

Acoustical Testing Laboratory



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Page 1 of 5

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 3 layers of Regupol Vibration 200 (17 mm) and a 4 Inch Concrete Slab

Report Number: NGC 7016080

1100 /010000

Assignment Number:

G-1296

Test Date:

05/09/2016

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.



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NGC 7016080 Regupol America LLC. 05/19/2016 Page 2 of 5

Revision Summary:

| Date | SUMMARY | | | |
|---------------------------|--------------------------------------|--|--|--|
| Approval Date: 05/19/2016 | Original issue date: 05/19/2016 | | | |
| | Original NGCTS report #: NGC 7016080 | | | |

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Report Number: NGC 7016080 Page 3 of 5

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, 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: $15.52 \text{ kg/m}^2 (3.18 \text{ PSF})$
- 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.

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

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Normalized impact sound pressure level

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

Page 4 of 5

Date: 5/9/2016 Test Report: NGC7016080

17.8 Specimen Size [m²]:

Receiving room Source room Volume [m³]: 128

Rm Temp [°C]: 19 Rm Temp [°C]: 19 Humidity [%]: 63 Humidity [%]:

70 Impact Insulation Class IIC [dB]:

Sum of Unfavorable Deviations [dB]:

Max. Unfavorable Deviation [dB]: 160 Hz at

| ax. Uniavorable Deviation [ub]. | | 7 at 160 Hz | | | | |
|---------------------------------|----------------|-------------|--------|-------|--------|--------------|
| Frequency | L _n | L2 | d | Corr. | u.Dev. | ΔL_n |
| [Hz] | [dB] | [dB] | [dB/s] | [dB] | [dB] | |
| 80 | 54 | 54.3 | 28.63 | -0.3 | | 0.83 |
| 100 | 46 | 47.4 | 20.12 | -1.4 | 4 | 1.93 |
| 125 | 48 | 50.6 | 16.95 | -2.6 | 6 | 1.35 |
| 160 | 49 | 51.1 | 16.01 | -2.1 | 7 | 1.01 |
| 200 | 47 | 50.5 | 14.44 | -3.5 | 5 | 0.46 |
| 250 | 45 | 47.4 | 15.16 | -2.4 | 3 | 1.08 |
| 315 | 40 | 43.3 | 14.67 | -3.3 | | 0.63 |
| 400 | 39 | 41.4 | 15.91 | -2.4 | | 0.48 |
| 500 | 37 | 39.4 | 16.85 | -2.4 | | 0.36 |
| 630 | 36 | 38.7 | 16.99 | -2.7 | | 0.48 |
| 800 | 35 | 37.6 | 16.92 | -2.6 | | 0.81 |
| 1000 | 31 | 33.6 | 16.96 | -2.6 | | 0.67 |
| 1250 | 30 | 32.1 | 18.21 | -2.1 | | 0.55 |
| 1600 | 34 | 36.1 | 19.81 | -2.1 | 3 | 0.57 |
| 2000 | 28 | 29.6 | 22.09 | -1.6 | | 0.74 |
| 2500 | 26 | 26.4 | 24.36 | -0.4 | 1 | 0.66 |
| 3150 | 22 | 22.8 | 26.01 | -0.8 | | 0.77 |
| 4000 | 13 | 15.3 | 29.68 | -2.3 | | 1.02 |
| 5000 | 11 | 12.4 | 34.12 | -1.4 | | 1.05 |

= Normalized Sound Pressure Level, dB

L2 = Receiving Room Level, dB

= Decay Rate, dB/second d

= Uncertainty for 95% Confidence Level ΔL_n

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Normalized impact sound pressure level

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

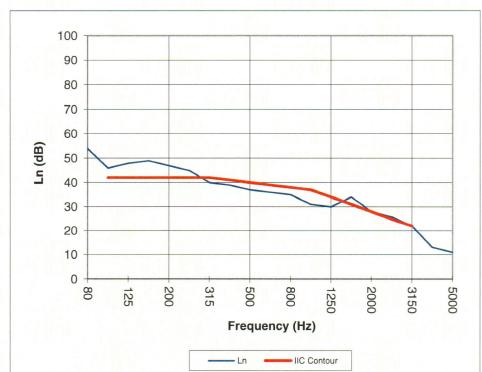
Page 5 of 5

Test Report: NGC7016080 Test Date: 5/9/2016

Specimen Size [m2]: 17.8

Impact Insulation Class IIC [dB]: 70

| Frequency | L _n | | | |
|-----------|----------------|--|--|--|
| [Hz] | [dB] | | | |
| 80 | 54 | | | |
| 100 | 46 | | | |
| 125 | 48 | | | |
| 160 | 49 | | | |
| 200 | 47 | | | |
| 250 | 45 | | | |
| 315 | 40 | | | |
| 400 | 39 | | | |
| 500 | 37 | | | |
| 630 | 36 | | | |
| 800 | 35 | | | |
| 1000 | 31 | | | |
| 1250 | 30 | | | |
| 1600 | 34 | | | |
| 2000 | 28 | | | |
| 2500 | 26 | | | |
| 3150 | 22 | | | |
| 4000 | 13 | | | |
| 5000 | 11 | | | |



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

= Normalized Sound Pressure Level, dB

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