

TEST REPORT

for

Regupol America LLC

11 Ritter Way

Lebanon, PA 17042

Florian Sassmannshausen / 717-675-2190

Sound Transmission Loss Test

ASTM E 90 – 09 / E 413 – 10

On

**6 Inch Concrete Slab Floor – Ceiling Assembly
Overlaid with 3 layers of Regupol Vibration 200 (17 mm)
and a 4 Inch Concrete Slab**

Report Number: NGC 5016053

Assignment Number: G-1296

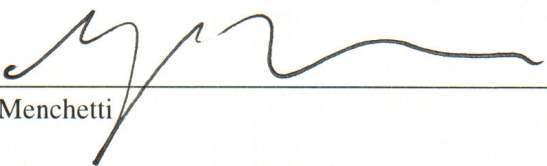
Test Date: 05/06/2016

Report Approval Date: 05/19/2016

Submitted by:


Anthony J. Rivers
Test Technician

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. The laboratory's accreditation or any of its test reports in no way constitute or imply product certification, approval, or endorsement by NVLAP, NIST or any agency of the Federal Government. This report may not be reproduced except in full, without written approval of the laboratory.

Revision Summary:

Date	SUMMARY
Approval Date: 05/19/2016	Original issue date: 05/19/2016 Original NGCTS report #: NGC 5016053

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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 - 09 / E 413 - 10.

Specimen Description: 6 inch concrete slab floor-ceiling assembly, overlaid with according to client, 3 layers of Regupol Vibration 200 (17 mm) and a 4 inch concrete slab.

The test specimen was a floor-ceiling assembly and was observed to consist of the following:
All weights and dimension are averaged:

- 101.6 mm (4 in.) thick reinforced concrete slab, weighing: 223.30 kg/m² (45.74 PSF)
- 3 layers of, according to the client, Regupol Vibration 200 (17 mm). The Regupol Vibration 200 (17 mm) was floating on the 6 inch concrete slab. Measured thickness: 54.86 mm (2.16 in.). Measured weight: 15.52 kg/m² (3.18 PSF)
- 152.4 mm (6 in.) thick reinforced concrete slab, weighing: 366.15 kg/m² (75.0 PSF)

The overall weight of the test assembly is: 604.98 kg/m² (123.92 PSF)

The perimeter of the test frame was sealed with a rubber gasket and a sand filled trough.

The test frame was structurally isolated from the receiving room.

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 4 and 5 of the report.

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Sound Transmission Loss Test Data

Test: ASTM E 90 - 04 / ASTM E 413 - 10

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Date: 5/6/2016

Specimen Size [m²]: 17.8

Source room

Volume [m³]: 84.75

Rm Temp [°C]: 19

Humidity [%]: 59

Receiving room

Volume [m³]: 128

Rm Temp [°C]: 19

Humidity [%]: 59

Sound Transmission Class STC [dB]: 59

Sum of Unfavorable Deviations [dB]: 26

Max. Unfavorable Deviation [dB]: 6 at 125 Hz

Frequency	STL	L1	L2	d	Corr.	u.Dev.	ΔSTL
[Hz]	[dB]	[dB]	[dB]	[dB/s]	[dB]	[dB]	
80	35	100.0	67.8	29.5	2.8		3.31
100	41	104.2	66.6	22.1	3.4		5.72
125	37	103.9	71.2	17.9	4.3	6	1.60
160	45	106.0	65.8	16.8	4.8	1	1.59
200	45	104.3	64.8	14.3	5.5	4	0.99
250	48	102.6	60.1	15.6	5.6	4	1.12
315	51	101.5	56.4	14.7	5.9	4	0.64
400	53	99.3	51.7	15.5	5.4	5	0.71
500	57	101.3	49.2	16.9	4.9	2	0.80
630	60	101.7	47.0	16.7	5.4		0.80
800	63	101.3	43.0	17.1	4.7		0.58
1000	67	99.1	37.0	16.7	4.8		0.59
1250	70	96.3	30.4	18.1	4.1		0.66
1600	73	97.0	28.4	19.5	4.4		1.04
2000	77	99.3	26.2	22.0	3.9		1.13
2500	78	100.7	26.4	23.8	3.6		1.01
3150	79	100.6	24.3	25.6	2.7		1.26
4000	82	98.0	18.7	29.4	2.6		1.96
5000	82	91.7	11.2	34.2	1.4		1.77

STL = Sound Transmission Loss, dB

L1 = Source Room Level, dB

L2 = Receiving Room Level, dB

d = Decay Rate dB/second

Δ STL = Uncertainty for 95% Confidence Level

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Sound Transmission Loss Test Data

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Per: ASTM E 90 - 04 / ASTM E 413 - 10

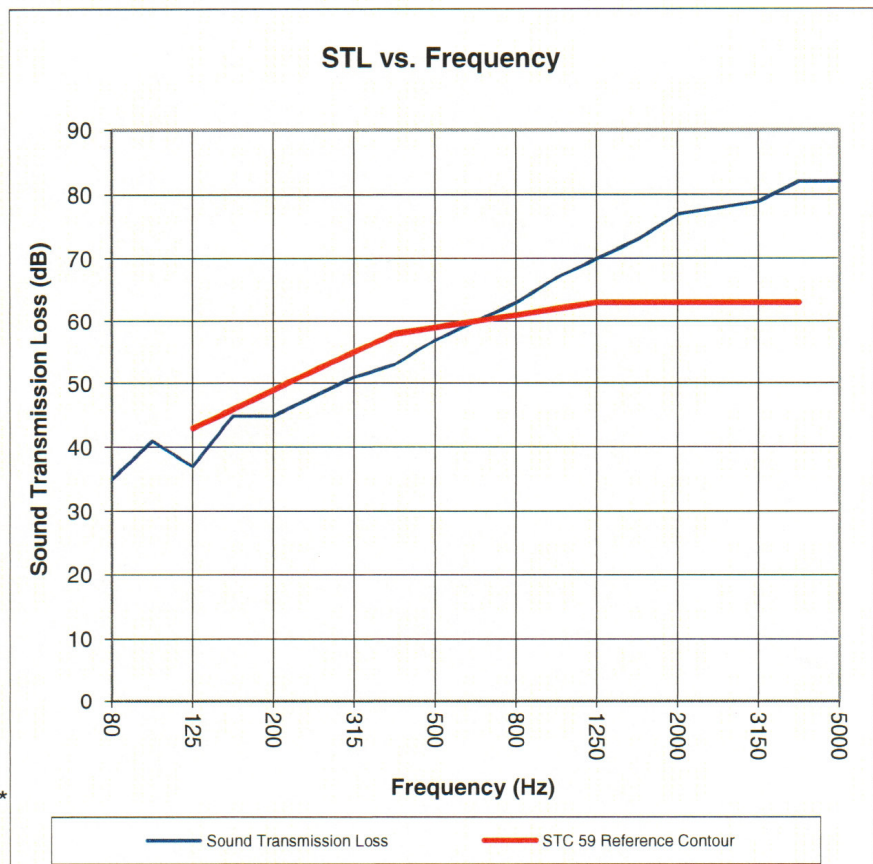
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Test Date: 5/6/2016

Specimen Size [m²]: 17.8

Sound Transmission Class STC = 59 dB

Frequency [Hz]	STL [dB]	ΔSTL
80	35	3.31
100	41	5.72
125	37	1.60
160	45	1.59
200	45	0.99
250	48	1.12
315	51	0.64
400	53	0.71
500	57	0.80
630	60	0.80
800	63	0.58
1000	67	0.59
1250	70	0.66
1600	73	1.04
2000	77	1.13
2500	78	1.01
3150	79	1.26
4000	82	1.96
5000	82	1.77



* 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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