G4258.02-113-11-R1
ACOUSTICAL PERFORMANCE TEST REPORT
ASTM E 492 AND ASTM E 2179

Rendered to

REGUPOL AMERICA

Series/Model: Regupol® Sonus™ HS 300

Specimen Type: Concrete Slab - 152 mm

Overall Size: 3023 mm by 3632 mm

IIC	**56**
ΔIIC	**26**

Test Specimen Identification:
Floor Topping: 6.58 mm Visions Hobart Laminate Flooring
Floor Underlayment: 3 mm (nominal) Regupol® Sonus™ HS 300 Rubber Underlayment
Floor Slab: 152 mm Concrete Slab

Reference should be made to Intertek-ATI Report G4258.02-113-11 for complete test specimen description. This page alone is not a complete report.

Acoustical Performance Test Report

REGUPOL AMERICA
11 Ritter Way
Lebanon, Pennsylvania 17042

Report	G4258.02-113-11
Test Date	10/24/16
Report Date	10/25/16
Revision Date	10/28/16

Project Scope

Architectural Testing, Inc., an Intertek company (Intertek-ATI), was contracted to conduct impact sound transmission and delta impact sound transmission tests. The complete test data is included as attachments to this report. The full test specimen was assembled on the day of testing by Intertek-ATI. All materials provided by the client were installed on an existing Intertek-ATI assembly (Concrete Slab - 152 mm) utilizing Intertek-ATI-supplied materials.

Test Methods

The acoustical tests were conducted in accordance with the following standards. The equipment listed in the attachments meets the requirements of the following standards.

ASTM E 492-09(2016)e1, Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine
ASTM E 2179-03(2016), Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors
ASTM E 989-06 (2012), Classification for Determination of Impact Insulation Class (IIC)
ASTM E 2235-04 (2012) Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods

Test Procedure

All testing was conducted in the VT test chambers at Intertek-ATI located in York, Pennsylvania. The microphones were calibrated before conducting the tests.

The impact sound transmission test was conducted in accordance with the ASTM E 492 test method. Two background noise sound pressure level, two sound pressure level measurements with the tapping machine operating at each position specified by ASTM E 492, and five sound absorption measurements were conducted at each of five microphone positions.

Test Procedure (Continued)
The delta impact insulation test was conducted in accordance with ASTM E 2179 test method. In addition to the impact sound transmission test, two sound pressure level measurements with the tapping machine operating at each position specified by ASTM E 492 with only the concrete slab installed were conducted at each of five microphone positions.

The air temperature and relative humidity conditions were monitored and recorded during all measurements.

Test Conditions

Source Room		Receive Room	
Average Temperature	19.5°C	Average Temperature	20°C
Average Relative Humidity	52%	Average Relative Humidity	62%

Test Calculations
The IIC (Impact Insulation Class) and ΔIIC (Delta Impact Insulation Class) ratings were calculated in accordance with ASTM E 989 and ASTM E 2179, respectively.

Test Specimen Materials and Installation Details

Material	Dimensions (mm)	Thickness (mm)	Manufacturer and Series	Quantity	Average Weight
Laminate Flooring	1286 by 194.1	6.6	Visions Hobart	10.98 m²	5.92 kg/m²
	Note: Loose laid				
Rubber Underlayment	3023 by 1219	3.0 (nominal)	Regupol® Sonus™ HS 300	10.98 m²	2.63 kg/m²
	Note: Loose laid				
Concrete Slab	3023 by 3632	152.0	N/A	10.98 m²	366.18 kg/m²
	Note: The concrete slab was installed in a test frame flush to the source room.				

Comments
The total weight of the floor/ceiling assembly was 4114.6 kg. Intertek-ATI will store samples of the test specimen for four years. Photographs of the test specimen are included in the attachments. A drawing of the test specimen is included in the attachments.

Intertek-ATI will service this report for the entire test record retention period. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained by Intertek-ATI for the entire test record retention period. The test record retention period ends four years after the test date.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen tested. This report is intended to help in the client's quality assurance program, but it does not represent a continuous or exhaustive evaluation of the specimen tested or of other products or materials that were not evaluated. The statements and data provided herein do not constitute approval, disapproval, certification, or acceptance of performance or materials.

FOR INTERTEK-ATI:

Digitally Signed by: Cody Snyder

Cody R. Snyder
Technician II - Acoustical Testing

Digitally Signed by: Jordan Strybos

Jordan Strybos
Project Manager - Acoustical Testing

Attachments (7 pages): This report is complete only when all attachments listed are included.

- Instrumentation (1)
- Impact Sound Transmission Data (2)
- Delta Impact Insulation Data (2)
- Photographs (1)
- Drawings (1)

** Stated by Client/Manufacturer*

N/A - Non Applicable

Revision Log

Revision	Date	Page(s)	Description
R0	10/25/16	N/A	Original Report Issue
R1	10/28/16	Cover page, Page 2, Datasheets	Underlayment thickness revised to nominal value per client's request

Attachments

Instrumentation

Instrument	Manufacturer	Model	ATI Number	Date of Calibration
Data Acquisition Unit	National Instruments	PXI-1033	65124	06/16 *
Microphone Calibrator	Norsonic	1251	INT00127	01/16
Receive Room Microphone	PCB Piezontronics	378B20	63748	06/16
Receive Room Microphone	PCB Piezotronics	378B20	63744	06/16
Receive Room Microphone	PCB Piezotronics	378B20	63745	06/16
Receive Room Microphone	PCB Piezotronics	378C20	65617	06/16
Receive Room Microphone	PCB Piezotronics	378B20	63747	06/16
Receive Room Environmental Indicator	Comet	T7510	63810	10/15
			63811	10/15
Source Room Microphone	PCB Piezotronics	378B20	63738	05/16
Source Room Microphone	PCB Piezotronics	378B20	63739	05/16
Source Room Microphone	PCB Piezotronics	378B20	63740	05/16
Source Room Microphone	PCB Piezotronics	378B20	63742	05/16
Source Room Microphone	Scantek	378B20	63741	05/16
Source Room Environmental Indicator	Comet	T7510	63812	11/15
Tapping Machine	Look Line s.r.l.	EM50 (TM50)	65351	02/16

** The calibration frequency for this equipment is every two years per the manufacturer's recommendation.*

Test Chambers

VT Receive Room Volume	158.86 m³
VT Source Room Volume	190 m³

Architectural Testing

ACCREDITED Testing Laboratory

IMPACT SOUND TRANSMISSION

ASTM E 492

Test Date	10/24/16
Data File No.	G4258.02
Client	Regupol America
Description	6.58 mm Visions Hobart Laminate Flooring, 3 mm (nominal) Regupol® Sonus™ HS 300 Rubber Underlayment, 152 mm Concrete Slab
Specimen Area	10.98 m²
Technician	Cody R. Snyder

Freq (Hz)	**Background SPL** (dB)	**Absorption** (m²)	**Normalized Impact SPL** (dB)	**95% Confidence Limit**	**Number of Deficiencies**
80	42.1	16.9	54	2.6	-
100	34.6	13.8	56	2.8	0
125	34.6	10.3	58	3.1	2
160	30.8	10.5	61	1.8	5
200	29.0	10.4	64	0.8	8
250	32.1	11.4	61	2.3	5
315	32.7	9.7	58	0.8	2
400	32.9	8.2	59	1.0	4
500	28.8	7.6	55	0.9	1
630	31.9	7.3	50	0.8	0
800	30.6	7.4	43	0.8	0
1000	29.6	7.2	39	0.5	0
1250	27.6	7.5	34	0.5	0
1600	25.0	7.5	30	0.6	0
2000	19.1	8.2	27	0.4	0
2500	14.5	9.3	22	1.4	0
3150	13.1	10.4	18	1.5	0
4000	11.8	12.3	13	1.2	-
5000	10.5	14.1	10	1.0	-
6300	9.5	18.3	8	0.9	-
8000	7.5	24.6	9	0.7	-
10000	7.2	30.2	10	0.8	-

IIC Rating **56** *(Impact Insulation Class)*

Deficiencies 27 *(Sum of Deficiencies)*

Note: *Receive Room levels less than 5 dB above the Background levels are highlighted in yellow.*

IMPACT SOUND TRANSMISSION

ASTM E 492

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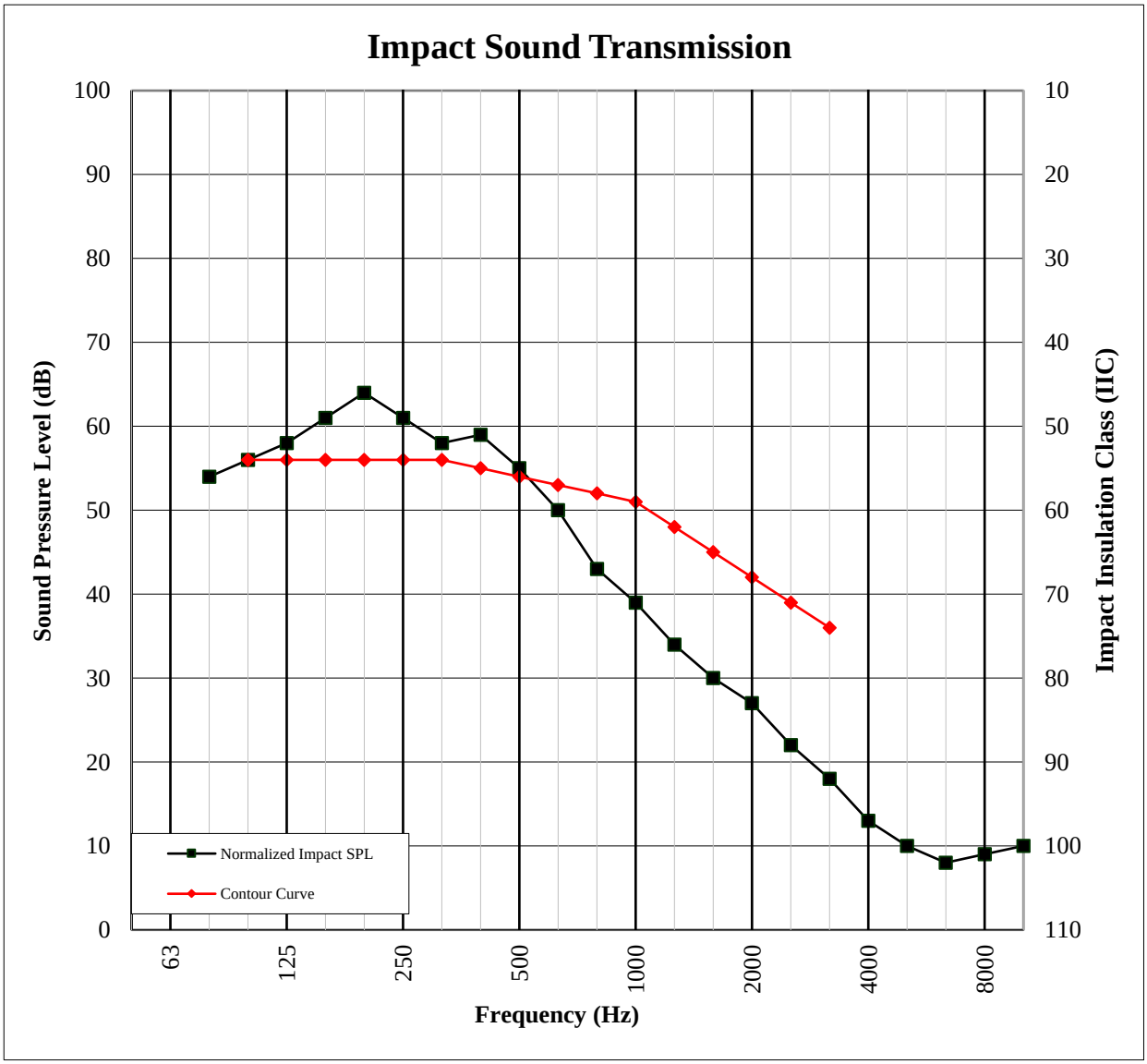

Architectural Testing

ACCREDITED Testing Laboratory

DELTA IMPACT INSULATION

ASTM E 2179

Test Date	10/24/16
Data File No.	G4258.02
Client	Regupol America
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Specimen Area	10.98 m²
Technician	Cody R. Snyder

Freq (Hz)	**Bkgrd SPL** (dB)	**Absorption** (Square Meters)	**Normalized Impact SPL** BARE (dB)	**95% Conf Limit**	**Normalized Impact SPL** SPEC (dB)	**95% Conf Limit**	**Resulting Array** $L_{ref,c}$	**No. of Defici-encies**
100	34.6	13.8	58.4	1.9	55.5	0.9	64	6
125	34.6	10.3	59.8	0.8	57.9	0.9	66	8
160	30.8	10.5	65.7	1.5	61.3	1.5	64	6
200	29.0	10.4	71.4	0.9	64.3	1.8	61	3
250	32.1	11.4	68.7	0.7	60.6	0.7	61	3
315	32.7	9.7	67.8	2.2	57.5	1.9	59	1
400	32.9	8.2	69.4	1.2	59.1	0.5	60	3
500	28.8	7.6	69.0	1.7	54.9	0.9	56	0
630	31.9	7.3	70.6	2.6	50.1	0.7	51	0
800	30.6	7.4	72.0	1.7	43.3	1.7	43	0
1000	29.6	7.2	72.2	2.0	38.6	0.7	38	0
1250	27.6	7.5	73.2	1.8	34.0	0.8	33	0
1600	25.0	7.5	74.0	1.4	29.6	0.9	28	0
2000	19.1	8.2	74.5	0.6	26.8	0.6	24	0
2500	14.5	9.3	74.9	1.8	22.1	0.4	19	0
3150	13.1	10.4	74.4	1.6	18.2	0.3	16	0

ΔIIC Rating **26** *(Delta Impact Insulation Class)*

Deficiencies 30 *(Sum of Deficiencies)*

Note: *Receive Room levels less than 5 dB above the Background levels are highlighted in yellow.*

Architectural Testing

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DELTA IMPACT INSULATION

ASTM E 2179

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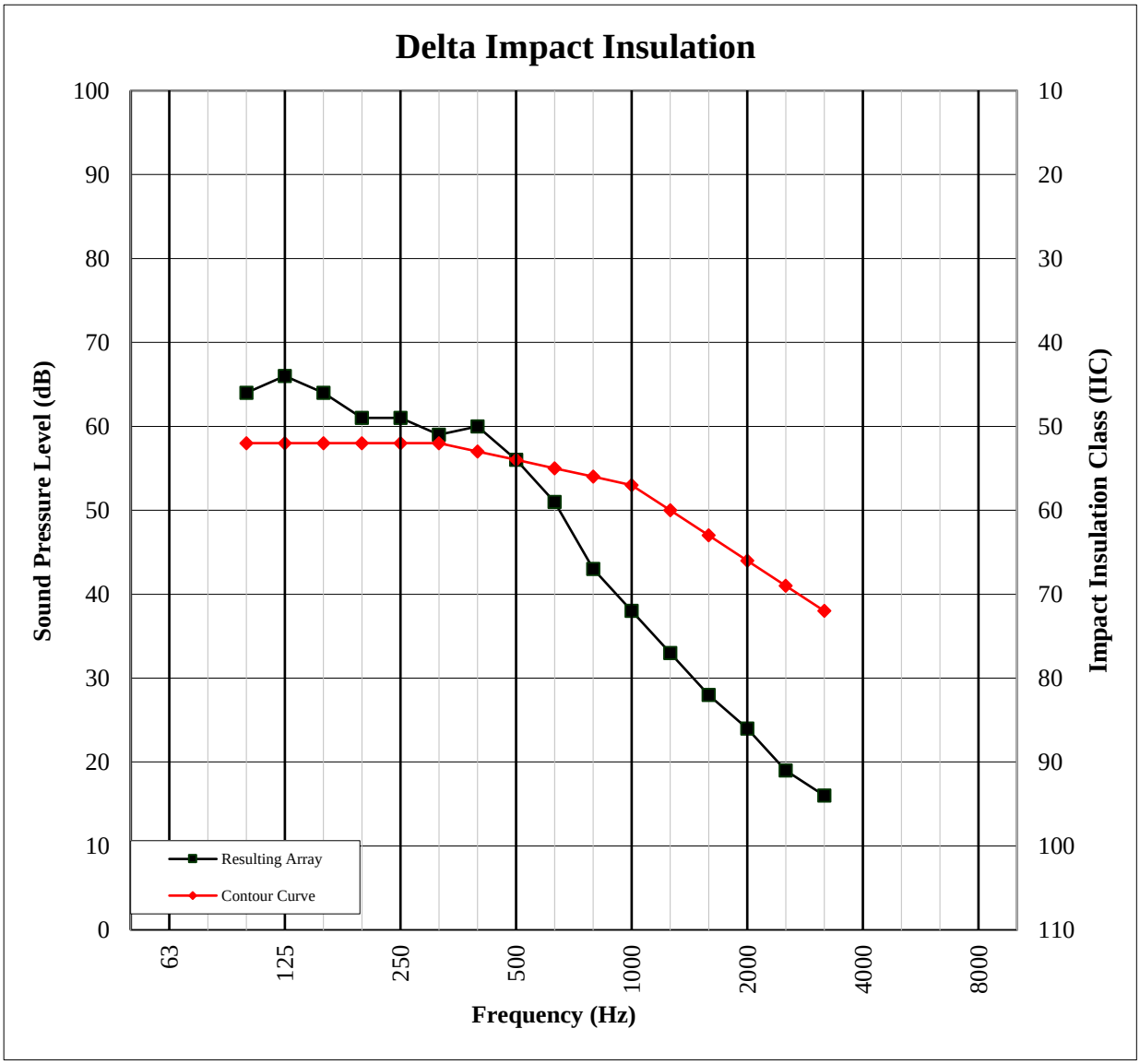
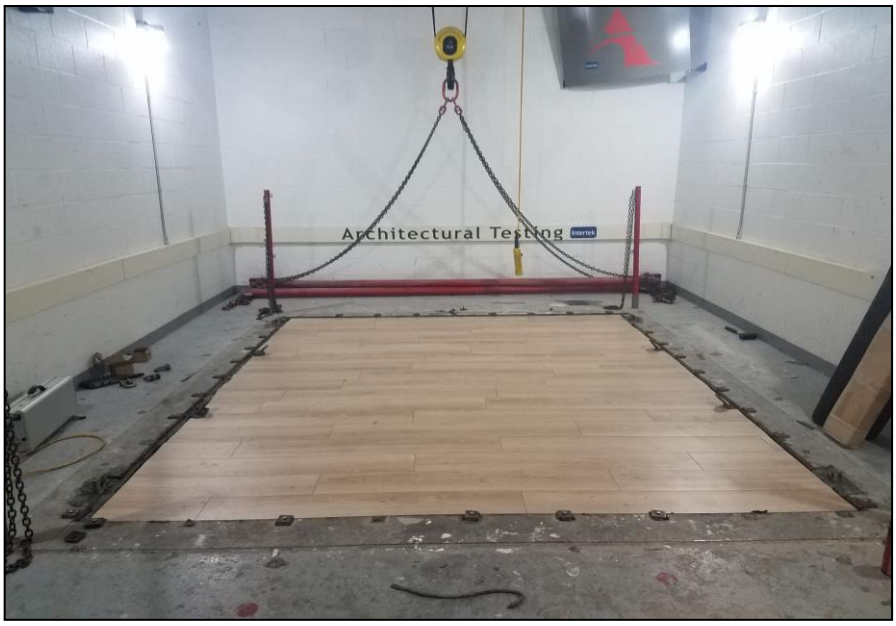


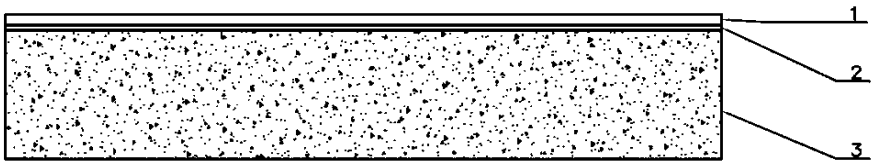
Photographs



Source Room View of Test Specimen Installation

Receive Room View of Test Specimen Installation

Drawing



1-Floor Topping
2-Underlayment
3-Concrete Slab