

TEST REPORT

for

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

Sound Transmission Loss Test

ASTM E 90 – 04 / E 413 - 10

On

**6 Inch (152mm) Concrete Slab Overlaid with
Engineered Hardwood Flooring Adhered with Sikabond-T35 Adhesive over
Regupol Sonus HS1000 Underlayment Adhered with Sikabond-T35 Adhesive With
Suspended Gypsum Board Ceiling**


Report Number: NGC 5011055_R2

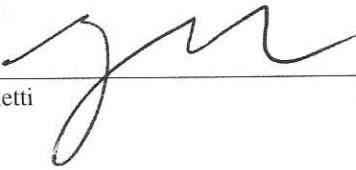
Assignment Number: G-709

Test Date: 8/10/2011

Report Approval Date: 9/12/2011

Reissue Date: 8/20/2014

Submitted by: 
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Reviewed by: 
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Revision Summary:

Date	SUMMARY
Approval Date: 9/12/2011	Original issue date. Original NGCTS report: NGC 5011055
Reissue Date: 6/23/2014	Reissued Report #: 5011055_R1 The report was reissued due to a client designated company name change.(SoundSeal)
Reissue Date: 8/20/2014	Reissued Report #: 5011055_R2 The Report was revised and reissued due to a client designate product name change and company name change.(Regupol)

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Test Method: This test method conforms explicitly with the American Society for Testing and Materials Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements - Designation: E 90 - 04 / E 413 - 04.

Specimen Description: 6 inch (152mm) 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 HS1000, 10 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 HS1000, 10mm underlayment. The underlayment was adhesively applied to the concrete with Sikabond-T35 adhesive. Measured thickness: 10.0 mm (0.395 in.) Measured weight: 7.7 kg/m² (1.58 PSF)
- 1 layer of Sikabond-T35 adhesive. Sample was troweled on using client supplied P5 trowel.
- 152.4mm (6 in.) thick reinforced concrete slab 366.2 kg/m² (75.0 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 tees.
- Gypsum board ceiling grid 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 393.4 kg/m² (80.58 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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Sound Transmission Loss Test Data

Test: ASTM E 90 - 04 / ASTM E 413 - 04

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Test Report: NGC 5011055_R2
 Specimen Size [m²]: 17.8

Date: 8/10/2011

Source room
 Volume [m³]: 53.2
 Rm Temp [°C]: 24.5
 Humidity [%]: 63

Receiving room
 Volume [m³]: 60
 Rm Temp [°C]: 23
 Humidity [%]: 48

Sound Transmission Class STC [dB]: 66

Sum of Unfavorable Deviations [dB]: 31
 Max. Unfavorable Deviation [dB]: 7 at 315 Hz

Frequency [Hz]	STL [dB]	L1 [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔSTL
100	44	106.2	67.9	32.2	5.7		2.81
125	47	105.2	65.5	21.9	7.2	3	2.85
160	49	107.2	66.4	17.5	8.2	4	2.87
200	51	105.3	62.9	15.6	8.6	5	1.08
250	55	105.0	58.1	16.4	8.1	4	1.03
315	55	102.1	54.8	17.8	7.7	7	0.56
400	59	102.9	51.3	18.4	7.4	6	1.04
500	64	103.9	47.4	19.0	7.5	2	0.36
630	69	103.5	42.2	20.8	7.7		0.58
800	72	102.9	38.0	21.5	7.1		0.70
1000	75	99.5	31.0	23.9	6.5		0.47
1250	79	98.8	26.2	26.6	6.4		0.33
1600	82	98.3	22.7	28.4	6.4		0.73
2000	81	101.5	25.6	32.1	5.1		0.59
2500	81	101.9	26.1	36.4	5.2		0.78
3150	81	100.4	23.5	39.2	4.1		1.19
4000	83	97.6	18.5	44.7	3.8		1.33
5000	83	90.5	11.1	50.4	3.7		1.63

STL = Sound Transmission Loss, dB
 L1 = Source Room Level, dB
 L2 = Receiving Room Level, dB
 d = Decay Time, dB/second
 Δ STL = Uncertainty for 95% Confidence Level

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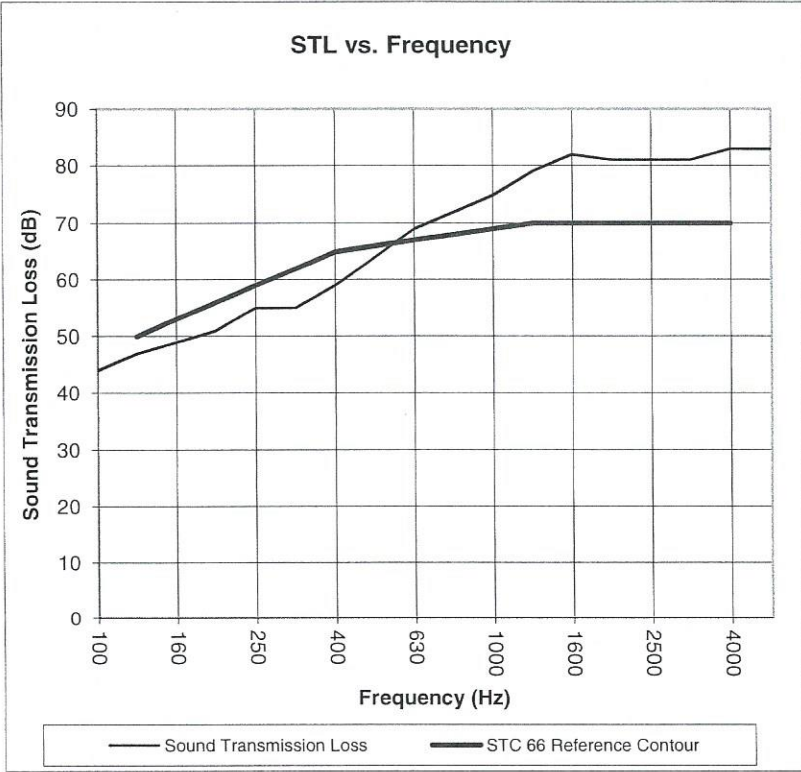
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Per: ASTM E 90 - 04 / ASTM E 413 - 04

Test Report: NGC 5011055_R2
 Test Date: 8/10/2011
 Specimen Size [m²]: 17.8

Sound Transmission Class STC = 66 dB

Frequency [Hz]	STL [dB]	ΔSTL
100	44	2.81
125	47	2.85
160	49	2.87
200	51	1.08
250	55	1.03
315	55	0.56
400	59	1.04
500	64	0.36
630	69	0.58
800	72	0.70
1000	75	0.47
1250	79	0.33
1600	82	0.73
2000	81	0.59
2500	81	0.78
3150	81	1.19
4000	83	1.33
5000	83	1.63



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

STL = Sound Transmission Loss, dB
 Δ STL = Uncertainty for 95% Confidence Level

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