



E1812.01-113-11-R1
ACOUSTICAL PERFORMANCE TEST REPORT
ASTM E 492

Rendered to

ECORE INTERNATIONAL

Series/Model: Forest rx Flooring

Specimen Type: Floor/ Ceiling Assembly

Overall Size: 3023 mm by 3632 mm

IIC 56

Test Specimen Identification:

Floor Topping: 6.91 mm Ecore International Forest rx Rubber Back Sheet Vinyl

Floor Slab: 203 mm Concrete slab

Reference should be made to Architectural Testing, Inc. Report E1812.01-113-11 for complete test specimen description.



Acoustical Performance Test Report

ECORE INTERNATIONAL
715 Fountain Avenue
Lancaster, Pennsylvania 17601

Report	E1812.01-113-11
Test Date	10/17/14
Report Date	10/31/14
Record Retention End Date	10/17/18
Revision Date	11/07/14

Project Scope

ECORE International contracted Architectural Testing to conduct an impact sound transmission test. A summary of the results is listed in the Test Results section, and the complete test data is included as attachments to this report. The client provided the test specimen.

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, 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 Architectural Testing, Inc. 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 twenty 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

Receive Room	
Maximum Temperature	19.6 °C
Minimum Temperature	19.5 °C
Average Temperature	19.5 °C
Maximum Relative Humidity	76%
Minimum Relative Humidity	75%
Average Relative Humidity	75%

Test Calculations

The IIC (Impact Insulation Class) rating was calculated in accordance with ASTM E 989.

Test Specimen Materials

Material	Dimensions (mm)	Thickness (mm)	Manufacturer and Series	Quantity	Average Weight
Rubber Back Sheet Vinyl	3023 by 1829	6.9	Ecore International Forest rx	10.98 m ²	6.6 kg/m ²
	<i>Note: The rubber back sheet vinyl was adhered directly to the concrete slab per manufactures specifications.</i>				
Concrete slab	3023 by 3632	203.0	N/A	10.98 m ²	488.24 kg/m ²
	N/A				

Comments

The total weight of the floor/ceiling assembly was 5433.4 kg. Architectural Testing 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.

Architectural Testing 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 Architectural Testing for the entire test record retention period.

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 may not be reproduced, except in full, without the written approval of Architectural Testing.

For ARCHITECTURAL TESTING, INC:

Leeland S. Hoover
Technician II - Acoustical Testing

Bradlay D. Hunt
Project Manager - Acoustical Testing

Attachments (5)

** Stated by Client/Manufacturer*

N/A - Non Applicable



Revision Log

Revision	Date	Page(s)	Description
R0	10/31/14	N/A	Original Report Issue
R1	11/07/14	Cover Page, Page 2, and Datasheets	Corrected the thickness description of the concrete slab

Attachments

Instrumentation

Instrument	Manufacturer	Model	ATI Number	Date of Calibration
Data Acquisition Unit	National Instruments	PXI-1033	63763	06/14 *
Receive Room Microphone	PCB Piezotronics	378B20	64340	04/14
Receive Room Microphone	PCB Piezotronics	378B20	63744	04/14
Receive Room Microphone	PCB Piezotronics	378B20	63745	04/14
Receive Room Microphone	PCB Piezotronics	378B20	63746	04/14
Receive Room Microphone	PCB Piezotronics	378B20	63747	04/14
Receive Room Environmental Indicator	Comet	T7510	63810	09/13
Receive Room Environmental Indicator	Comet	T7510	63811	09/13
Microphone Calibrator	Norsonic	1251	Y002919	06/14
Tapping Machine	Norsonic	N-211	Y003242	03/14

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

Test Chambers

VT Receive Room Volume	158.3 m ³
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IMPACT SOUND TRANSMISSION
ASTM E 492

Test Date	10/17/14
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Client	ECORE International
Description	6.91 mm Ecore International Forest rx Rubber Back Sheet Vinyl, 203 mm Concrete slab
Specimen Area	10.98 m ²
Technician	Leeland S. Hoover

Freq (Hz)	Background SPL (dB)	Absorption (m ²)	Normalized Impact SPL (dB)	95% Confidence Limit	Number of Deficiencies
80	64.1	15.6	66	3.0	-
100	45.8	10.9	52	1.6	0
125	40.2	9.6	58	4.8	2
160	36.6	8.2	58	1.0	2
200	32.7	11.7	59	5.6	3
250	30.0	10.3	64	3.1	8
315	30.5	10.0	60	3.7	4
400	29.6	7.9	61	2.6	6
500	27.2	7.4	56	3.3	2
630	26.5	7.0	50	4.0	0
800	27.1	7.1	42	5.1	0
1000	25.7	7.1	33	5.2	0
1250	27.0	7.1	31	2.3	0
1600	24.3	7.1	27	1.8	0
2000	17.9	7.8	24	1.8	0
2500	16.7	8.6	20	1.2	0
3150	16.0	9.2	17	1.2	0
4000	12.4	10.4	17	0.8	-
5000	9.7	12.2	13	0.6	-
6300	8.4	15.1	10	0.5	-
8000	7.0	19.8	9	0.4	-
10000	6.9	25.4	10	0.4	-

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.*

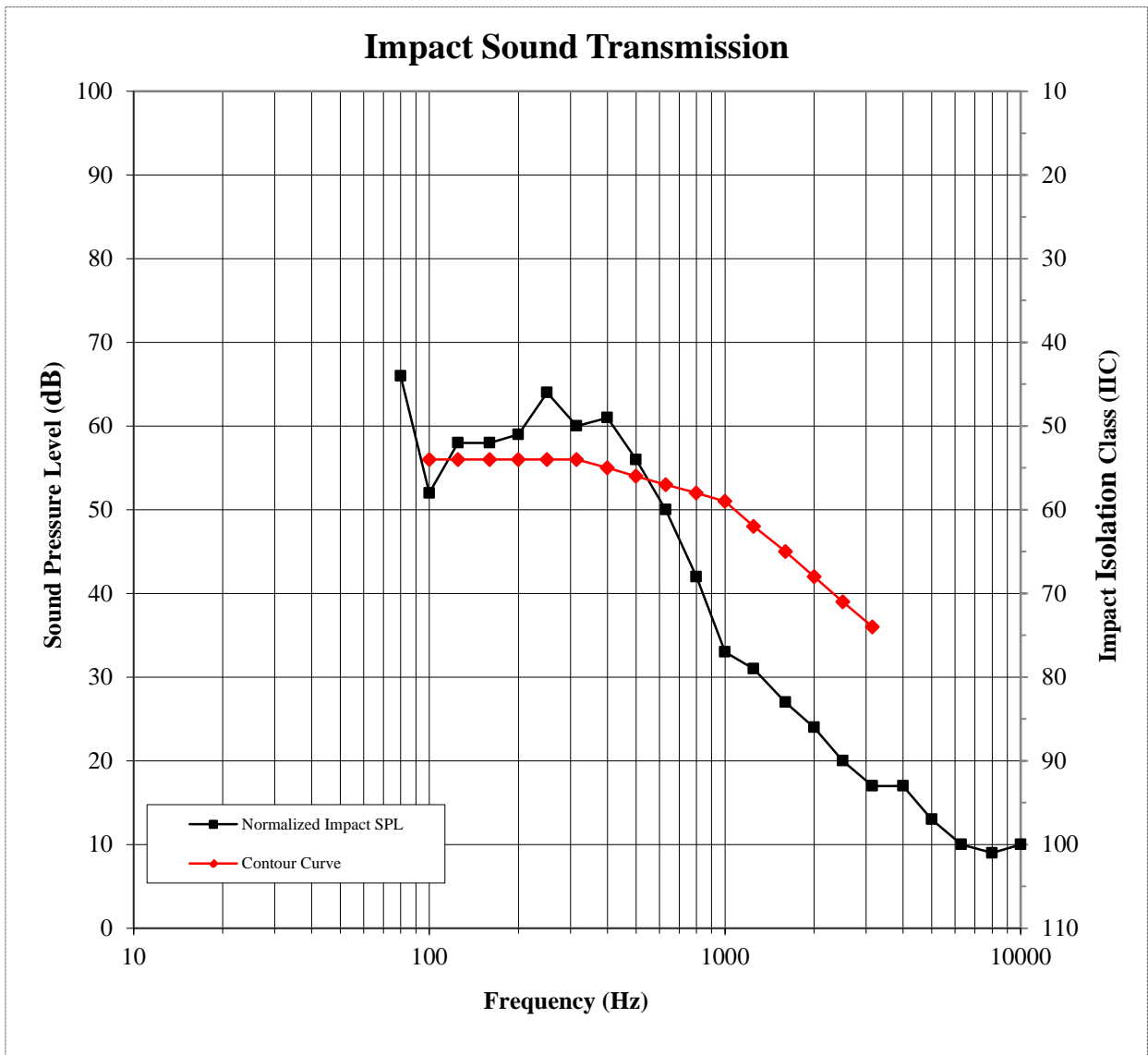


E1812.01-113-11-R1

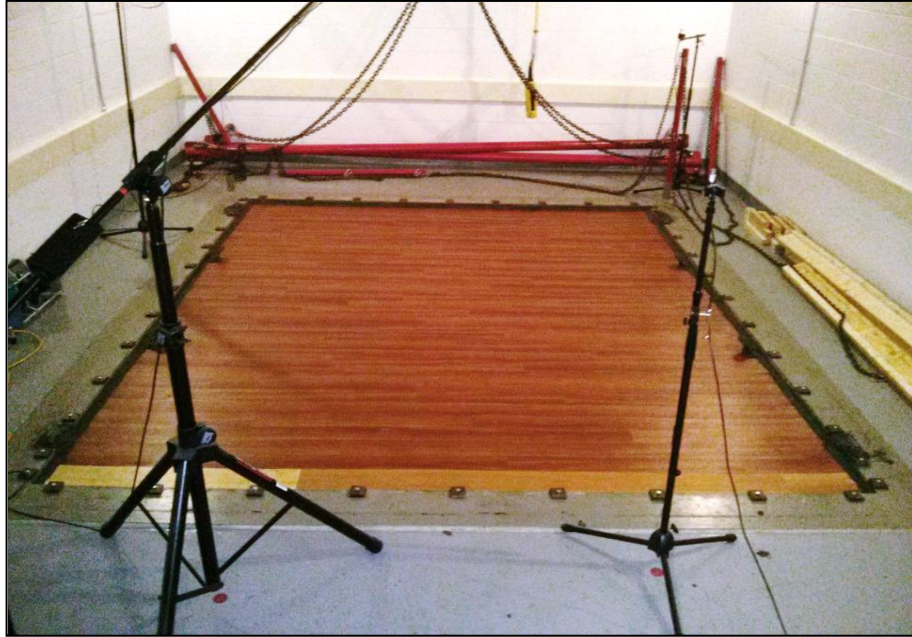


IMPACT SOUND TRANSMISSION ASTM E 492

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Photographs

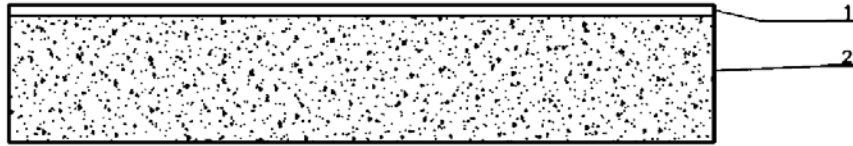


Source Room View of Test Specimen Installation



Receive Room View of Test Specimen Installation

Drawing



- 1-Floor topping
- 2-Concrete Slab