

# ONEFLOR USA ACOUSTICAL PERFORMANCE TEST REPORT

## SCOPE OF WORK

ASTM E492 TESTING ON 3.5 MM ONEFLOR SETAGRIP/SETADB

## SPECIMEN TYPE

152 mm Concrete Slab with Suspended Ceiling

## REPORT NUMBER

M4989.03-113-11-R0

## TEST DATE

06/17/21

## ISSUE DATE

03/29/22

## RECORD RETENTION END

06/17/25

## PAGES

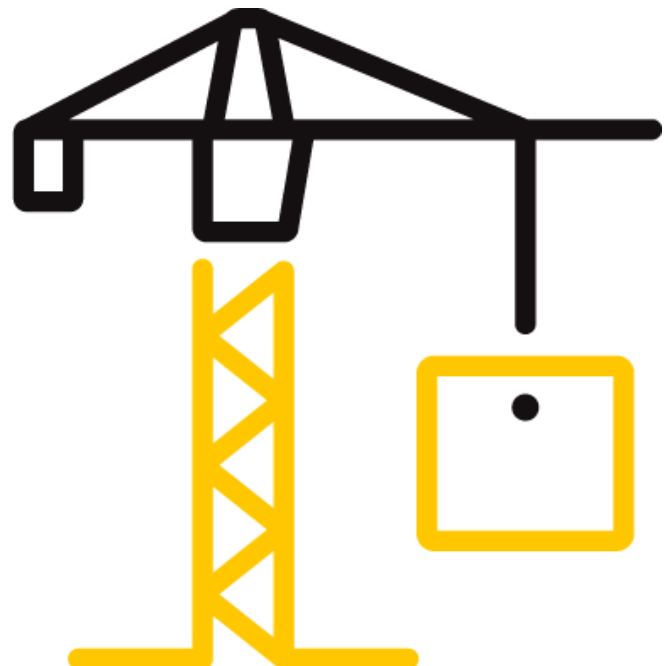
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## DOCUMENT CONTROL

ATI 00629 (03/21/18)

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## TEST REPORT FOR ONEFLOR USA

Report No.: M4989.03-113-11-R0

Date: 03/29/22

### REPORT ISSUED TO

#### ONEFLOR USA

3011Crossbrook Court

Katy, Texas 77450

### SECTION 1

#### SCOPE

Intertek Building & Construction (B&C) was contracted to perform testing in accordance with ASTM E492 on 3.5 mm OneFlor Setagrip/SetaDB. This report is a reissue in the name of OneFlor USA through written authorization from the original report holder. Results obtained are tested values and were secured by using the designated test method(s). 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

<b>DATA FILE NO.</b>	M4989.02
<b>SERIES/MODEL:</b>	3.5 mm OneFlor Setagrip/SetaDB
<b>IIC</b>	67

<b>COMPLETED BY:</b>	Daniel B. Mohler
<b>TITLE:</b>	Project Lead - Acoustical Testing
<b>SIGNATURE:</b>	
<b>DATE:</b>	03/29/22

<b>COMPLETED BY:</b>	Jordan Strybos
<b>TITLE:</b>	Engineer, Team Lead - Acoustical Testing
<b>SIGNATURE:</b>	
<b>DATE:</b>	03/29/22

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**SECTION 3****TEST METHODS**

The specimen was evaluated in accordance with the following:

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

**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*

**SECTION 4****MATERIAL SOURCE/INSTALLATION**

The full test specimen was assembled on the day of testing by B&C. All materials provided by the original client were installed on an existing B&C assembly (152 mm Concrete Slab with Suspended Ceiling) 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 4219.8 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.

This report is reissued in the name of OneFlor USA through written authorization from the original report holder. The original Report No. is M4989.02-113-11.

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.

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**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.

<b>VT RECEIVE ROOM VOLUME</b>	155.77 m <sup>3</sup>
<b>VT SOURCE ROOM VOLUME</b>	190 m <sup>3</sup>

**SECTION 6  
LIST OF OFFICIAL OBSERVERS**

NAME	COMPANY
Morgan S. J. Kennedy	Intertek B&C
Jordan Strybos	Intertek B&C

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**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 maximum and minimum temperatures and humidities of the receive room from the duration of the test are listed in Sections 10 and 11.

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.

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

**SECTION 8****TEST CALCULATIONS**

The IIC (Impact Insulation Class) rating was calculated in accordance with ASTM E989.

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**SECTION 9**

**TEST SPECIMEN DESCRIPTION**

MATERIAL	DIMENSIONS (mm)	THICKNESS (mm)	MANUFACTURER AND SERIES	QUANTITY	AVERAGE WEIGHT
Setagrip/SetaDB	1219.2 by 152.4	3.5	OneFlor	10.98 m <sup>2</sup>	4.44 kg/m <sup>2</sup>
	Note: Loose laid				
Concrete Slab	3023 by 3632	152.4	5000 PSI	10.98 m <sup>2</sup>	366.18 kg/m <sup>2</sup>
	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.				
Drywall Main Beam	38.1 by 2870	43.0	Armstrong HD8906	10.9 lin m	0.45 kg/m
	Note: Twelve gauge hanger wires were attached to the bottom side of the concrete at twelve locations and then to the main beams. The hanger wire was twisted around itself a minimum of three times within 76 mm creating a 305 mm plenum. The measured steel thickness was 0.5 mm.				
Cross Tee	38.3 by 1219	37.3	Armstrong XL8945P	27.2 lin m	0.45 kg/m
	Note: Inserted into the main beams on 610 mm centers. The measured steel thickness was 0.5 mm.				
Fiberglass Insulation	609.6 by 2438	88.9	Johns Manville Unfaced R-13	10.98 m <sup>2</sup>	1.32 kg/m <sup>2</sup>
	Note: Loose laid onto the ceiling grid system				
Gypsum Panel	3023 by 1219	15.9	National Gypsum Gold Bond® Fire-Shield® Type X	10.56 m <sup>2</sup>	11.23 kg/m <sup>2</sup>
	Note: Fastened with 25.4 mm fine thread drywall screws on 305 mm centers. Seams and perimeter sealed with Pecora AC-20® Acoustical Sealant and covered with pressure-sensitive tape.				

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### SECTION 10

#### TEST RESULTS - IMPACT SOUND TRANSMISSION



<b>TEST DATE</b>	6/17/2021				
<b>DATA FILE NO.</b>	M4989.02				
<b>CLIENT</b>	OneFlor USA				
<b>DESCRIPTION</b>	3.5 mm OneFlor Setagrip/SetaDB, 152.4 mm 5000 PSI Concrete Slab, 43 mm Armstrong HD8906 Drywall Main Beam, 37.3 mm Armstrong XL8945P Cross Tee, 88.9 mm Johns Manville Unfaced R-13 Fiberglass Insulation, 15.9 mm National Gypsum Gold Bond® Fire-Shield® Type X Gypsum Panel				
<b>SPECIMEN AREA</b>	10.98 m <sup>2</sup>	<b>Maximum Temp.</b>	21.7°C	<b>Minimum Temp.</b>	21.5°C
<b>TECHNICIAN</b>	MSJK	<b>Max. Humidity</b>	57%	<b>Min. Humidity</b>	56%

FREQ (Hz)	BACKGROUND SPL (dB)	ABSORPTION m <sup>2</sup>	NORMALIZED IMPACT SPL (dB)	95% CONFIDENCE LIMIT	NUMBER OF DEFICIENCIES
80	33.9	14.3	50	2.2	-
100	28.9	12.2	50	1.4	5
125	25.8	11.9	51	0.8	6
160	22.2	9.9	52	1.2	7
200	18.8	11.9	48	0.6	3
250	21.1	12.6	50	1.0	5
315	18.4	11.0	46	0.8	1
400	14.8	9.8	45	0.5	1
500	16.5	9.2	41	0.4	0
630	16.5	9.3	42	0.5	0
800	17.8	9.3	40	0.5	0
1000	16.3	8.8	37	0.6	0
1250	14.8	9.1	35	0.5	0
1600	12.4	9.5	31	0.6	0
2000	11.4	10.4	28	0.6	0
2500	9.7	11.7	22	0.6	0
3150	8.7	12.7	17	0.7	0
4000	8.8	13.9	8	0.6	-
5000	8.7	16.5	7	0.3	-
6300	9.2	20.5	9	0.1	-
8000	8.8	26.3	10	0.2	-
10000	8.7	26.3	10	0.3	-
<b>IIC Rating</b>	<b>67</b>	<i>(Impact Insulation Class)</i>		<b>Sum of Deficiencies</b>	<b>28</b>

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

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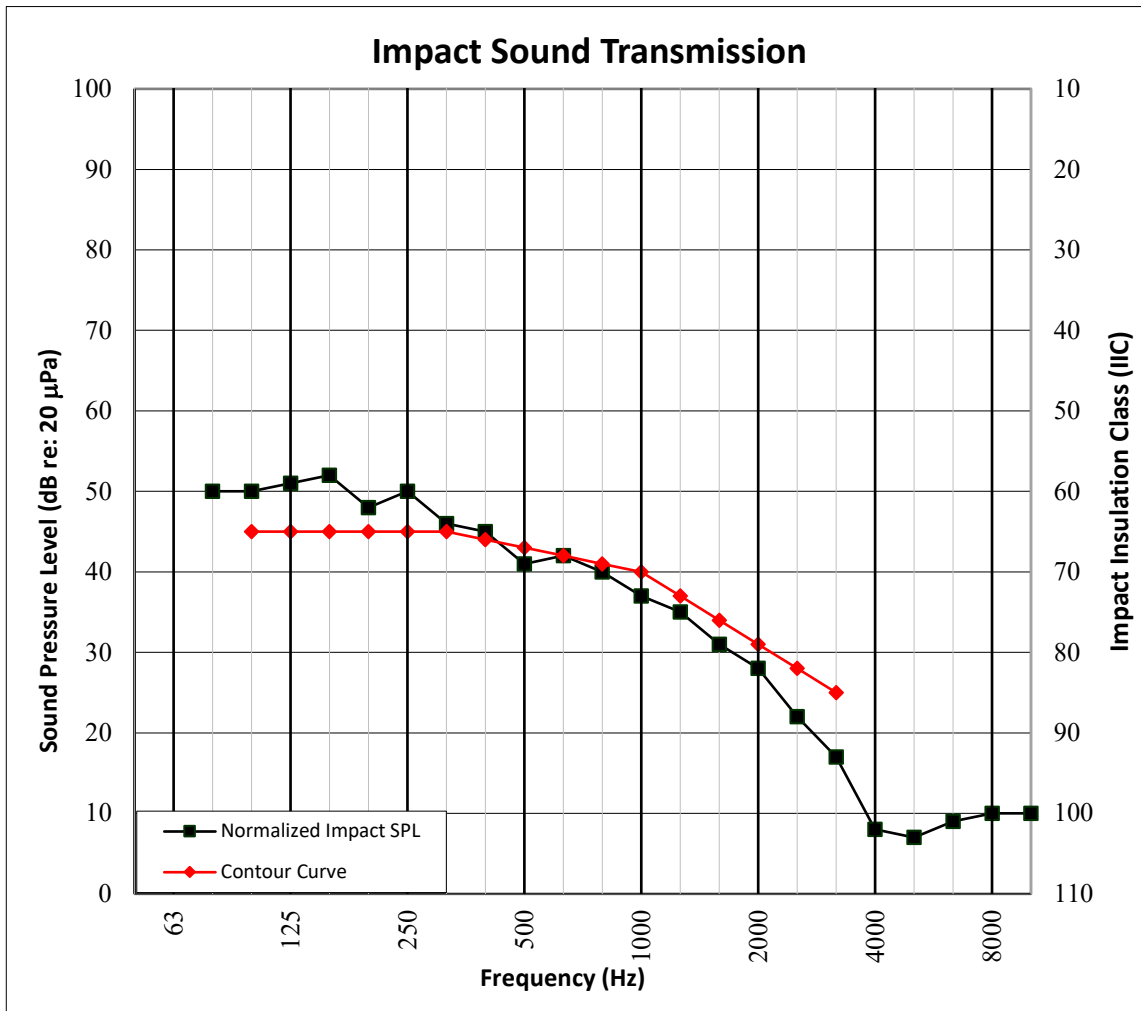
Date: 03/29/22

### SECTION 11

#### TEST RESULTS - IMPACT SOUND TRANSMISSION GRAPH



<b>TEST DATE</b>	6/17/2021				
<b>DATA FILE NO.</b>	M4989.02				
<b>CLIENT</b>	OneFlor USA				
<b>DESCRIPTION</b>	3.5 mm OneFlor Setagrip/SetaDB, 152.4 mm 5000 PSI Concrete Slab, 43 mm Armstrong HD8906 Drywall Main Beam, 37.3 mm Armstrong XL8945P Cross Tee, 88.9 mm Johns Manville Unfaced R-13 Fiberglass Insulation, 15.9 mm National Gypsum Gold Bond® Fire-Shield® Type X Gypsum Panel				
<b>SPECIMEN AREA</b>	10.98 m <sup>2</sup>	<b>Maximum Temp.</b>	21.7°C	<b>Minimum Temp.</b>	21.5°C
<b>TECHNICIAN</b>	MSJK	<b>Max. Humidity</b>	57%	<b>Min. Humidity</b>	56%





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### SECTION 12

#### PHOTOGRAPHS



Photo No. 1

Source Room View of Test Specimen Installation



Photo No. 2

Receive Room View of Test Specimen Installation

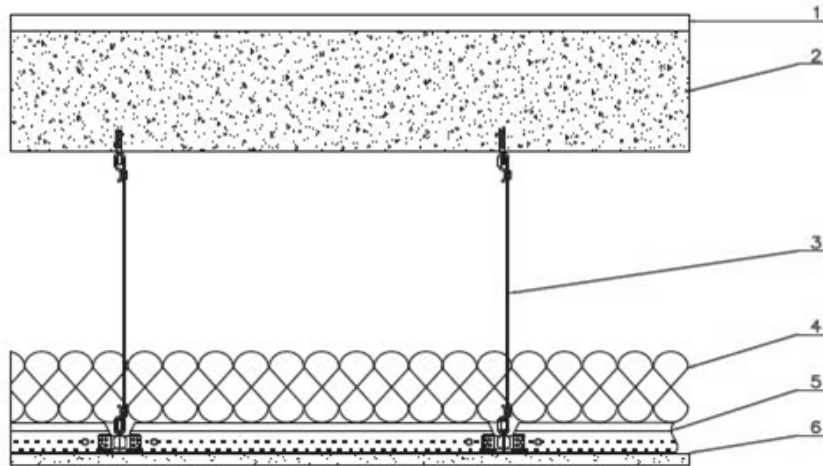
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### SECTION 13

#### DRAWING



- 1-Floor Topping
- 2-Concrete Slab
- 3-Hanger Wire
- 4-Insulation
- 5-Ceiling Grid
- 6-Ceiling

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**SECTION 14**

**REVISION LOG**

REVISION #	DATE	PAGES	DESCRIPTION
R0	03/29/22	N/A	Original Report Issue - Reissue of Report No. M4989.02-113-11 in the name of OneFlor USA.