



E8378.02-113-11-R0
ACOUSTICAL PERFORMANCE TEST REPORT
ASTM E 90 AND ASTM E 492

Rendered to

MP GLOBAL PRODUCTS

Series/Model: MP Global Products Sound Buffer

Specimen Type: Concrete Slab - 152 mm

Overall Size: 3023 mm by 3632 mm

STC	52
IIC	52

Test Specimen Identification:

Floor Topping: 4 mm Luxury Vinyl Plank

Floor Underlayment: 1.2 mm MP Global Products Sound Buffer

Floor Slab: 152 mm Concrete Slab

Reference should be made to Intertek-ATI Report E8378.02-113-11 for complete test specimen description. This page alone is not a complete report.



Acoustical Performance Test Report

MP GLOBAL PRODUCTS
2500 Old Hadar Road
Norfolk, Nebraska 68701

Report E8378.02-113-11
Test Date 06/17/15
Report Date 03/25/16

Project Scope

This report is a reissue of the original Report No. E8378.01-113-11 and is rendered to MP Global Products 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 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	22.8°C	Average Temperature	22.7°C
Average Relative Humidity	61%	Average Relative Humidity	63%

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
Luxury Vinyl Plank	914.4 by 152.4	4.0	N/A	10.98 m ²	7.52 kg/m ²
	<i>Note: Installed with releasable self-adhesive</i>				
Sound Buffer	3023 by 914.4	1.2	MP Global Products	10.98 m ²	0.56 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 4109.4 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 MP Global Products 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 (7 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	03/25/16	N/A	Original Report Issue - Reissue of Report No. E8378.01-113-11 in the name of MP Global Products

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	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 63811	09/14
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	PCB Piezotronics	378B20	63741	04/15
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

AIRBORNE SOUND TRANSMISSION LOSS

ASTM E 90

Test Date	06/17/15
Data File No.	E8378.01
Client	MP Global Products
Description	4 mm Luxury Vinyl Plank, 1.2 mm MP Global Products Sound Buffer, 152 mm Concrete Slab
Specimen Area	10.98 m ²
Technician	Jordan Strybos

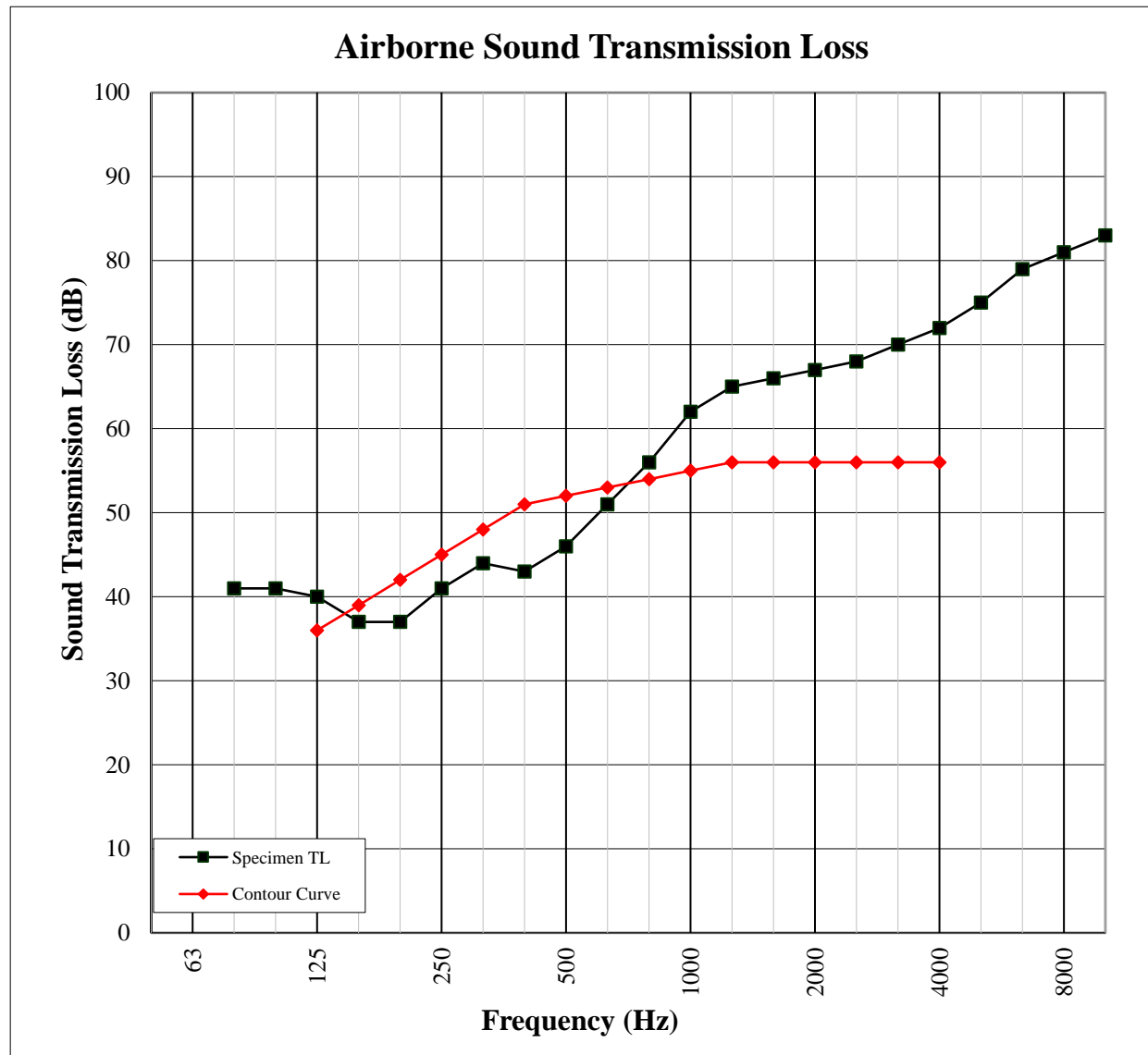
Freq (Hz)	Background SPL (dB)	Absorption (m ²)	Source SPL (dB)	Receive SPL (dB)	Specimen TL (dB)	95% Confidence Limit	Number of Deficiencies
80	48.4	14.8	115	73	41	4.70	-
100	46.1	13.3	110	70	41	1.70	-
125	42.3	8.8	109	71	40	1.30	0
160	37.7	10.3	108	71	37	1.60	2
200	32.3	11.5	107	70	37	1.50	5
250	29.4	11.3	106	65	41	1.00	4
315	27.0	10.6	108	65	44	0.80	4
400	25.4	8.6	105	63	43	0.50	8
500	25.1	8.2	103	58	46	0.40	6
630	22.9	7.9	105	56	51	0.70	2
800	21.4	7.8	105	51	56	0.30	0
1000	23.9	7.7	105	46	62	0.30	0
1250	24.4	7.8	105	43	65	0.50	0
1600	21.8	7.9	104	40	66	0.20	0
2000	15.1	8.6	105	41	67	0.40	0
2500	10.9	9.0	103	37	68	0.40	0
3150	9.9	9.8	103	34	70	0.50	0
4000	9.2	11.1	102	30	72	0.40	0
5000	7.6	12.6	102	27	75	0.60	-
6300	7.0	15.9	101	22	79	0.90	-
8000	6.5	20.5	100	18	81	1.00	-
10000	6.5	25.1	101	16	83	1.00	-

STC Rating 52 (Sound Transmission Class)
Deficiencies 31 (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

Test Date	06/17/15
Data File No.	E8378.01
Client	MP Global Products
Description	4 mm Luxury Vinyl Plank, 1.2 mm MP Global Products Sound Buffer, 152 mm Concrete Slab
Specimen Area	10.98 m ²
Technician	Jordan Strybos



IMPACT SOUND TRANSMISSION ASTM E 492

Test Date	06/17/15
Data File No.	E8378.01
Client	MP Global Products
Description	4 mm Luxury Vinyl Plank, 1.2 mm MP Global Products Sound Buffer, 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	50.0	15.0	54	3.1	-
100	43.2	13.6	56	2.0	0
125	37.5	8.8	56	1.7	0
160	31.9	10.4	64	2.4	4
200	27.9	11.8	67	2.1	7
250	25.9	11.5	67	1.4	7
315	23.7	10.8	64	0.5	4
400	22.6	8.8	63	1.4	4
500	23.7	8.2	59	0.5	1
630	22.1	7.6	56	1.0	0
800	20.0	7.6	55	0.6	0
1000	22.8	7.6	54	0.6	0
1250	22.7	7.7	51	1.0	0
1600	19.4	8.0	46	0.7	0
2000	11.9	8.5	41	0.9	0
2500	8.6	9.1	35	0.8	0
3150	6.9	9.8	27	0.9	0
4000	5.7	11.0	21	1.0	-
5000	5.8	12.6	14	1.7	-
6300	5.9	15.9	9	1.6	-
8000	6.3	20.2	8	1.0	-
10000	6.4	25.3	9	0.8	-

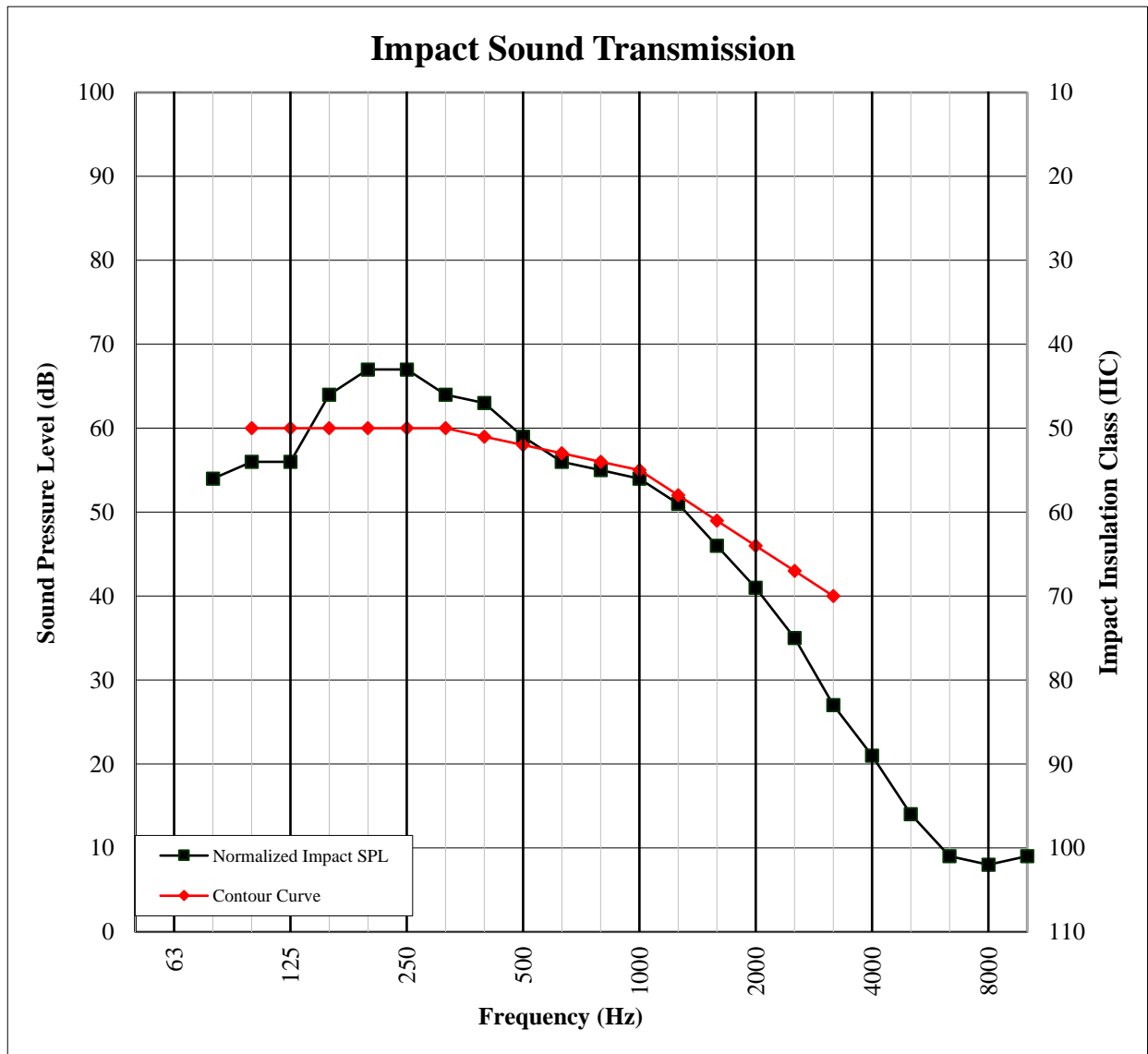
IIC Rating **52** *(Impact Insulation Class)*
Deficiencies **27** *(Sum of Deficiencies)*

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

IMPACT SOUND TRANSMISSION

ASTM E 492

Test Date	06/17/15
Data File No.	E8378.01
Client	MP Global Products
Description	4 mm Luxury Vinyl Plank, 1.2 mm MP Global Products Sound Buffer, 152 mm Concrete Slab
Specimen Area	10.98 m ²
Technician	Jordan Strybos



Photographs

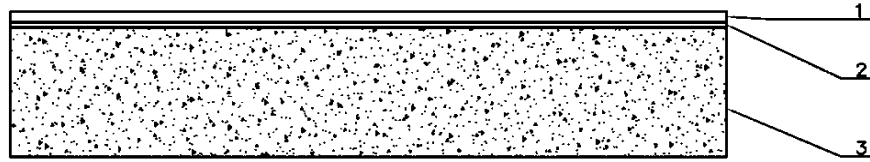


Source Room View of Test Specimen Installation



Receive Room View of Test Specimen Installation

Drawing



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