H3069.01-113-11-R0
ACOUSTICAL PERFORMANCE TEST REPORT
ASTM E 90 AND ASTM E 492

Rendered to

VENEKLASEN ASSOCIATES

Series/Model: Sount Tec Luxury Vinyl Plank

Specimen Type: Concrete Slab - 203 mm (8")

Overall Size: 3023 mm by 3632 mm (119" by 143")

STC	**53**
IIC	**56**

Test Specimen Identification:
Floor Topping: 5.9 mm (0.23") Urban Surfaces Sound Tec Luxury Vinyl Plank
Floor Slab: 203.2 mm (8") 5000 PSI Concrete Slab

Reference should be made to Intertek-ATI Report H3069.01-113-11 for complete test specimen description. This page alone is not a complete report.

Acoustical Performance Test Report

VENEKLASEN ASSOCIATES
1711 16th Street
Santa Monica, California 90404

Report	H3069.01-113-11
Test Date	07/06/17
Report Date	07/21/17

Project Scope

Architectural Testing, Inc., an Intertek company (Intertek-ATI), was contracted to conduct airborne sound transmission loss and 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 - 203 mm (8")) 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 90-09 (2016), Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions
ASTM E 413-16, Classification for Rating Sound Insulation
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 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 airborne transmission loss test was conducted in accordance with the ASTM E 90 test method using the single direction method. Two background noise sound pressure level and five sound absorption measurements were conducted at each of five microphone positions. Four sound pressure level measurements were made simultaneously in both rooms, at each of five microphone positions.

Test Procedure (Continued)

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.

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

Test Conditions

Source Room		Receive Room	
Minimum Temperature	23°C (73.4°F)	Minimum Temperature	25°C (77°F)
Maximium Temperature	23.2°C (73.7°F)	Maximium Temperature	25.1°C (77.1°F)
Minimum Relative Humidity	75%	Minimum Relative Humidity	62%
Maxmimum Relative Humidity	75%	Maxmimum Relative Humidity	63%

Test Calculations

The STC (Sound Transmission Class) and IIC (Impact Insulation Class) ratings were calculated in accordance with ASTM E 413 and ASTM E 989, respectively.

Test Specimen Materials and Installation Details

Material	Dimensions (mm/inch)	Thickness (mm/inch)	Manufacturer and Series	Quantity	Average Weight
Luxury Vinyl Plank	177.8 by 1219 7 by 48	5.9 / 0.23	Urban Surfaces Sound Tec	10.98 m² 118.19 ft²	8.73 kg/m² 1.79 lb/ft²
	Note: Loose laid				
Concrete Slab	3023 by 3632 119 by 143	203.2 / 8	5000 PSI	10.98 m² 118.19 ft²	524.71 kg/m² 107.47 lb/ft²
	Note: Installed in a test frame flush to the source room. Mats of #5 reinforcing bars were placed 25.4 mm from both the top and bottom of the slab, with bars spaced on 305 mm centers in both directions.				

Comments

The total weight of the floor/ceiling assembly was 5857.1 kg / 12913.5 lbs. 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 I - 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)
- Airborne Sound Transmission Loss Data (2)
- Impact Sound Transmission Data (2)
- Photographs (1)
- Drawings (1)

** Stated by Client/Manufacturer*
N/A - Non Applicable

Revision Log

Revision	Date	Page(s)	Description
R0	07/21/17	N/A	Original Report Issue

Attachments

Instrumentation

Instrument	Manufacturer	Model	ATI Number	Date of Calibration
Data Acquisition Unit	National Instruments	PXI-4462	65124	06/16 *
Microphone Calibrator	Norsonic	1251	INT00127	03/17
Receive Room Microphone	PCB Piezotronics	378C20	65617	05/17
Receive Room Microphone	PCB Piezotronics	378B20	63744	05/17
Receive Room Microphone	PCB Piezotronics	378B20	63745	05/17
Receive Room Microphone	PCB Piezotronics	378B20	63746	09/16
Receive Room Microphone	PCB Piezotronics	378B20	63747	05/17
Receive Room Environmental Indicator	Comet	T7510	63810	10/16
			63811	10/16
Source Room Microphone	PCB Piezotronics	378B20	63738	04/17
Source Room Microphone	PCB Piezotronics	378B20	63739	04/17
Source Room Microphone	PCB Piezotronics	378B20	63740	04/17
Source Room Microphone	PCB Piezotronics	378B20	63742	04/17
Source Room Microphone	PCB Electronics	378B20	63741	04/17
Source Room Environmental Indicator	Comet	T7510	63812	11/16
Tapping Machine	Look Line s.r.l.	EM50 (TM50)	65351	07/17

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

Test Chambers

VT Receive Room Volume	158.34 m³ (5591.89 ft³)
VT Source Room Volume	190 m³ (6709.79 ft³)

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AIRBORNE SOUND TRANSMISSION LOSS

ASTM E 90

Test Date	07/06/17
Data File No.	H3069.01
Client	Veneklasen Associates
Description	5.9 mm (0.23") Urban Surfaces Sound Tec Luxury Vinyl Plank, 203.2 mm (8") 5000 PSI Concrete Slab
Specimen Area	10.98 m²
Technician	Jeremy L. Amend

Freq (Hz)	**Background SPL** (dB)	**Absorption** (m²)	**Source SPL** (dB)	**Receive SPL** (dB)	**Specimen TL** (dB)	**95% Confidence Limit**	**Number of Deficiencies**
50	42.2	25.9	102	64	34	4.80	-
63	40.0	30.1	102	67	30	4.80	-
80	42.3	16.2	109	66	42	4.10	-
100	33.0	12.6	106	69	36	2.60	-
125	32.9	10.5	105	72	34	2.70	3
160	28.7	9.5	105	68	37	1.40	3
200	24.7	10.1	103	60	43	1.00	0
250	30.4	10.9	102	58	44	1.10	2
315	24.7	9.3	106	59	47	1.00	2
400	23.3	8.2	103	58	47	0.90	5
500	23.7	7.8	101	52	50	0.90	3
630	23.1	7.5	100	52	50	0.70	4
800	22.0	7.6	101	50	52	0.50	3
1000	19.7	7.6	100	47	55	0.40	1
1250	19.4	7.7	98	40	60	0.50	0
1600	16.2	7.6	99	36	64	0.50	0
2000	13.7	8.4	99	34	66	0.40	0
2500	10.4	9.2	95	30	66	0.70	0
3150	8.8	10.0	97	28	69	0.70	0
4000	7.7	11.1	97	26	71	1.00	0
5000	6.9	12.5	94	20	73	1.10	-
6300	7.0	14.9	92	14	77	1.10	-
8000	6.9	19.5	93	12	79	1.20	-
10000	7.0	23.1	92	9	80	0.80	-

STC Rating **53** *(Sound Transmission Class)*

Deficiencies 26 *(Sum of Deficiencies)*

Notes:

1) Receive Room levels less than 5 dB above the Background levels are highlighted in yellow.

2) Specimen TL levels listed in red are potentially limited by the laboratory flanking limit.

3) Specimen TL levels listed in blue indicate the lower limit of the transmission loss.

4) Specimen TL levels listed in green indicate that there has been a filler wall correction applied

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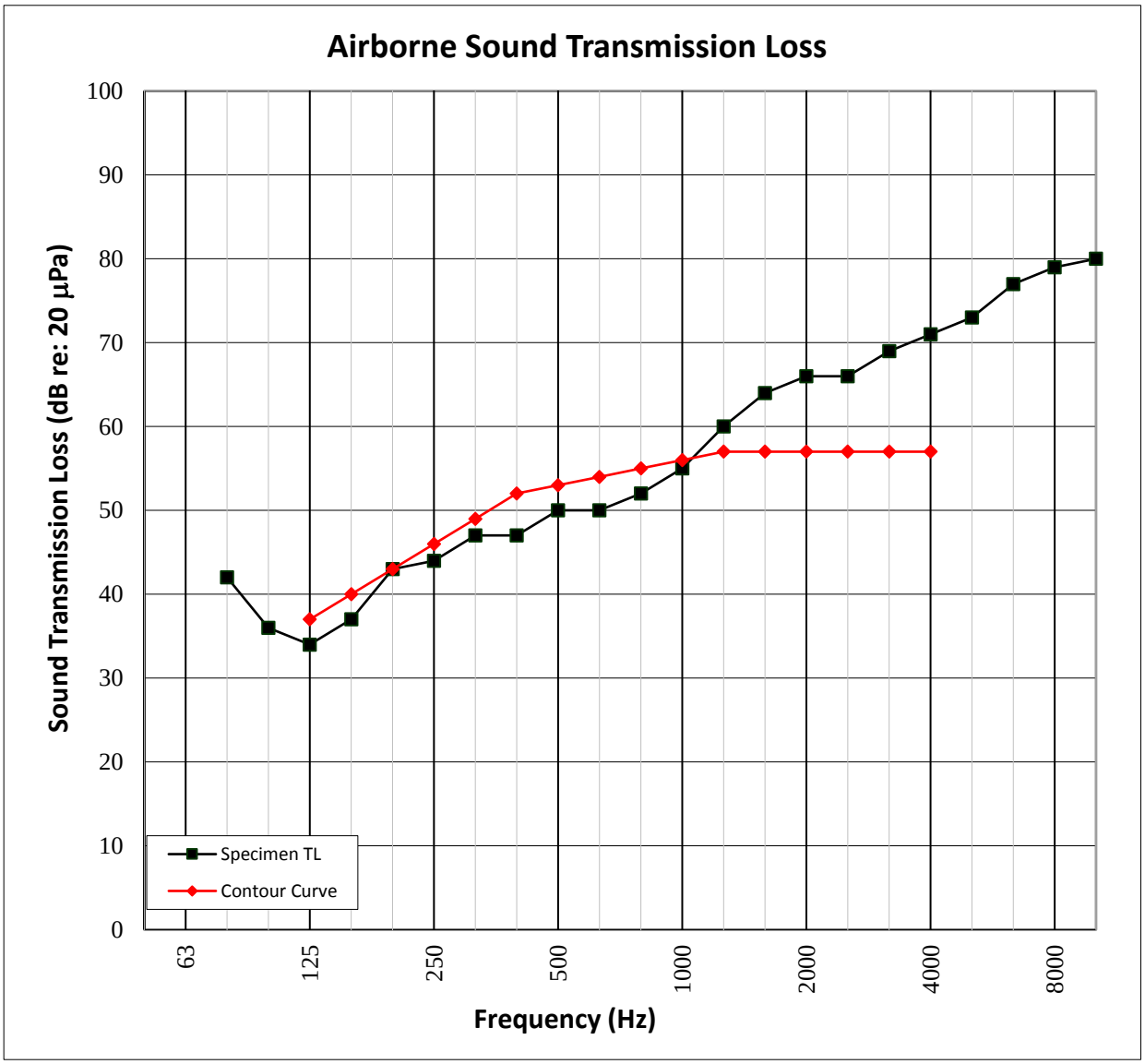

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IMPACT SOUND TRANSMISSION

ASTM E 492

Test Date	07/06/17
Data File No.	H3069.01
Client	Veneklasen Associates
Description	5.9 mm (0.23") Urban Surfaces Sound Tec Luxury Vinyl Plank, 203.2 mm (8") 5000 PSI Concrete Slab
Specimen Area	10.98 m²
Technician	Jeremy L. Amend

Freq (Hz)	**Background SPL** (dB)	**Absorption** (m²)	**Normalized Impact SPL** (dB)	**95% Confidence Limit**	**Number of Deficiencies**
50	41.6	26.8	57	2.0	-
63	40.6	29.7	51	2.6	-
80	43.1	15.4	51	1.9	-
100	36.2	11.6	52	1.8	0
125	33.8	9.7	59	2.0	3
160	30.0	9.8	59	1.4	3
200	26.8	10.1	61	1.0	5
250	31.2	10.2	64	1.1	8
315	25.8	9.5	58	0.5	2
400	24.1	8.2	57	0.8	2
500	26.6	7.9	52	0.7	0
630	24.1	7.6	48	0.5	0
800	23.0	7.6	48	0.6	0
1000	21.5	7.6	44	0.5	0
1250	24.5	7.6	41	0.5	0
1600	19.2	7.6	38	0.6	0
2000	16.6	8.4	33	0.5	0
2500	14.2	9.2	27	0.7	0
3150	13.5	10.0	20	1.0	0
4000	10.9	11.1	14	0.8	-
5000	8.5	12.4	9	0.5	-
6300	7.0	14.9	8	0.4	-
8000	6.8	19.3	8	0.4	-
10000	6.9	23.1	9	0.5	-

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

Deficiencies 23 *(Sum of Deficiencies)*

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

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IMPACT SOUND TRANSMISSION

ASTM E 492

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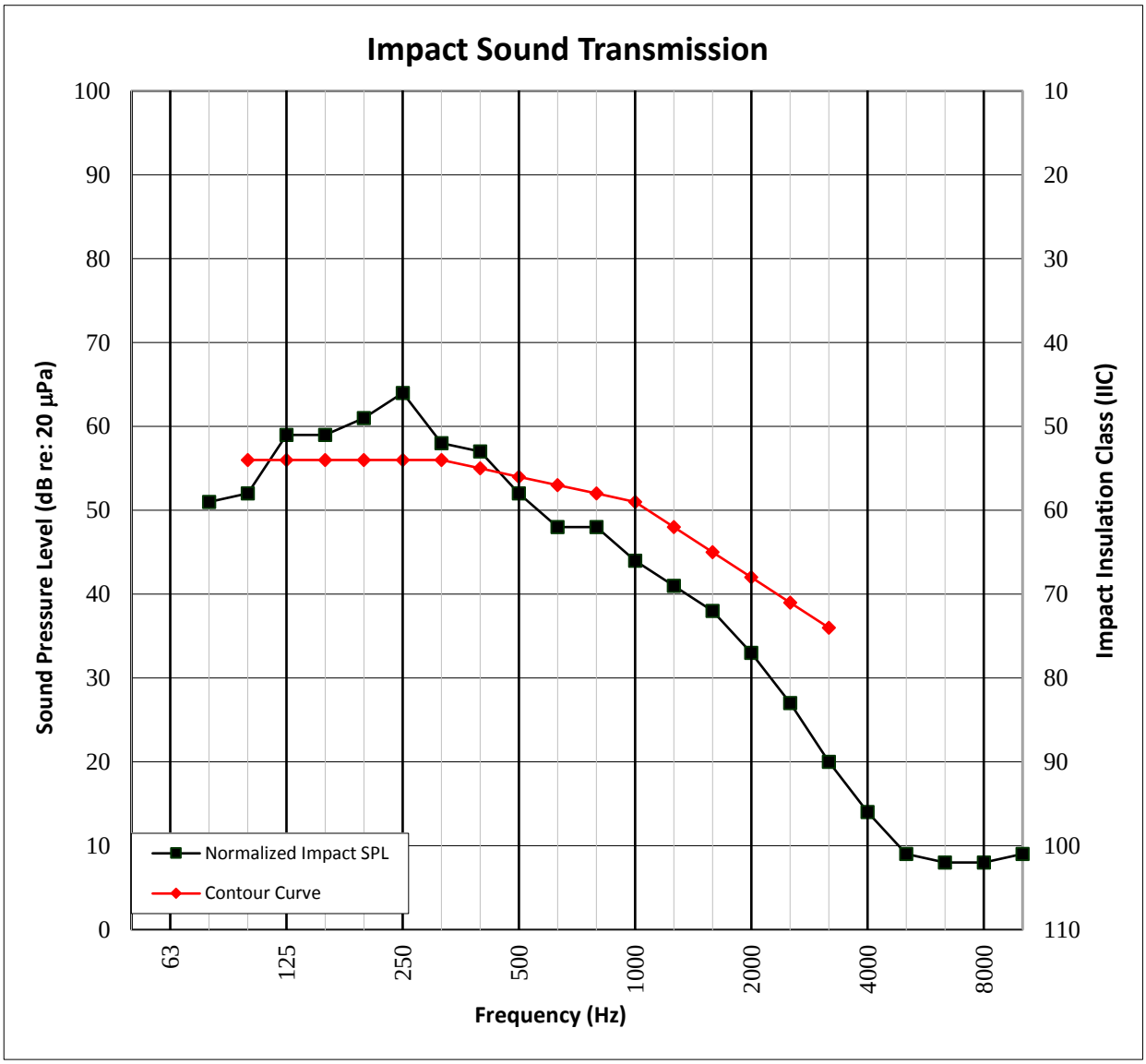
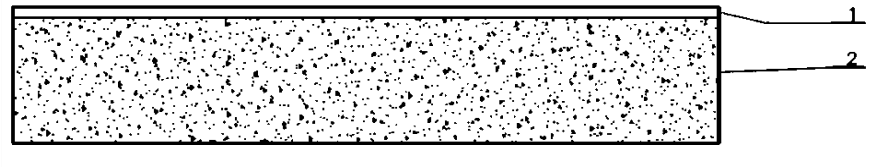


Photographs

Source Room View of Test Specimen Installation

Receive Room View of Test Specimen Installation

Drawing



1-Floor Topping
2-Concrete Slab