



E6534.03-113-11-R1
ACOUSTICAL PERFORMANCE TEST REPORT
ASTM E 90, ASTM E 492, ASTM E 2179

Rendered to

SPECIALIZED SUPPLIES AND SERVICES, INC.

Series/Model: 25.4 mm SFR AcoustiTile

Specimen Type: Concrete Slab - 152 mm

Overall Size: 3023 mm by 3632 mm

STC	52
IIC	56
ΔIIC	27

Test Specimen Identification:

Floor Topping: 25.4 mm SFR AcoustiTile Rubber Tile Flooring

Floor Slab: 152 mm Concrete Slab

Reference should be made to Intertek-ATI Report E6534.03-113-11 for complete test specimen description. This page alone is not a complete report.



Acoustical Performance Test Report

SPECIALIZED SUPPLIES AND SERVICES, INC.
1529 NW 89 Court
Doral, Florida 33172

Report	E6534.03-113-11
Test Date	03/25/15
Report Date	03/17/16
Revision Date	03/23/16

Project Scope

This report is a reissue of the original Report No. E6534.01-113-11 and is rendered to Specialized Supplies and Services, Inc. through written authorization. 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 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 2179-03 (2009), Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete

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 twenty sound absorption measurements were conducted at each of five microphone positions.

Test Procedure (Continued)

Four sound pressure level measurements were made simultaneously in both rooms, at each of five microphone positions.

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 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.

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

Test Conditions

Source Room		Receive Room	
Average Temperature	19.8°C	Average Temperature	18.3°C
Average Relative Humidity	36%	Average Relative Humidity	38%

Test Calculations

The STC (Sound Transmission Class), IIC (Impact Insulation Class), and ΔIIC (Delta Impact Insulation Class) ratings were calculated in accordance with ASTM E 413, 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
Rubber Tile Flooring	609.6 by 609.6	25.4	SFR AcoustiTile	10.98 m ²	19.41 kg/m ²
	<i>Note: Loose laid</i>				
Concrete Slab	3023 by 3632	152.0	N/A	10.98 m ²	366.18 kg/m ²
	<i>Note: The concrete slab was installed in a test frame flush to the source room.</i>				

Comments

The total weight of the floor/ceiling assembly was 4233.8 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.



This report is reissued in the name of Specialized Supplies and Services, Inc. through written authorization from the original report holder.

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.

This report may not be reproduced, except in full, without the written approval of Intertek-ATI.

FOR INTERTEK-ATI:

Jordan Strybos
Project Manager - Acoustical Testing

Bradlay D. Hunt
Project Manager - Acoustical Testing

Attachments (9 Pages): This report is complete only when all attachments are included.

** Stated by Client/Manufacturer*

N/A - Non Applicable



Revision Log

<u>Revision</u>	<u>Date</u>	<u>Page(s)</u>	<u>Description</u>
R0	03/17/16	N/A	Original Report Issue - Reissue of Report No. E6534.01-113-11 in the name of Specialized Supplies and Services, Inc.
R1	03/21/16	Page 3	Formatting error corrected - final paragraph now shown in full

Attachments

Instrumentation

Instrument	Manufacturer	Model	ATI Number	Date of Calibration
Data Acquisition Unit	National Instruments	PXI-1033	63763	06/14 *
Microphone Calibrator	Norsonic	1251	Y002919	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 63811	09/14 09/14
Source Room Microphone	PCB Piezotronics	378B20	63738	04/14
Source Room Microphone	PCB Piezotronics	378B20	63739	04/14
Source Room Microphone	PCB Piezotronics	378B20	63748	04/14
Source Room Microphone	PCB Piezotronics	378B20	63742	04/14
Source Room Microphone	PCB Piezotronics	378B20	63741	04/14
Source Room Environmental Indicator	Comet	T7510	63812	09/14
Tapping Machine	Look Line s.r.l.	EM50 (TM50)	65351	11/14

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

Test Chambers

VT Receive Room Volume	158.86 m ³
VT Source Room Volume	190 m ³



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AIRBORNE SOUND TRANSMISSION LOSS
ASTM E 90

Test Date	03/25/15
Data File No.	E6534.01
Client	ECORE International
Description	25.4 mm SFR AcoustiTile Rubber Tile Flooring, 152 mm Concrete Slab
Specimen Area	10.98 m ²
Technician	Jordan Strybos

Freq (Hz)	Background SPL (dB)	Absorption (m ²)	Source SPL (dB)	Receive SPL (dB)	Specimen TL (dB)	95% Confidence Limit	Number of Deficiencies
80	53.6	16.3	107	67	40	4.30	-
100	41.3	14.8	107	66	41	2.30	-
125	37.1	10.6	106	68	39	1.20	0
160	32.7	11.0	107	71	37	1.40	2
200	29.4	11.9	104	70	34	1.90	8
250	26.8	11.7	104	62	41	1.40	4
315	24.7	10.6	103	59	44	0.40	4
400	21.8	9.1	102	55	48	0.70	3
500	23.9	8.2	103	49	55	0.50	0
630	23.9	7.9	104	47	60	0.60	0
800	24.1	7.9	104	44	62	0.60	0
1000	24.5	7.9	103	41	64	0.50	0
1250	25.9	7.9	104	41	66	0.80	0
1600	19.6	8.1	104	40	66	0.30	0
2000	12.7	9.3	103	38	67	0.50	0
2500	8.3	10.4	103	38	67	0.60	0
3150	6.4	11.8	103	33	70	0.60	0
4000	6.4	13.7	103	30	73	0.60	0
5000	5.8	16.9	103	27	74	0.70	-
6300	5.9	22.3	96	17	78	0.70	-
8000	6.2	29.9	96	12	80	1.00	-
10000	6.3	37.7	90	7	79	0.90	-

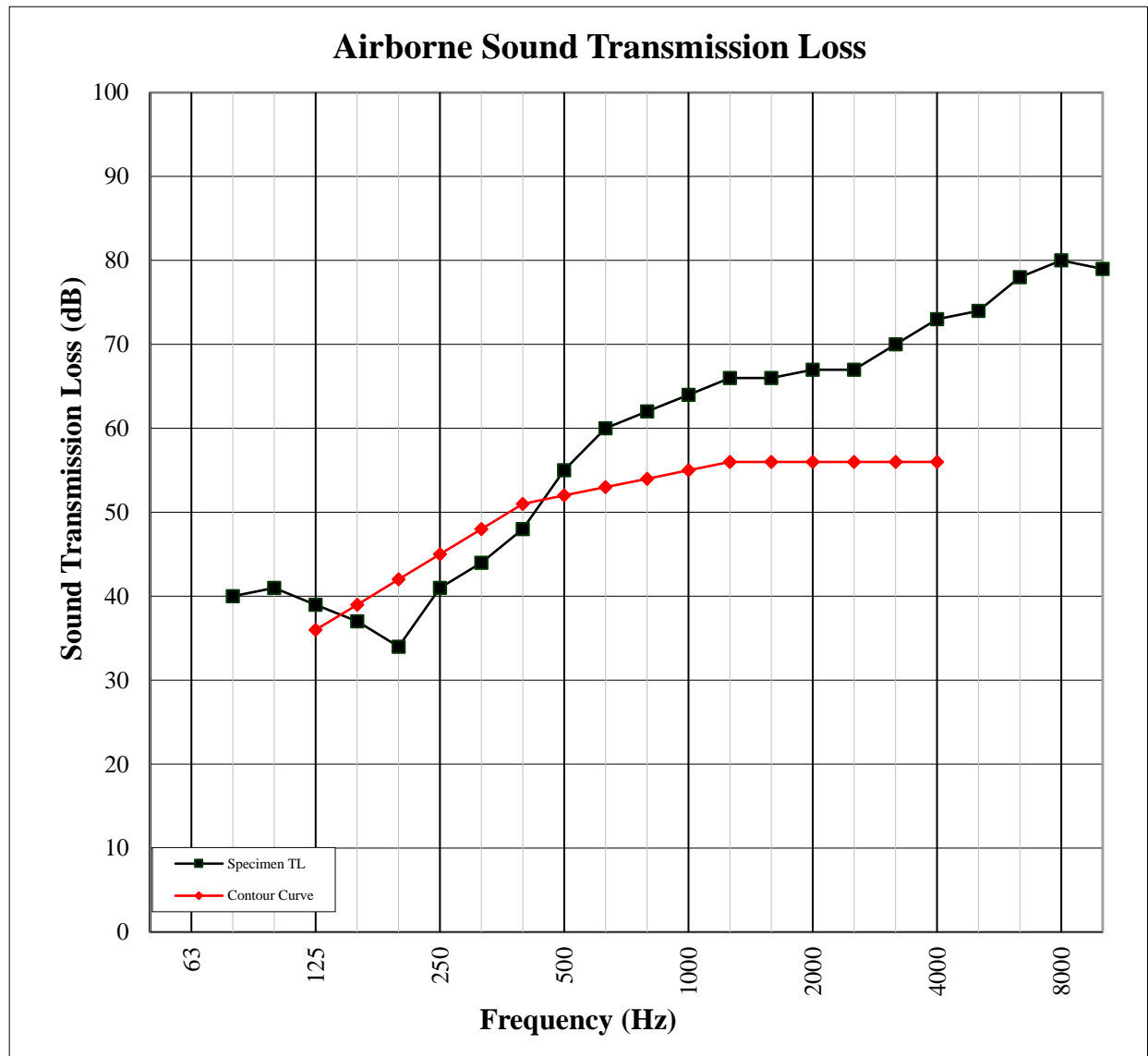
STC Rating **52** (*Sound Transmission Class*)

Deficiencies **21** (*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

AIRBORNE SOUND TRANSMISSION LOSS
ASTM E 90

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Description	25.4 mm SFR AcoustiTile Rubber Tile Flooring, 152 mm Concrete Slab
Specimen Area	10.98 m ²
Technician	Jordan Strybos





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IMPACT SOUND TRANSMISSION
ASTM E 492

Test Date	03/25/15
Data File No.	E6534.01
Client	ECORE International
Description	25.4 mm SFR AcoustiTile Rubber Tile Flooring, 152 mm Concrete Slab
Specimen Area	10.98 m ²
Technician	Jordan Strybos

Freq (Hz)	Background SPL (dB)	Absorption (m ²)	Normalized Impact SPL (dB)	95% Confidence Limit	Number of Deficiencies
80	50.9	17.8	58	2.9	-
100	43.7	13.5	56	1.5	0
125	40.8	10.3	57	1.5	1
160	33.4	10.3	59	2.2	3
200	28.1	12.7	64	2.3	8
250	26.5	11.8	56	0.7	0
315	24.2	10.1	51	1.1	0
400	21.6	9.4	48	0.5	0
500	25.1	8.3	44	1.3	0
630	24.4	7.8	40	0.6	0
800	24.9	8.0	36	0.8	0
1000	24.9	7.9	28	0.5	0
1250	23.5	8.0	23	0.4	0
1600	19.8	8.1	20	0.2	0
2000	12.5	9.2	13	0.3	0
2500	7.9	10.4	9	0.5	0
3150	6.2	11.8	7	0.2	0
4000	6.1	13.7	6	0.5	-
5000	5.6	17.1	6	0.5	-
6300	5.9	22.1	7	0.7	-
8000	6.2	30.1	9	0.9	-
10000	6.3	38.9	10	0.9	-

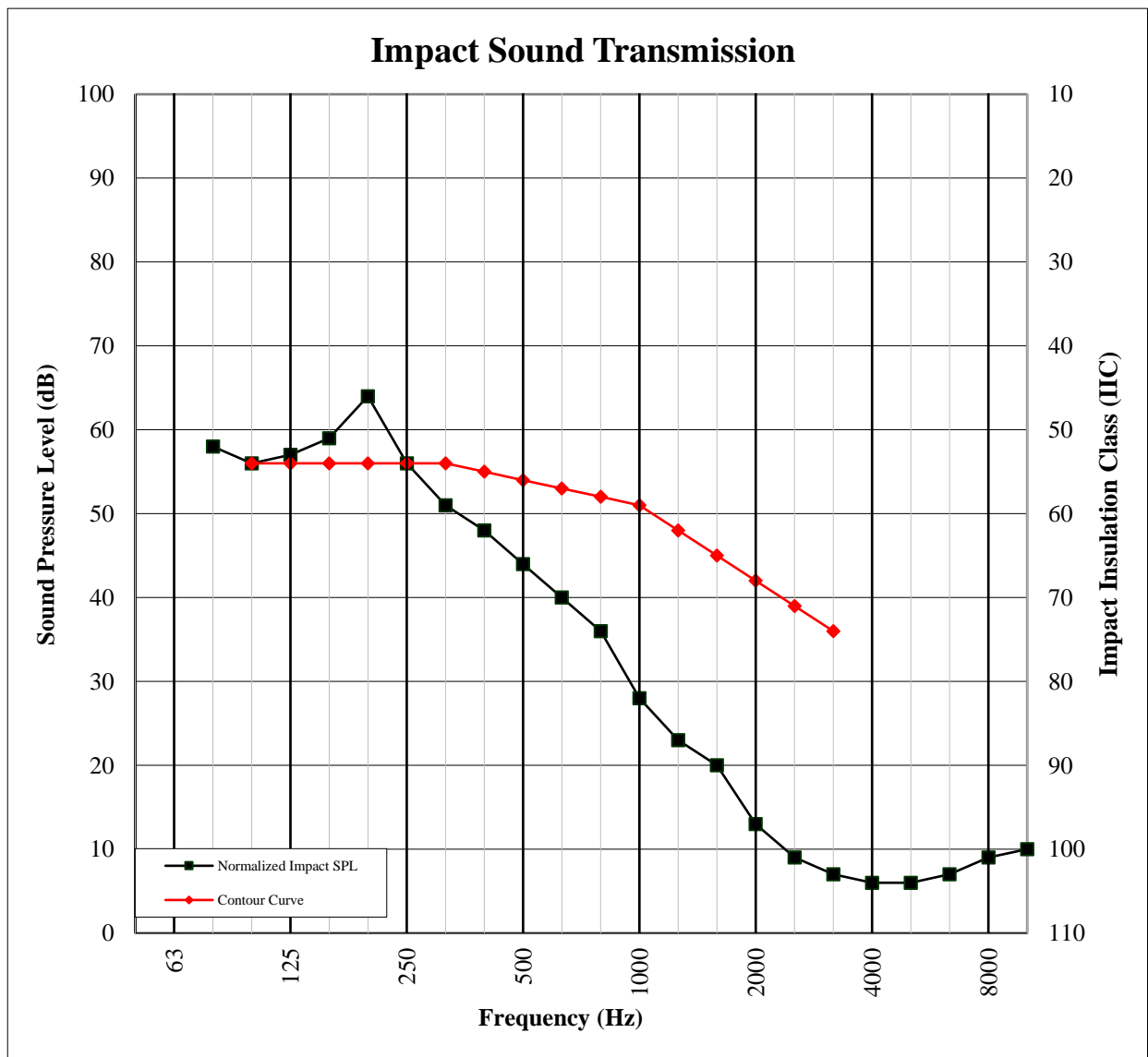
IIC Rating **56** *(Impact Insulation Class)*

Deficiencies **12** *(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

Test Date	03/25/15
Data File No.	E6534.01
Client	ECORE International
Description	25.4 mm SFR AcoustiTile Rubber Tile Flooring, 152 mm Concrete Slab
Specimen Area	10.98 m ²
Technician	Jordan Strybos





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DELTA IMPACT INSULATION
ASTM E 2179

Test Date	03/25/15
Data File No.	E6534.01
Client	ECORE International
Description	25.4 mm SFR AcoustiTile Rubber Tile Flooring, 152 mm Concrete Slab
Specimen Area	10.98 m ²
Technician	Jordan Strybos

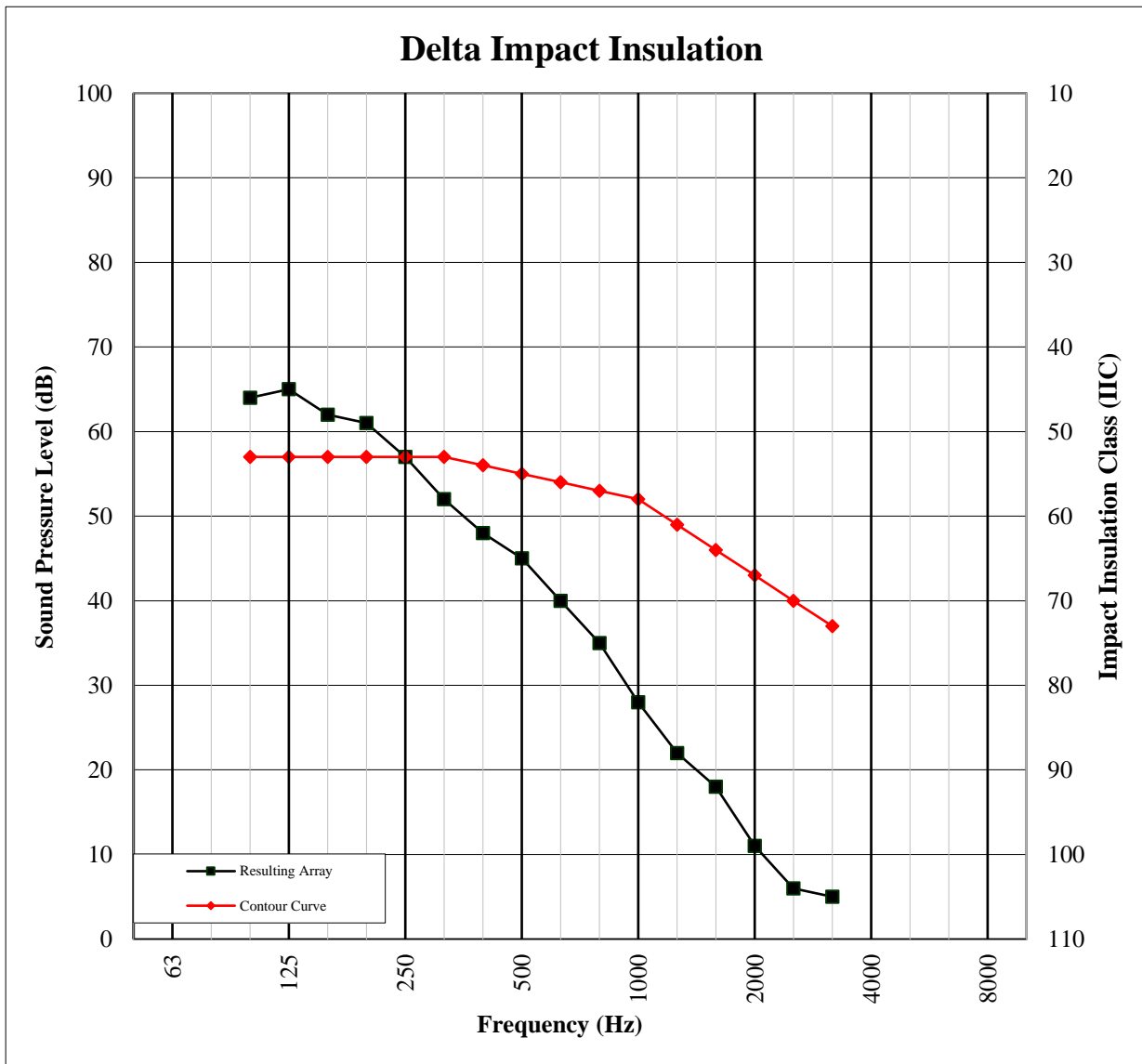
Freq (Hz)	Bkgrd SPL (dB)	Absorption (Square Meters)	Normalized Impact SPL BARE (dB)	95% Conf Limit	Normalized Impact SPL SPEC (dB)	95% Conf Limit	Resulting Array L _{ref,c}	No. of Deficiencies
100	43.7	13.5	59.5	0.7	56.3	0.9	64	7
125	40.8	10.3	59.6	1.1	57.1	1.0	65	8
160	33.4	10.3	65.3	1.1	59.2	0.8	62	5
200	28.1	12.7	72.2	2.2	64.3	1.7	61	4
250	26.5	11.8	68.2	2.0	56.3	0.8	57	0
315	24.2	10.1	68.7	2.3	51.1	1.6	52	0
400	21.6	9.4	70.1	1.2	48.1	1.2	48	0
500	25.1	8.3	69.9	1.4	44.0	0.9	45	0
630	24.4	7.8	71.1	1.7	40.0	2.5	40	0
800	24.9	8.0	72.9	3.1	36.3	1.6	35	0
1000	24.9	7.9	72.6	1.3	28.2	0.5	28	0
1250	23.5	8.0	73.5	0.7	23.2	0.3	22	0
1600	19.8	8.1	73.8	1.5	19.6	1.2	18	0
2000	12.5	9.2	74.3	1.9	13.1	0.7	11	0
2500	7.9	10.4	74.8	1.3	9.1	0.6	6	0
3150	6.2	11.8	73.9	1.8	7.1	0.4	5	0

ΔIIC Rating 27 *(Delta Impact Insulation Class)*
Deficiencies 24 *(Sum of Deficiencies)*

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

DELTA IMPACT INSULATION
ASTM E 2179

Test Date	03/25/15
Data File No.	E6534.01
Client	ECORE International
Description	25.4 mm SFR AcoustiTile Rubber Tile Flooring, 152 mm Concrete Slab
Specimen Area	10.98 m ²
Technician	Jordan Strybos



Photographs

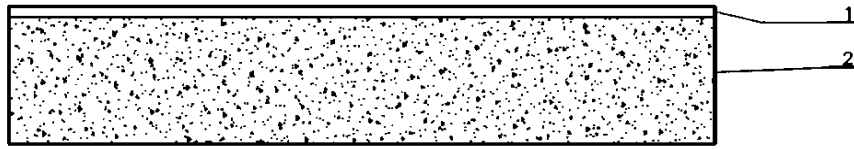


Close-Up of Test Specimen



Receive Room View of Test Specimen Installation

Drawing



1-Floor Topping

2-Concrete Slab