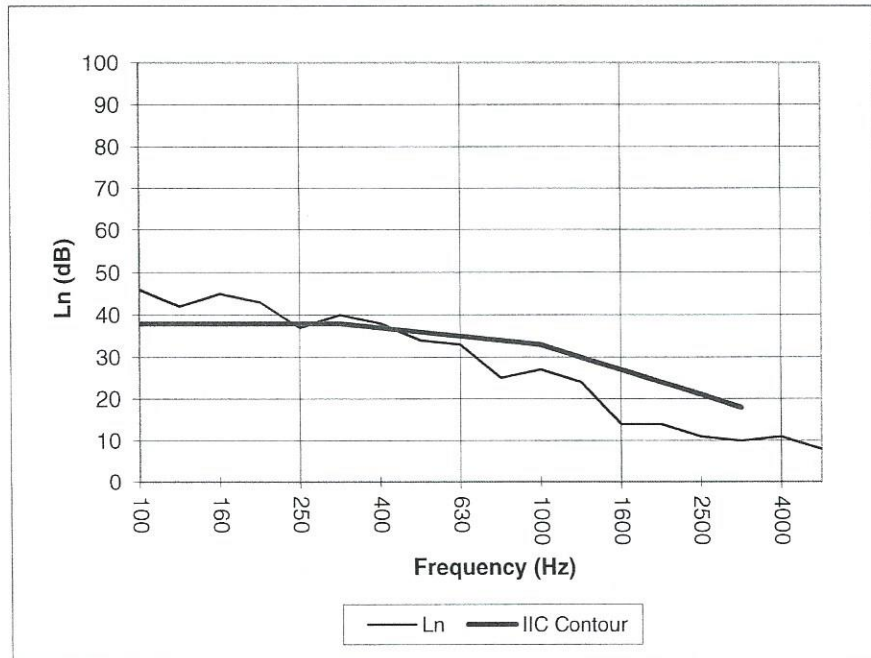
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Test Report: NGC 7011096_R2
 Test Date: 8/12/2011
 Specimen Size [m²]: 17.8

Impact Insulation Class IIC [dB]: 74

Frequency [Hz]	L _n [dB]
100	46
125	42
160	45
200	43
250	37
315	40
400	38
500	34
630	33
800	25
1000	27
1250	24
1600	14
2000	14
2500	11
3150	10
4000	11
5000	8



* 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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