

# Acoustical Testing Laboratory



Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation unde Lab Code 200291

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### **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 300 (17 mm)
and a 4 Inch Concrete Slab

Report Number:

NGC 7016085

Assignment Number:

G-1296

Test Date:

05/11/2016

Report Approval Date:

05/19/2016

Submitted by:

Anthony J. Rivers

Test Technician

Reviewed by:

Robert J. Menchetti

Director





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### **Revision Summary:**

Date	SUMMARY		
Approval Date: 05/19/2016	Original issue date: 05/19/2016		
	Original NGCTS report #: NGC 7016085		





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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:

6 inch concrete slab floor-ceiling assembly, overlaid with according to client, 1 layer of Regupol Vibration 300 (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<sup>2</sup> (45.74 PSF)
- 1 layer of, according to the client, Regupol Vibration 300 (17 mm). The Regupol Vibration 300 (17 mm) was floating on the 6 inch concrete slab. Measured thickness: 18.03 mm (0.71 in.). Measured weight:  $7.23 \text{ kg/m}^2 (1.48 \text{ PSF})$
- 152.4 mm (6 in.) thick reinforced concrete slab, weighing: 366.15 kg/m<sup>2</sup> (75.0 PSF)

The overall weight of the test assembly is: 596.68 kg/m<sup>2</sup> (122.22 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.)

Concrete slab cured for a minimum of 28 days. Conditioning:

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





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Normalized impact sound	pressure level
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Test: ASTM E 492 - 09 / ASTM E 989 - 06

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Test Report:

Source room

NGC7016085

Date: 5/11/2016

Specimen Size [m<sup>2</sup>]:

17.8

Receiving room

Rm Temp [°C]: 20 Humidity [%]:

Volume [m<sup>3</sup>]: 128 Rm Temp [°C]: 20

Humidity [%]: 60

Impact Insulation Class IIC [dB]: 61

Sum of Unfavorable Deviations [dB]: Max. Unfavorable Deviation [dB]:

160

Hz

IVIAX. OTTIAVOTABLE L	reviation [ub].	0	aı	100	ПZ	
Frequency	L <sub>n</sub>	L2	d	Corr.	u.Dev.	$\Delta L_n$
[Hz]	[dB]	[dB]	[dB/s]	[dB]	[dB]	
80	58	58.1	30.22	-0.1		1.98
100	54	55.8	21.70	-1.8	3	2.80
125	57	58.6	18.06	-1.6	6	0.91
160	59	61.4	16.48	-2.4	8	1.01
200	55	58.4	13.60	-3.4	4	0.90
250	55	57.5	15.60	-2.5	4	0.80
315	53	56.3	14.27	-3.3	2	0.71
400	50	52.7	15.73	-2.7		0.45
500	46	48.2	17.05	-2.2		0.28
630	44	46.2	17.20	-2.2		0.50
800	41	43.5	17.28	-2.5		0.32
1000	40	41.9	16.64	-1.9		0.32
1250	38	40.5	17.96	-2.5		0.56
1600	38	39.6	19.52	-1.6		0.59
2000	33	34.3	21.89	-1.3		0.61
2500	28	29.1	23.90	-1.1		0.79
3150	23	24.5	25.84	-1.5		0.72
4000	23	22.5	29.86	0.5		0.99
5000	19	19.3	34.39	-0.3		1.20

at

= Normalized Sound Pressure Level, dB Ln

L2 = Receiving Room Level, dB

= Decay Rate, dB/second d

 $\Delta L_n$ = Uncertainty for 95% Confidence Level





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### Normalized impact sound pressure level

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

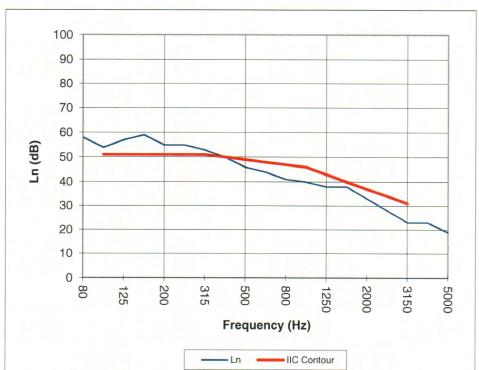
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Test Report: NGC7016085 Test Date: 5/11/2016

Specimen Size [m2]: 17.8

#### Impact Insulation Class IIC [dB]: 61

Frequency	L <sub>n</sub>		
[Hz]	[dB]		
80	58		
100	54		
125	57		
160	59		
200	55		
250	55		
315	53		
400	50		
500	46		
630	44		
800	41		
1000	40		
1250	38		
1600	38		
2000	33		
2500	28		
3150	23		
4000	23		
5000	19		
+ D + 1			



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

= Normalized Sound Pressure Level, dB