F6860.02-113-11-R0
ACOUSTICAL PERFORMANCE TEST REPORT
ASTM E 90 AND ASTM E 492

Rendered to

COMMERCIAL ACOUSTICS

Series/Model: 4mm Novalis Stainmaster with Commercial Acoustics Floor Blokker

Specimen Type: Concrete Slab - 152 mm

Overall Size: 3023 mm by 3632 mm

STC	**50**
IIC	**56**

Test Specimen Identification:
Floor Topping: 4 mm Novalis Stainmaster Premier Luxury Vinyl Plank
Floor Underlayment: 3.89 mm Commercial Acoustics Floor Blocker Underlayment
Floor Slab: 152 mm Concrete Slab

Reference should be made to Intertek-ATI Report F6860.02-113-11 for complete test specimen description. This page alone is not a complete report.

Acoustical Performance Test Report

COMMERCIAL ACOUSTICS

1519 W. Cypress Street
Tampa, FL 33606

Report	F6860.02-113-11
Test Date	03/22/16
Report Date	04/01/16

Project Scope

Architectural Testing, Inc., a subsidiary of Intertek (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 client provided the test specimen. The specimen was constructed on the date of testing.

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, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions
ASTM E 413-10, Classification for Rating Sound Insulation
ASTM E 492-09, 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	
Average Temperature	19.4°C	Average Temperature	21.3°C
Average Relative Humidity	54%	Average Relative Humidity	52%

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)	Thickness (mm)	Manufacturer and Series	Quantity	Average Weight
Premier Luxury Vinyl Plank	1219 by 152.4	4.0	Novalis Stainmaster	10.98 m²	7.96 kg/m²
	Note: Adhered to the underlayment with XL Brands Stix Essential RES Aerosol Spray Adhesive per manufacturer's specifications				
Underlayment	7620 by 1219	3.9	Commercial Acoustics Floor Blokker	10.98 m²	4.14 kg/m²
	Note: Loose laid with seams taped. The underlayment was composed of a 0.75 lb. mass-loaded EVA with an attached polyester fiber layer.				
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 4153.6 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.

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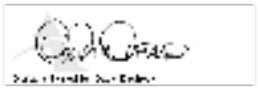
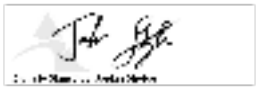
FOR INTERTEK-ATI:



David M. Dacheux
Technician II - Acoustical Testing



Jordan Strybos
Project Manager - Acoustical Testing

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

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

Revision Log

Revision	Date	Page(s)	Description
R0	04/01/16	N/A	Original Report Issue

Attachments

Instrumentation

Instrument	Manufacturer	Model	ATI Number	Date of Calibration
Data Acquisition Unit	National Instruments	PXI-1033	63763	06/14 *
Microphone Calibrator	Norsonic	1251	INT00127	01/16
Receive Room Microphone	Scantek	378B20	63748	05/15
Receive Room Microphone	PCB Piezotronics	378B20	63744	05/15
Receive Room Microphone	PCB Piezotronics	378B20	63745	05/15
Receive Room Microphone	PCB Piezotronics	378B20	63746	05/15
Receive Room Microphone	PCB Piezotronics	378B20	63747	05/15
Receive Room Environmental Indicator	Comet	T7510	63810	10/15
			63811	10/15
Source Room Microphone	PCB Piezotronics	378B20	63738	04/15
Source Room Microphone	PCB Piezotronics	378B20	63739	04/15
Source Room Microphone	PCB Piezotronics	378B20	63740	04/15
Source Room Microphone	PCB Piezotronics	378B20	63742	04/15
Source Room Microphone	Scantek	378B20	63741	04/15
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

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AIRBORNE SOUND TRANSMISSION LOSS

ASTM E 90

Test Date	03/22/16
Data File No.	F6860.02
Client	Commercial Acoustics
Description	4 mm Novalis Stainmaster Premier Luxury Vinyl Plank, 3.89 mm Commercial Acoustics Floor Blokker Underlayment, 152 Concrete Slab
Specimen Area	10.98 m²
Technician	David M. Dacheux

Freq (Hz)	Background SPL (dB)	Absorption (m²)	Source SPL (dB)	Receive SPL (dB)	Specimen TL (dB)	95% Confidence Limit	Number of Deficiencies
80	49.1	20.8	109	69	38	3.40	-
100	37.9	17.5	106	65	40	2.40	-
125	35.2	12.7	105	67	39	1.90	0
160	26.8	14.9	107	71	35	2.20	2
200	22.9	16.4	104	71	32	2.20	8
250	24.4	14.6	103	62	40	0.70	3
315	22.5	15.3	104	62	41	1.00	5
400	18.4	14.7	103	57	45	0.70	4
500	20.2	13.5	103	49	54	0.90	0
630	20.2	13.0	105	46	59	0.70	0
800	21.4	13.1	104	41	63	0.70	0
1000	20.3	12.6	104	40	65	0.50	0
1250	19.5	12.3	104	39	66	0.50	0
1600	16.2	12.1	104	38	67	0.50	0
2000	10.4	12.6	104	36	68	0.40	0
2500	7.9	13.1	102	34	68	0.50	0
3150	6.7	14.1	103	32	71	0.70	0
4000	5.5	15.3	104	31	72	0.90	0
5000	5.6	17.3	104	27	75	0.80	-
6300	5.8	21.5	97	18	78	0.80	-
8000	6.2	27.2	97	14	80	0.80	-
10000	6.3	33.8	91	7	80	0.50	-

STC Rating **50** *(Sound Transmission Class)*

Deficiencies 22 *(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 indicate the lower limit of the transmission loss.
3) Specimen TL levels listed in green indicate that there has been a filler wall correction applied

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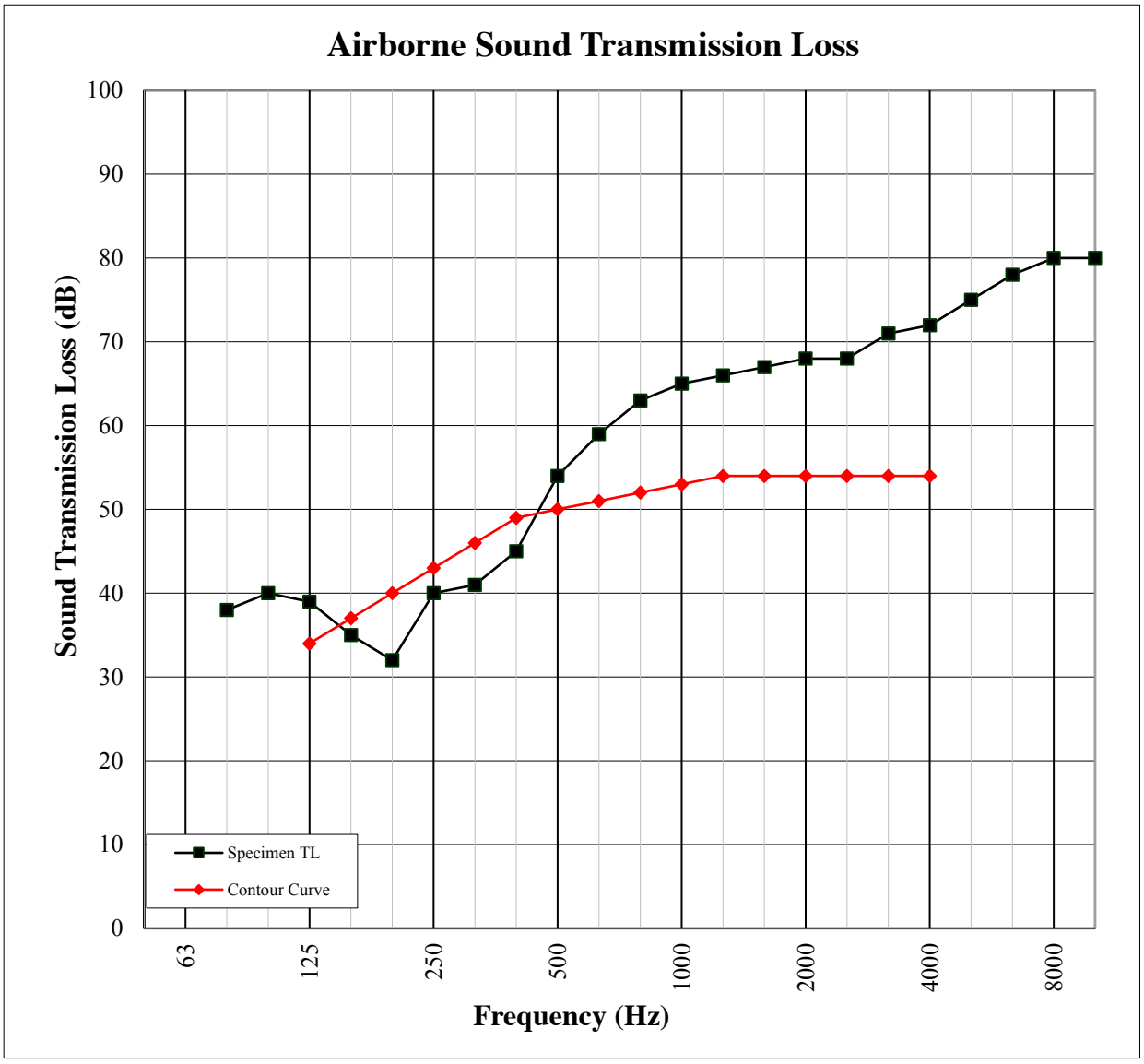

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IMPACT SOUND TRANSMISSION

ASTM E 492

Test Date	03/22/16
Data File No.	F6860.02
Client	Commercial Acoustics
Description	4 mm Novalis Stainmaster Premier Luxury Vinyl Plank, 3.89 mm Commercial Acoustics Floor Blokker Underlayment, 152 Concrete Slab
Specimen Area	10.98 m²
Technician	David M. Dacheux

Freq (Hz)	**Background SPL** (dB)	**Absorption** (m²)	**Normalized Impact SPL** (dB)	**95% Confidence Limit**	**Number of Deficiencies**
80	49.5	19.0	58	3.5	-
100	36.3	17.8	55	1.2	0
125	36.0	11.8	56	0.7	0
160	27.3	14.4	61	2.4	5
200	21.6	15.5	65	2.4	9
250	24.8	15.4	58	0.9	2
315	22.1	14.5	55	2.3	0
400	18.7	14.3	52	0.4	0
500	20.9	13.0	46	1.3	0
630	20.0	13.2	43	1.4	0
800	20.7	12.6	38	1.3	0
1000	19.3	12.7	32	0.2	0
1250	20.7	12.1	33	0.6	0
1600	18.8	12.0	26	0.4	0
2000	10.9	12.7	21	0.5	0
2500	9.1	13.1	17	0.4	0
3150	8.3	14.2	14	0.4	0
4000	7.0	15.3	12	0.2	-
5000	7.2	17.5	10	0.3	-
6300	6.9	21.5	10	0.4	-
8000	7.0	26.9	11	0.5	-
10000	6.4	33.4	11	0.6	-

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

Deficiencies 16 *(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

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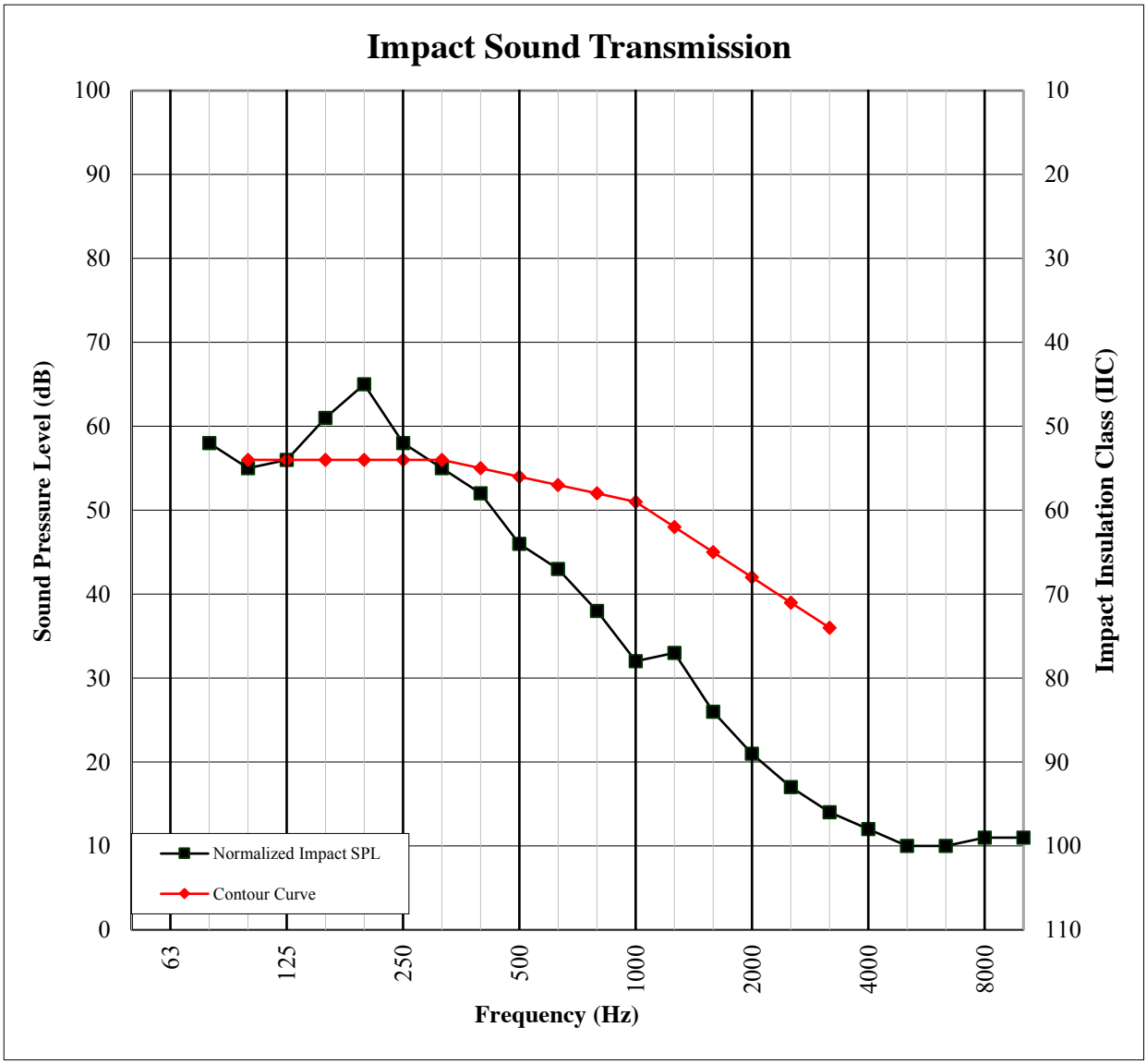


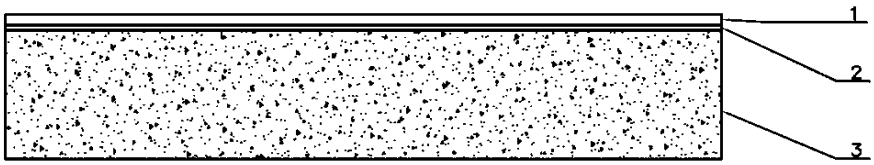
Photographs

Source Room View of Test Specimen Installation

Source Room View of Test Specimen Installation

Receive Room View of Test Specimen Installation

Drawing



1-Floor Topping
2-Underlayment
3-Concrete Slab