

PXL CROSS LINKED FOAM CORPORATION ACOUSTICAL PERFORMANCE TEST REPORT

SCOPE OF WORK

ASTM E90, ASTM E492, AND ASTM E2179 TESTING ON 7MM LIFEPROOF VINYL PLANK FLOORING OVER 3.2MM (1/8") ECO CORK FOAM UNDERLAYMENT

SPECIMEN TYPE

Concrete Slab - 152 mm

REPORT NUMBER

M5263.07-113-11-R0

TEST DATE

07/19/21

ISSUE DATE

08/23/21

RECORD RETENTION END

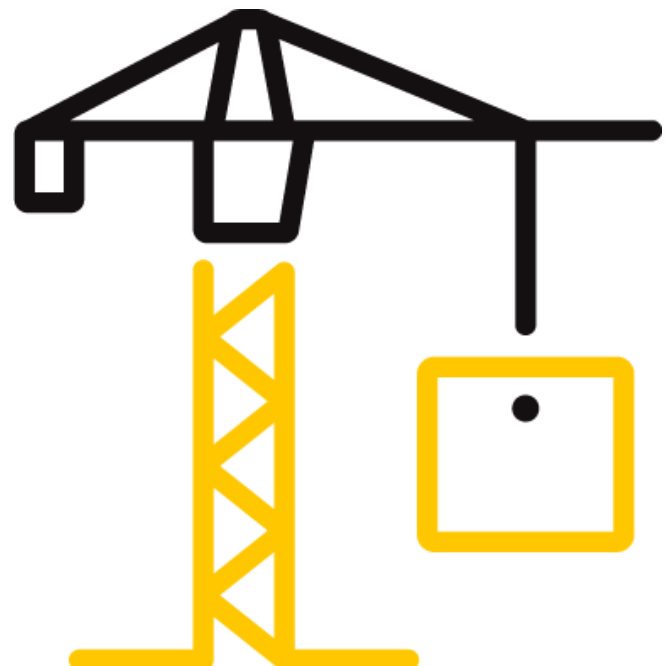
07/19/25

PAGES

17

DOCUMENT CONTROL

ATI 00629 (03/21/18)
RTTDS-R-AMER-Test-2844
© 2017 INTERTEK



TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

Date: 08/23/21

REPORT ISSUED TO

PXL CROSS LINKED FOAM CORPORATION

210 Willmott Street Unit #4

Cobourg, Ontario K9A 0E9 CANADA

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by PXL Cross Linked Foam Corporation to perform testing in accordance with ASTM E90, ASTM E492, AND ASTM E2179 on 7mm Lifeproof Vinyl Plank Flooring over 3.2mm (1/8") Eco Cork Foam Underlayment. Results obtained are tested values and were secured by using the designated test methods. Testing was conducted in the VT test chambers at Intertek B&C located in York, Pennsylvania.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

DATA FILE NO.	M5263.07
SERIES/MODEL:	7mm Lifeproof Vinyl Plank Flooring over 3.2mm (1/8") Eco Cork Foam Underlayment
STC	50
IIC	58
ΔIIC	25
HIIC	62
ΔHIIC	33

COMPLETED BY: Cody R. Snyder
Technician Team Leader -
TITLE: Acoustical Testing
SIGNATURE:
DATE: 08/23/21

COMPLETED BY: Daniel B. Mohler
Project Lead - Acoustical
TITLE: Testing
SIGNATURE:
DATE: 08/23/21

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample(s) tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.



TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

Date: 08/23/21

SECTION 3**TEST METHODS**

The specimen was evaluated in accordance with the following:

ASTM E90-09 (2016), *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions*

ASTM E413-16, *Classification for Rating Sound Insulation*

ASTM E492-09(2016)e1, *Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine*

ASTM E2179-21, *Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors*

ASTM E989-21, *Classification for Determination of Impact Insulation Class (IIC)*

ASTM E2235-04 (2020), *Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods*

ASTM E3222-20, *Standard Classification for Determination of High-Frequency Impact Sound Ratings*

SECTION 4**MATERIAL SOURCE/INSTALLATION**

The full test specimen was assembled on the day of testing by B&C. All materials provided by the client were installed on an existing B&C assembly (Concrete Slab - 152 mm) utilizing B&C-supplied materials. The assembly was installed in a steel test frame which was installed into the opening between the source and receive rooms in the test chamber. The test frame was isolated from the structure with dense neoprene gasket.

The total weight of the floor/ceiling assembly was 4114.1 kg. B&C will store samples of the test specimen for four years. Photographs of the test specimen are included in the report. A drawing of the test specimen is included in the report.

B&C 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 B&C for the entire test record retention period.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule, also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

Date: 08/23/21

**SECTION 5
EQUIPMENT**

INSTRUMENT	MANUFACTURER	MODEL	DESCRIPTION	ASSET #	CAL DATE
Data Acquisition Unit	National Instruments	PXI-4462	Data Acquisition Card	63763-1	10/20 *
Data Acquisition Unit	National Instruments	PXI-4462	Data Acquisition Card	63763-4	10/20 *
Data Acquisition Unit	National Instruments	PXI-4462	Data Acquisition Card	65124	02/21 *
Microphone Calibrator	Norsonic	1251	Acoustical Calibrator	65105	09/20
Receive Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	64340	11/20
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	65617	09/20
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	65968	01/21
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	INT01089	02/21
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	INT00652	02/21
Receive Room Environmental Indicator	Comet	T7510	Temperature and Humidity Transmitter	63810	10/20
				63811	10/20
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	65969	04/21
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	63742	03/21
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	63747	09/20
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	63745	09/20
Source Room Microphone	PCB Electronics	378C20	Microphone and Preamplifier	63744	09/20
Source Room Environmental Indicator	Comet	T7510	Temperature and Humidity Transmitter	63812	10/20
Tapping Machine	Norsonic	Nor277	Tapping Machine	INT00936	01/21

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

VT RECEIVE ROOM VOLUME	158.86 m ³
VT SOURCE ROOM VOLUME	190 m ³

**SECTION 6
LIST OF OFFICIAL OBSERVERS**

NAME	COMPANY
Cody R. Snyder	Intertek B&C
Daniel B. Mohler	Intertek B&C

TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

Date: 08/23/21

SECTION 7**TEST PROCEDURE**

The microphones were calibrated before conducting the tests. The air temperature and relative humidity conditions were monitored and recorded during all measurements. The average temperature and humidity of both the source and receive rooms are listed in Sections 10 and 11. The maximum and minimum temperatures and humidities of the receive room from the duration of the test are listed in Sections 12 through 15.

The airborne transmission loss test was conducted in accordance with the ASTM E90 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. Two 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 E492 test method. Two background noise sound pressure level, two sound pressure level measurements with the tapping machine operating at each position specified by ASTM E492, and five sound absorption measurements were conducted at each of five microphone positions.

The delta impact insulation test was conducted in accordance with ASTM E2179 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 E492 with only the concrete slab installed were conducted at each of five microphone positions.

Detailed test procedures, data for flanking limit tests, repeatability measurements, and reference specimen tests are available upon request.

SECTION 8**TEST CALCULATIONS**

The STC (Sound Transmission Class), IIC (Impact Insulation Class), HIIC (High-Frequency Impact Insulation Class), and Δ IIC (Delta Impact Insulation Class) ratings were calculated in accordance with ASTM E413, ASTM E989, ASTM E3222, and ASTM E2179, respectively.

TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

Date: 08/23/21

SECTION 9

TEST SPECIMEN DESCRIPTION

MATERIAL	DIMENSIONS (mm)	THICKNESS (mm)	MANUFACTURER AND SERIES	QUANTITY	AVERAGE WEIGHT
Vinyl Plank Flooring	1209 by 221	7.0	Lifeproof	10.98 m ²	8.1 kg/m ²
	Note: Loose laid				
Foam Underlayment	3023 by 914.4	3.2	(1/8") Eco Cork	10.98 m ²	0.39 kg/m ²
	Note: Loose laid				
Concrete Slab	3023 by 3632	152.4	5000 PSI	10.98 m ²	366.18 kg/m ²
	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. No noticeable shrinkage or cracking was visible on the specimen.				

TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

Date: 08/23/21

SECTION 10

TEST RESULTS - AIRBORNE SOUND TRANSMISSION LOSS



TEST DATE	7/19/2021				
DATA FILE NO.	M5263.07				
CLIENT	PXL Cross Linked Foam Corporation				
DESCRIPTION	7 mm Lifeproof Vinyl Plank Flooring, 3.2 mm (1/8") Eco Cork Foam Underlayment, 152.4 mm 5000 PSI Concrete Slab				
SPECIMEN AREA	10.98 m ²	Receive Temp.	21.4°C	Source Temp.	20.7°C
TECHNICIAN	CRS	Receive Humidity	77%	Source Humidity	77%

FREQ (Hz)	BACKGROUND SPL (dB)	ABSORPTION m ²	SOURCE SPL (dB)	RECEIVE SPL (dB)	SPECIMEN TL (dB)	95% CONFIDENCE LIMIT	NUMBER OF DEFICIENCIES
50	38	29.1	99	62	34	2.6	-
63	34.6	24.3	98	60	36	4.1	-
80	36.3	15.9	97	61	36	2.9	-
100	29.1	11.9	95	59	37	2.4	-
125	27.1	10.4	96	57	41	2.5	0
160	24.2	10.7	94	58	38	1.3	0
200	23.5	11.6	94	55	40	1.3	0
250	20.2	11.8	99	56	43	0.9	0
315	20.9	12.2	102	57	45	0.9	1
400	16.8	10.8	102	60	42	1.0	7
500	17.7	10.2	100	58	42	0.8	8
630	20.3	10.2	103	56	47	1.1	4
800	17.7	10.3	102	50	52	0.6	0
1000	17.1	10.8	102	44	58	0.7	0
1250	16.9	10.8	102	41	61	0.5	0
1600	17.8	10.7	103	39	64	0.6	0
2000	16.3	11.6	103	37	66	0.4	0
2500	14.8	12.1	101	34	68	0.5	0
3150	13.2	12.9	102	33	70	0.6	0
4000	12.2	13.7	103	32	71	0.6	0
5000	11.7	15.3	103	30	72	0.5	-
6300	10.7	18.0	98	22	74	0.7	-
8000	10.8	22.2	98	18	77	0.7	-
10000	10.6	22.2	93	9	82	0.8	-
STC Rating	50	<i>(Sound Transmission Class)</i>			Sum of Deficiencies	20	

- 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

TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

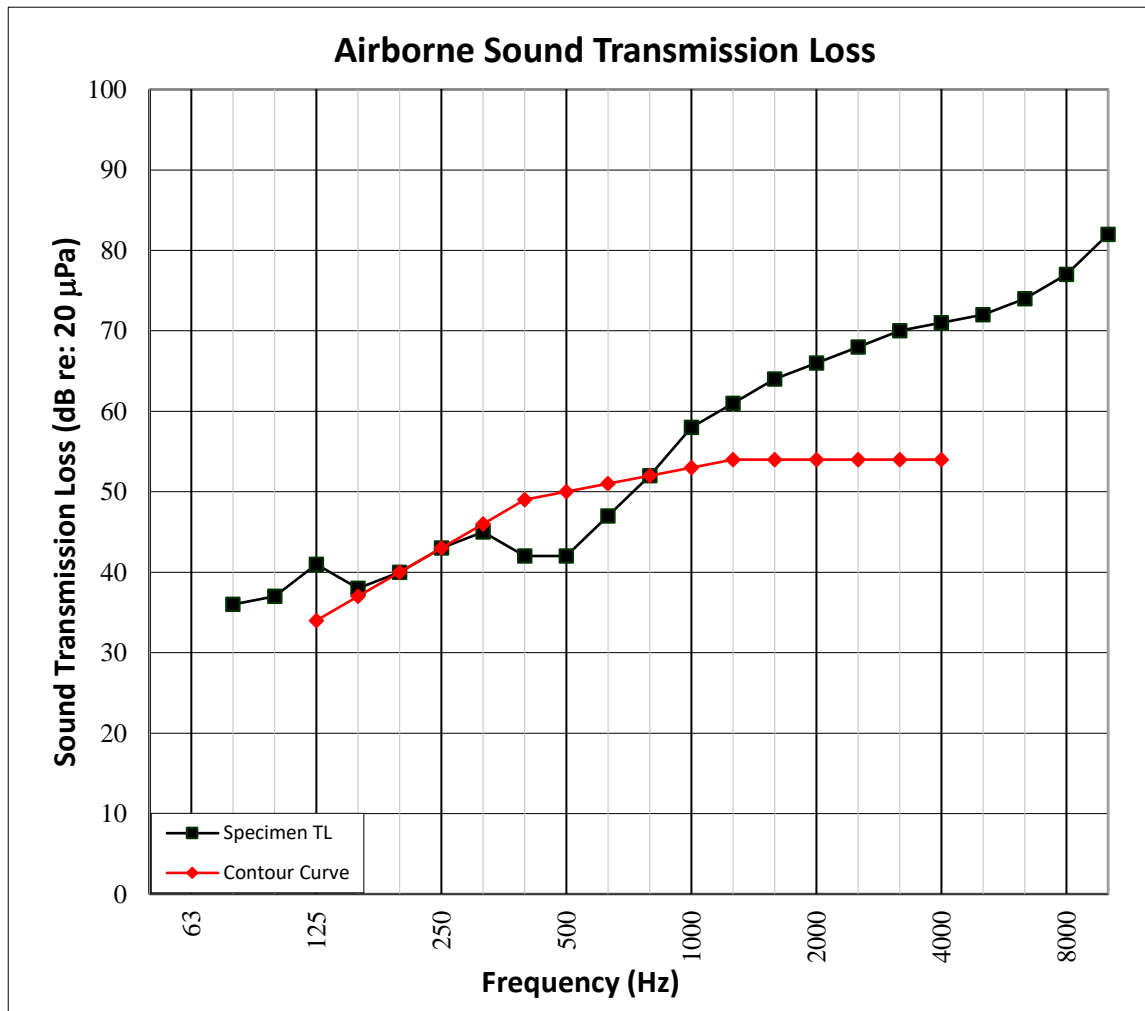
Date: 08/23/21

SECTION 11

TEST RESULTS - AIRBORNE SOUND TRANSMISSION LOSS GRAPH



TEST DATE	7/19/2021				
DATA FILE NO.	M5263.07				
CLIENT	PXL Cross Linked Foam Corporation				
DESCRIPTION	7 mm Lifeproof Vinyl Plank Flooring, 3.2 mm (1/8") Eco Cork Foam Underlayment, 152.4 mm 5000 PSI Concrete Slab				
SPECIMEN AREA	10.98 m ²	Receive Temp.	21.4°C	Source Temp.	20.7°C
TECHNICIAN	CRS	Receive Humidity	77%	Source Humidity	77%



TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

Date: 08/23/21

SECTION 12

TEST RESULTS - IMPACT SOUND TRANSMISSION



TEST DATE	7/19/2021				
DATA FILE NO.	M5263.07				
CLIENT	PXL Cross Linked Foam Corporation				
DESCRIPTION	7 mm Lifeproof Vinyl Plank Flooring, 3.2 mm (1/8") Eco Cork Foam Underlayment, 152.4 mm 5000 PSI Concrete Slab				
SPECIMEN AREA	10.98 m ²	Maximum Temp.	21.5°C	Minimum Temp.	21.3°C
TECHNICIAN	CRS	Max. Humidity	77%	Min. Humidity	76%

FREQ (Hz)	BACKGROUND SPL (dB)	ABSORPTION m ²	NORMALIZED IMPACT SPL (dB)	95% CONFIDENCE LIMIT	NUMBER OF DEFICIENCIES
80	41.5	15.7	56	3.2	-
100	27.3	13.3	55	1.3	1
125	26.0	10.5	56	1.3	2
160	23.4	11.2	58	1.0	4
200	21.1	12.2	62	0.6	8
250	17.3	11.6	60	0.8	6
315	17.4	11.6	58	0.6	4
400	14.5	11.1	56	0.5	3
500	15.6	10.1	53	0.4	1
630	18.8	10.2	50	0.4	0
800	16.3	10.4	49	0.5	0
1000	16.4	10.7	43	0.3	0
1250	15.7	10.8	37	0.4	0
1600	13.2	10.8	31	0.4	0
2000	13.5	11.5	26	0.6	0
2500	12.4	12.3	20	0.7	0
3150	10.3	12.8	14	0.7	0
4000	10.6	13.9	12	0.6	-
5000	10.6	15.2	13	0.8	-
6300	10.4	18.1	11	0.7	-
8000	10.6	22.1	10	0.4	-
10000	10.5	22.1	10	0.3	-
IIC Rating	58	<i>(Impact Insulation Class)</i>		Sum of Deficiencies	29

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

TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

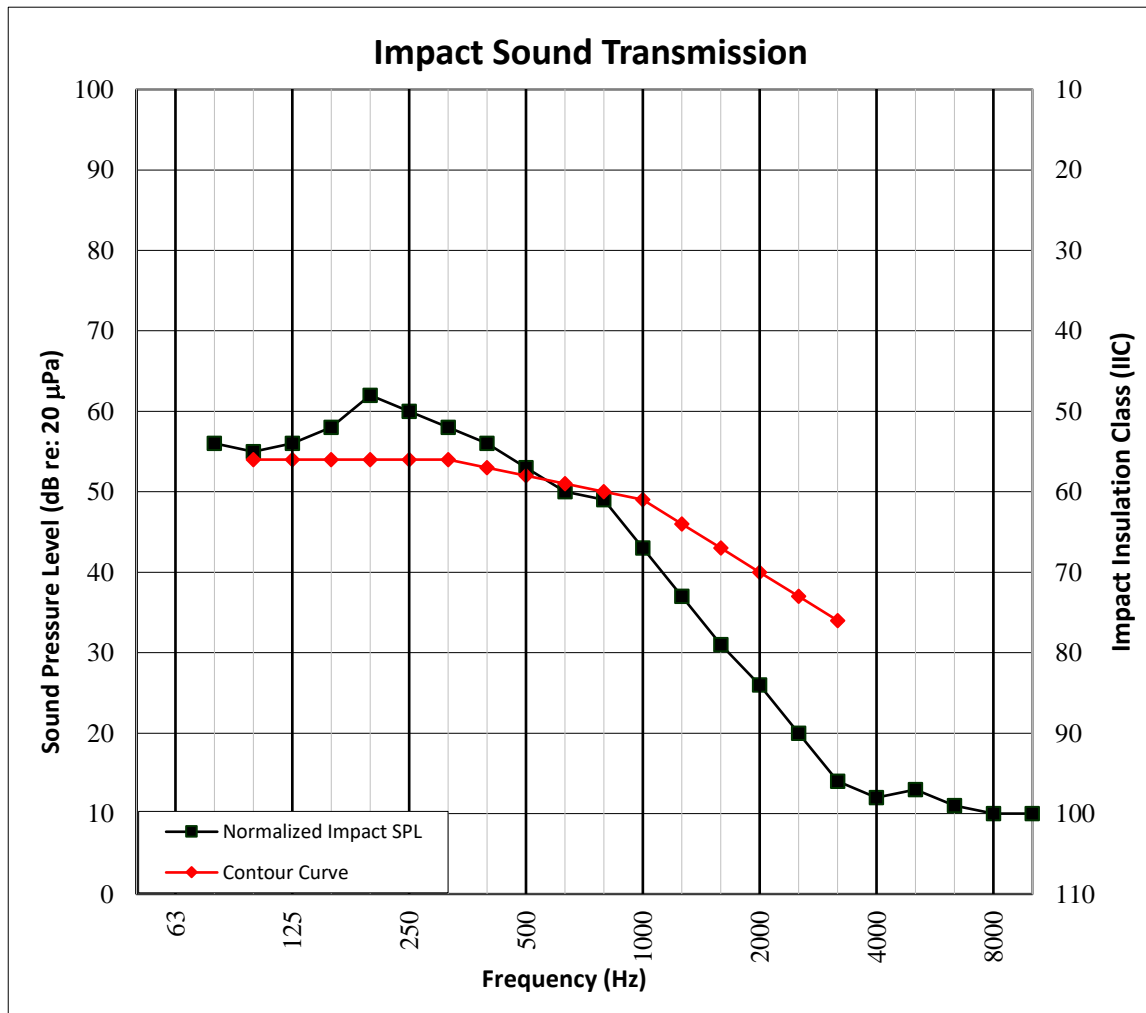
Date: 08/23/21

SECTION 13

TEST RESULTS - IMPACT SOUND TRANSMISSION GRAPH



TEST DATE	7/19/2021				
DATA FILE NO.	M5263.07				
CLIENT	PXL Cross Linked Foam Corporation				
DESCRIPTION	7 mm Lifeproof Vinyl Plank Flooring, 3.2 mm (1/8") Eco Cork Foam Underlayment, 152.4 mm 5000 PSI Concrete Slab				
SPECIMEN AREA	10.98 m ²	Maximum Temp.	21.5°C	Minimum Temp.	21.3°C
TECHNICIAN	CRS	Max. Humidity	77%	Min. Humidity	76%



TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

Date: 08/23/21

SECTION 14

TEST RESULTS - HIGH-FREQUENCY IMPACT SOUND TRANSMISSION



TEST DATE	7/19/2021				
DATA FILE NO.	M5263.07				
CLIENT	PXL Cross Linked Foam Corporation				
DESCRIPTION	7 mm Lifeproof Vinyl Plank Flooring, 3.2 mm (1/8") Eco Cork Foam Underlayment, 152.4 mm 5000 PSI Concrete Slab				
SPECIMEN AREA	10.98 m ²	Maximum Temp.	21.5°C	Minimum Temp.	21.3°C
TECHNICIAN	CRS	Max. Humidity	77%	Min. Humidity	76%

FREQ (Hz)	BACKGROUND SPL (dB)	ABSORPTION m ²	NORMALIZED IMPACT SPL (dB)	95% CONFIDENCE LIMIT	NUMBER OF DEFICIENCIES
400	14.5	11.1	56	0.5	6.9
500	15.6	10.1	53	0.4	4.7
630	18.8	10.2	50	0.4	3.5
800	16.3	10.4	49	0.5	2.5
1000	16.4	10.7	43	0.3	0.0
1250	15.7	10.8	37	0.4	0.0
1600	13.2	10.8	31	0.4	0.0
2000	13.5	11.5	26	0.6	0.0
2500	12.4	12.3	20	0.7	0.0
3150	10.3	12.8	14	0.7	0.0
HIIC Rating	62	<i>(High-Frequency Impact Insulation Class)</i>		Sum of Deficiencies	17.6

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

TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

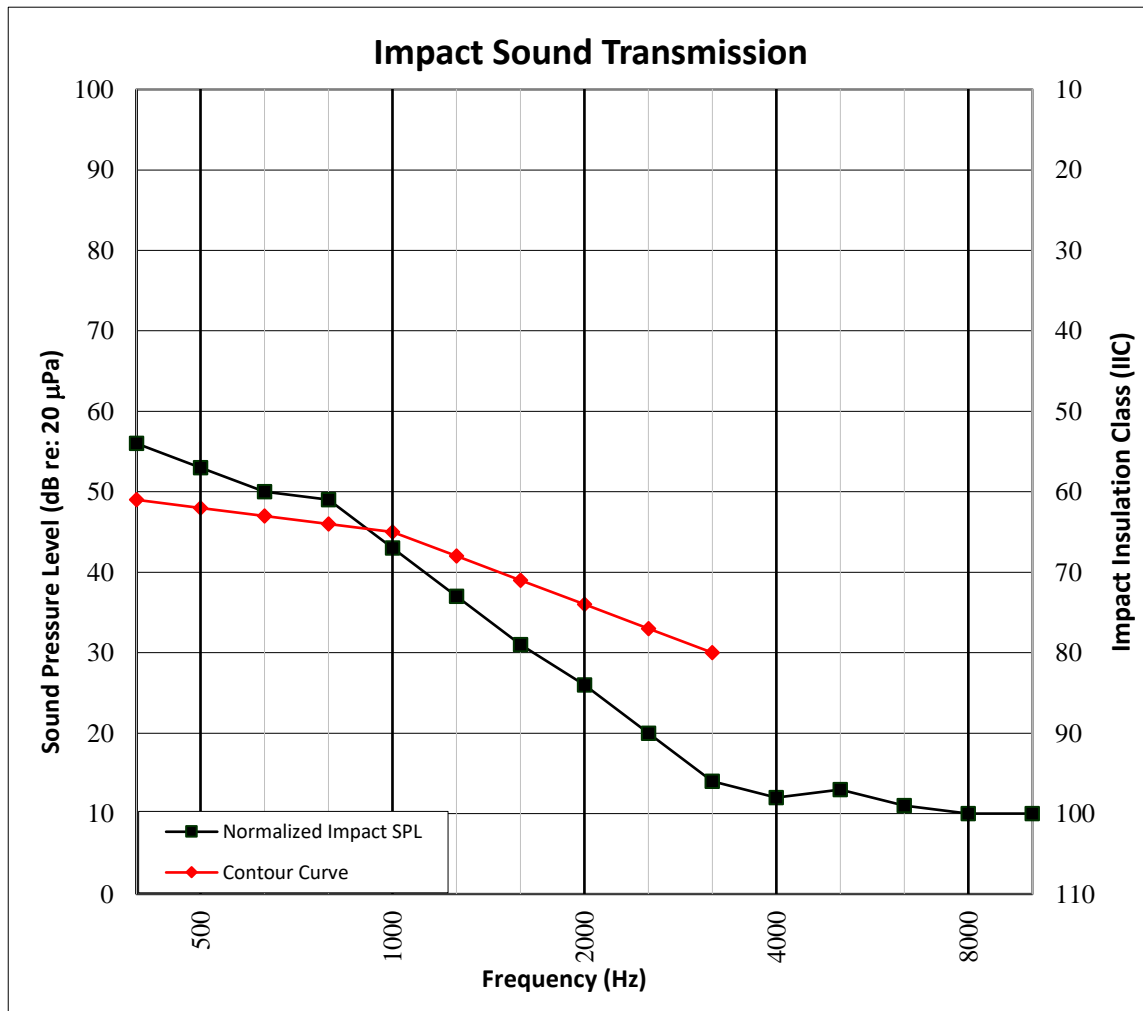
Date: 08/23/21

SECTION 15

TEST RESULTS -HIGH-FREQUENCY IMPACT SOUND TRANSMISSION GRAPH



TEST DATE	7/19/2021				
DATA FILE NO.	M5263.07				
CLIENT	PXL Cross Linked Foam Corporation				
DESCRIPTION	7 mm Lifeproof Vinyl Plank Flooring, 3.2 mm (1/8") Eco Cork Foam Underlayment, 152.4 mm 5000 PSI Concrete Slab				
SPECIMEN AREA	10.98 m ²	Maximum Temp.	21.5°C	Minimum Temp.	21.3°C
TECHNICIAN	CRS	Max. Humidity	77%	Min. Humidity	76%



TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

Date: 08/23/21

SECTION 16

TEST RESULTS - DELTA IMPACT INSULATION



TEST DATE	7/19/2021				
DATA FILE NO.	M5263.07				
CLIENT	PXL Cross Linked Foam Corporation				
DESCRIPTION	7 mm Lifeproof Vinyl Plank Flooring, 3.2 mm (1/8") Eco Cork Foam Underlayment, 152.4 mm 5000 PSI Concrete Slab				
SPECIMEN AREA	10.98 m ²	Maximum Temp.	21.5°C	Minimum Temp.	21.3°C
TECHNICIAN	CRS	Max. Humidity	77%	Min. Humidity	76%

FREQ (Hz)	BACKGROUND SPL (dB)	ABSORPTION m ²	NORMALIZED IMPACT SPL BARE (dB)	95% CONF LIMIT	NORMALIZED IMPACT SPL SPEC (dB)	95% CONF LIMIT	RESULT ARRAY L _{ref,c}	NUMBER OF DEFICIENCIES
100	27.3	13.3	57.7	1.7	55.4	1.6	65.0	6
125	26.0	10.5	58.6	1.5	56.3	1.6	65.0	6
160	23.4	11.2	61.6	1.1	57.8	1.2	64.0	5
200	21.1	12.2	65.9	0.8	61.5	0.8	64.0	5
250	17.3	11.6	66.0	0.7	60.0	1.0	63.0	4
315	17.4	11.6	66.5	0.9	57.8	0.8	61.0	2
400	14.5	11.1	67.7	0.6	55.9	0.6	58.0	0
500	15.6	10.1	68.4	0.7	52.7	0.5	55.0	0
630	18.8	10.2	70.4	0.6	50.5	0.5	51.0	0
800	16.3	10.4	71.2	0.7	48.5	0.6	49.0	0
1000	16.4	10.7	71.5	0.4	43.1	0.4	44.0	0
1250	15.7	10.8	72.4	0.5	37.4	0.5	37.0	0
1600	13.2	10.8	72.6	0.6	31.1	0.5	30.0	0
2000	13.5	11.5	73.0	0.7	25.7	0.8	25.0	0
2500	12.4	12.3	72.6	0.8	19.9	0.9	19.0	0
3150	10.3	12.8	71.9	1.1	14.0	0.9	14.0	0
ΔIIC Rating	25	<i>(Delta Impact Insulation Class)</i>				Sum of Deficiencies	28	
ΔHIIC Rating	33	<i>(Delta High-Frequency Impact Insulation Class)</i>				Sum of Deficiencies	19	

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

TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

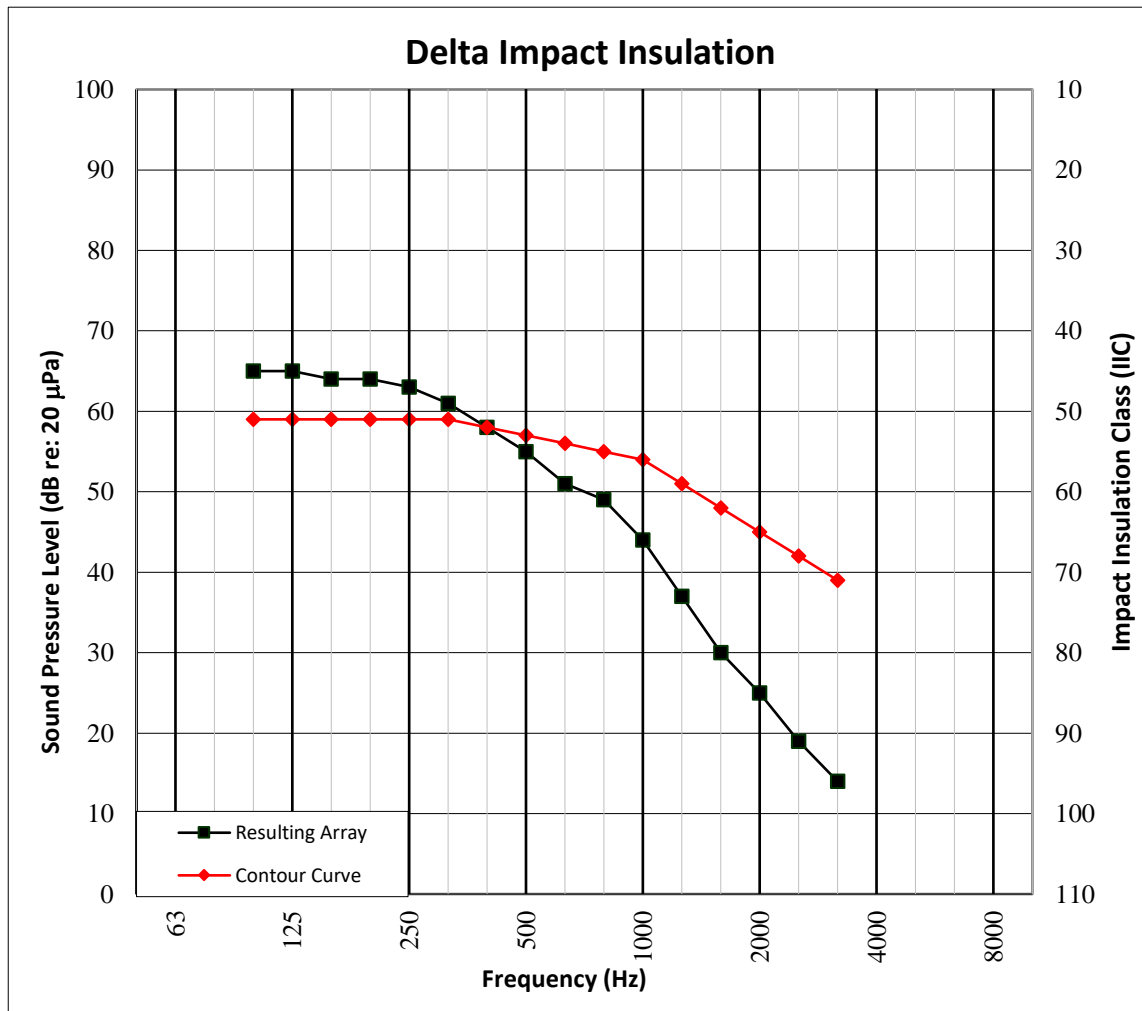
Date: 08/23/21

SECTION 17

TEST RESULTS - DELTA IMPACT INSULATION GRAPH



TEST DATE	7/19/2021				
DATA FILE NO.	M5263.07				
CLIENT	PXL Cross Linked Foam Corporation				
DESCRIPTION	7 mm Lifeproof Vinyl Plank Flooring, 3.2 mm (1/8") Eco Cork Foam Underlayment, 152.4 mm 5000 PSI Concrete Slab				
SPECIMEN AREA	10.98 m ²	Maximum Temp.	21.5°C	Minimum Temp.	21.3°C
TECHNICIAN	CRS	Max. Humidity	77%	Min. Humidity	76%



TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

Date: 08/23/21

SECTION 18

PHOTOGRAPHS



Photo No. 1
Source Room View of Test Specimen Installation



Photo No. 2
Receive Room View of Test Specimen Installation

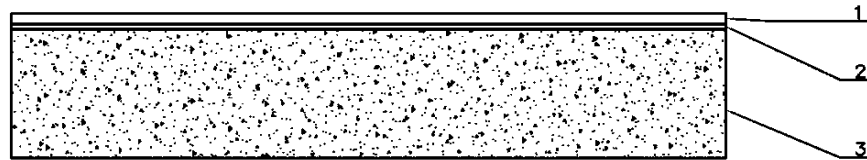
TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

Date: 08/23/21

SECTION 19

DRAWING



- 1-Floor Topping
- 2-Underlayment
- 3-Concrete Slab

TEST REPORT FOR PXL CROSS LINKED FOAM CORPORATION

Report No.: M5263.07-113-11-R0

Date: 08/23/21

SECTION 20

REVISION LOG

REVISION #	DATE	PAGES	DESCRIPTION
R0	08/23/21	N/A	Original Report Issue