TEST REPORT

for

Regupol America LLC
11 Ritter Way
Lebanon, PA 17042
Florian Sassmannshausen / 717-675-2190

Impact Sound Transmission Test

ASTM E 492 – 09 / ASTM E 989 – 06

On

6 Inch Concrete Slab Floor – Ceiling Assembly
Overlaid with 1 layer of Regupol Vibration 200 (17 mm)
and a 4 Inch Concrete Slab

Report Number: NGC 7016082

Assignment Number: G-1296

Test Date: 05/10/2016

Report Approval Date: 05/19/2016

Submitted by: _____
Anthony J. Rivers
Test Technician

Reviewed by: _____
Robert J. Menchetti
Director

Revision Summary:

Date	SUMMARY
Approval Date: 05/19/2016	Original issue date: 05/19/2016 Original NGCTS report #: NGC 7016082

Report Number: NGC 7016082

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: 6 inch concrete slab floor-ceiling assembly, overlaid with according to client, 1 layer 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/m^2 (45.74 PSF)
- 1 layer 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: 18.29 mm (0.72 in.). Measured weight: 5.17 kg/m^2 (1.06 PSF)
- 152.4 mm (6 in.) thick reinforced concrete slab, weighing: 366.15 kg/m^2 (75.0 PSF)

The overall weight of the test assembly is: 594.63 kg/m^2 (121.80 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.

Normalized impact sound pressure level

Test: ASTM E 492 - 09 / ASTM E 989 - 06

Test Report: NGC7016082 Date: 5/10/2016

Specimen Size [m²]: 17.8

Source room

Rm Temp [°C]: 20
Humidity [%]: 60

Receiving room

Volume [m³]: 128
Rm Temp [°C]: 20
Humidity [%]: 60

Impact Insulation Class IIC [dB]: 64

Sum of Unfavorable Deviations [dB]: 27

Max. Unfavorable Deviation [dB]: 7 at 160 Hz

Frequency [Hz]	L_n [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔL_n
80	58	57.7	29.64	0.3		1.04
100	52	53.4	22.04	-1.4	4	2.73
125	53	55.2	17.57	-2.2	5	0.87
160	55	57.9	16.38	-2.9	7	0.75
200	53	55.6	15.05	-2.6	5	0.78
250	52	55.0	15.38	-3.0	4	0.74
315	50	52.6	14.74	-2.6	2	0.68
400	46	48.8	15.66	-2.8		0.67
500	43	44.9	17.32	-1.9		0.34
630	40	42.5	16.70	-2.5		0.40
800	38	40.4	17.16	-2.4		0.50
1000	36	38.1	16.45	-2.1		0.39
1250	34	35.9	18.11	-1.9		0.55
1600	33	34.3	19.64	-1.3		0.66
2000	30	31.0	21.97	-1.0		0.67
2500	27	27.4	23.91	-0.4		0.78
3150	24	25.0	25.68	-1.0		0.86
4000	20	20.8	29.82	-0.8		0.99
5000	17	17.4	34.00	-0.4		1.21

L_n = Normalized Sound Pressure Level, dB
L2 = Receiving Room Level, dB
d = Decay Rate, dB/second
ΔL_n = Uncertainty for 95% Confidence Level

Normalized impact sound pressure level

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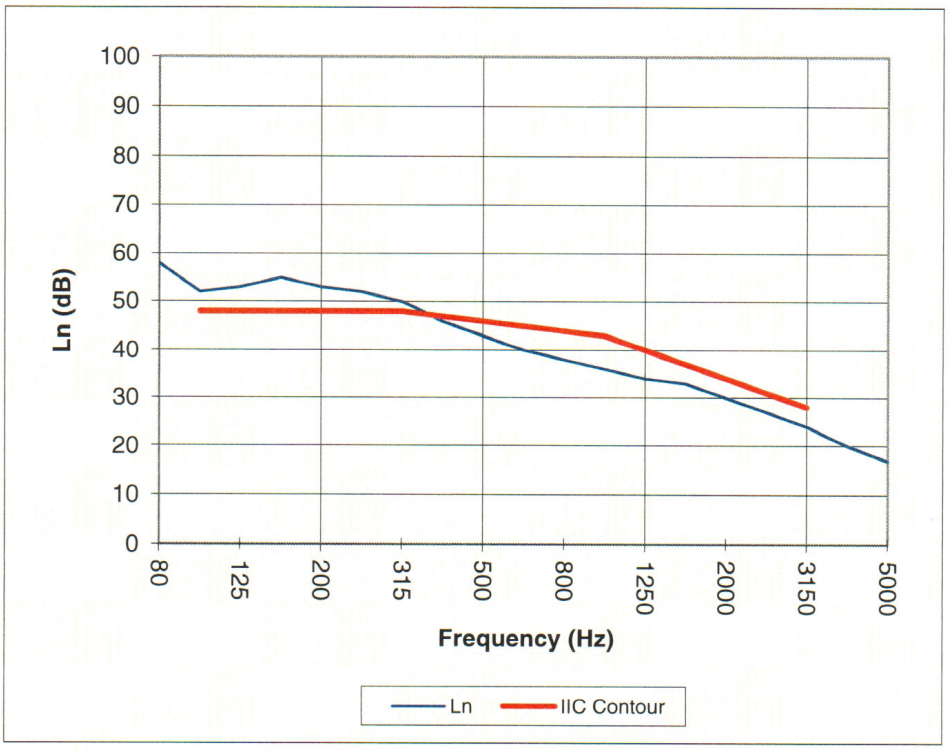
Specimen Size [m²]: 17.8

Impact Insulation Class IIC [dB]: 64

Frequency [Hz]	L_n [dB]
80	58
100	52
125	53
160	55
200	53
250	52
315	50
400	46
500	43
630	40
800	38
1000	36
1250	34
1600	33
2000	30
2500	27
3150	24
4000	20
5000	17



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

L_n = Normalized Sound Pressure Level, dB