

# KINETICS NOISE CONTROL ACOUSTICAL PERFORMANCE TEST REPORT

**SCOPE OF WORK**

ASTM E90 SOUND TRANSMISSION LOSS TESTING ON RT-7, CURB ISOLATION PANEL

**REPORT NUMBER**

J8334.01-113-11-R0

**TEST DATE**

07/24/19

**ISSUE DATE**

08/09/19

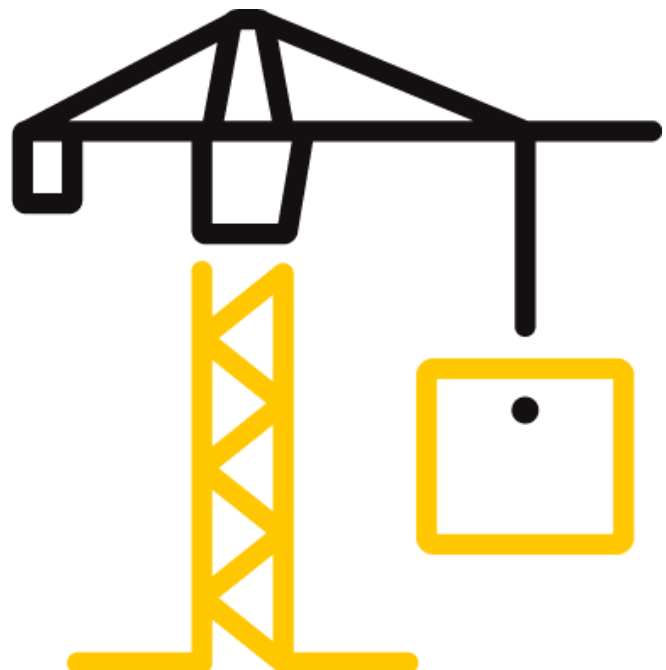
**PAGES**

10

**DOCUMENT CONTROL NUMBER**

RT-R-AMER-Test-2761 (01/24/19)

© 2017 INTERTEK



## TEST REPORT FOR KINETICS NOISE CONTROL

Report No.: J8334.01-113-11-R0

Date: 08/09/19

### REPORT ISSUED TO KINETICS NOISE CONTROL

6300 Irelan Place  
Dublin, Ohio 43017-0655

### SECTION 1 SCOPE

Intertek Building & Construction (B&C) was contracted by Kinetics Noise Control to conduct a sound transmission loss test. Results obtained are tested values and were secured by using the designated test methods. The complete test data is included herein. The client provided the test specimen. All measurements were conducted in the HT 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. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

For INTERTEK B&C:

<b>COMPLETED BY:</b>	Zachary P Golden	<b>REVIEWED BY:</b>	Todd D Kister
<b>TITLE:</b>	Technician Team Leader Acoustical Testing	<b>TITLE:</b>	Laboratory Manager Acoustical Testing
<b>SIGNATURE:</b>		<b>SIGNATURE:</b>	
<b>DATE:</b>	08/09/19	<b>DATE:</b>	08/09/19

ZPG : jmcs

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 KINETICS NOISE CONTROL

Report No.: J8334.01-113-11-R0

Date: 08/09/19

### SECTION 2

#### SUMMARY OF TEST RESULTS

<b>SERIES/MODEL</b>	RT-7
<b>TYPE</b>	Curb Isolation Panel
<b>DATA FILE NO.</b>	J8334.01
<b>STC</b>	37
<b>OITC</b>	29

### SECTION 3

#### TEST METHODS

The specimens were evaluated in accordance with the following:

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

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

**ASTM E1332-16**, *Standard Classification for Rating Outdoor-Indoor Sound Attenuation*

**ASTM E2235-04 (2012)**, *Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods*

### SECTION 4

#### SPECIMEN INSTALLATION

A sound transmission loss test was initially performed on a filler wall.

The specimen plug was removed from the filler wall assembly. The specimen was placed on an isolation pad in the test opening. Duct seal and duct tape was used to seal the perimeter of the specimen to the test opening on both sides. The interior side of the specimen, when installed, was approximately 1/4" from being flush with the receive room side of the filler wall. A stethoscope was used to check for any abnormal air leaks around the test specimen prior to testing. Operable portions of the test specimen, if any, were cycled at least five times prior to testing.

**TEST REPORT FOR KINETICS NOISE CONTROL**

Report No.: J8334.01-113-11-R0

Date: 08/09/19

**SECTION 5  
EQUIPMENT**

The equipment listed below meets the requirements of the test methods stated in Section 3 of this report.

INSTRUMENT	MANUFACTURER	MODEL	DESCRIPTION	ASSET #	CAL DATE
Data Acquisition Card	National Instruments	PXI-4462	Data Acquisition Card	65125*	05/18
Data Acquisition Card	National Instruments	PXI-4462	Data Acquisition Card	65126*	05/18
Data Acquisition Card	National Instruments	PXI-4462	Data Acquisition Card	63763-3*	04/18
Source Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64902	12/18
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	65969	04/19
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	65103	03/19
Source Room Microphone	PCB Piezotronics	378C20	Microphone and Preamplifier	64905	03/19
Source Room Microphone	PCB piezotronics	378C20	Microphone and Preamplifier	64906	03/19
Receive Room Microphone	PBC Piezotronics	378B20	Microphone and Preamplifier	64907	12/18
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64908	12/18
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64909	12/18
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64910	12/18
Receive Room Microphone	PCB Piezotronics	378B20	Microphone and Preamplifier	64911	01/19
Receive Room Environmental Indicator	Comet	T7510	Receive Room	64915	01/19
Source Room Environmental Indicator	Comet	T7510	Source Room	64914	03/19
Microphone Calibrator	Larson Davis	CAL200	Acoustical Calibrator	INT00852	09/18

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

**TEST CHAMBER**

	VOLUME	DESCRIPTION
RECEIVE ROOM	234 m <sup>3</sup>	Rotating vane and stationary diffusers Temperature and humidity controlled Isolation pads under the floor
SOURCE ROOM	207 m <sup>3</sup>	Stationary diffusers only Temperature and humidity controlled

	MAXIMUM SIZE	DESCRIPTION
TL TEST OPENING	4.27 m wide by 3.05 m high	Vibration break between source and receive rooms

## TEST REPORT FOR KINETICS NOISE CONTROL

Report No.: J8334.01-113-11-R0

Date: 08/09/19

### SECTION 6

#### LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Andrew M. Johnston	Intertek B&C
Zachary P. Golden	Intertek B&C

### SECTION 7

#### TEST PROCEDURE

The sensitivity of the microphones was checked before measurements were conducted.

The transmission loss values were obtained for a single direction of measurement.

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 receive and source rooms at each of five microphone positions.

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

Data for flanking limit tests, repeatability measurements, and reference specimen tests are available upon request.

Intertek B&C will store samples of test specimens for four years.

### SECTION 8

#### ACOUSTICAL TEST CALCULATIONS

Transmission loss (TL) at each 1/3 octave frequency is the average source room sound pressure level minus the average receive room sound pressure level, plus, 10 times the log of the specimen area divided by the sound absorption of the receive room with the sample in place.

#### STC Rating

To obtain the Sound Transmission Class (STC), read the TL of the contour curve at 500 Hz. The sum of the deficiencies below the contour curve must not exceed 32. The maximum deficiency at any one frequency must not exceed 8.

#### OITC Rating

The Outdoor-Indoor Transmission Class (OITC) is calculated by subtracting the logarithmic summation of the TL values from the logarithmic summation of the A-weighted transportation noise spectrum stated in ASTM E1332.

## TEST REPORT FOR KINETICS NOISE CONTROL

Report No.: J8334.01-113-11-R0

Date: 08/09/19

### SECTION 9

#### SPECIMEN DESCRIPTION

	FRAME
SIZE	72" by 48"
THICKNESS	7-1/4"
DAYLIGHT OPENING SIZE	N/A

DESCRIPTION	THICKNESS	DENSITY	WEIGHT
AcoustiBoard	2"	0.01 lbs/ft <sup>3</sup> *	3 lbs/ft <sup>2</sup> *
AcoustiSheet	5/8"	0.26 lbs/ft <sup>3</sup> **	2.3 lbs/ft <sup>2</sup> *
AcoustiBoard	2"	0.01 lbs/ft <sup>3</sup> *	3 lbs/ft <sup>2</sup> *
AcoustiSheet	5/8"	0.26 lbs/ft <sup>3</sup> *	2.3 lbs/ft <sup>2</sup> *
AcoustiBoard	2"	0.01 lbs/ft <sup>3</sup> *	3 lbs/ft <sup>2</sup> *

TOTAL WEIGHT (lbs)	AVERAGE WEIGHT (lbs/ft <sup>2</sup> )
150	6.25

\* - Stated per Client/Manufacturer, N/A-Not Applicable

Photographs are included in Section 11.

The client did not supply a report drawing of the test specimen.

**TEST REPORT FOR KINETICS NOISE CONTROL**

Report No.: J8334.01-113-11-R0

Date: 08/09/19

**SECTION 10**  
**TEST RESULTS**

**J8334.01 DATA**

<b>SPECIMEN AREA</b>	2.23 m <sup>2</sup>	<b>RECEIVE TEMP.</b>	22.8 °C	<b>SOURCE TEMP</b>	22.2 °C
<b>TECHNICIAN</b>	Zachary Gol	<b>RECEIVE HUMIDITY</b>	48%	<b>SOURCE HUMIDIT</b>	50%

FREQ (Hz)	BACKGROUND SPL (dB)	ABSORPTION (m <sup>2</sup> )	SOURCE SPL (dB)	RECEIVE SPL (dB)	SPECIMEN TL (dB)	95% CONFIDENCE LIMIT	NUMBER OF DEFICIENCIES
80	38.6	5.9	104	84	16	2.12	-
100	33.7	6.7	104	82	17	1.72	-
125	37.9	6.8	104	75	24	1.26	0
160	39.4	6.6	106	78	24	0.97	0
200	38.8	6.5	106	75	27	1.18	0
250	32.7	7.2	102	71	26	0.51	4
315	26.4	8.4	102	69	27	0.53	6
400	21.6	9.1	101	65	30	0.37	6
500	17.1	9.4	101	63	32	0.63	5
630	18.1	9.0	100	59	35	0.59	3
800	14.1	9.0	99	55	38	0.25	1
1000	10.6	9.1	100	53	42	0.39	0
1250	8.7	9.5	99	46	47	0.28	0
1600	7.9	9.8	99	41	51	0.32	0
2000	7.6	10.1	99	36	56	0.16	0
2500	7.4	11.1	100	33	60	0.29	0
3150	8.1	12.5	99	30	61	0.19	0
4000	8.8	15.0	97	27	62	0.26	0
5000	9.7	18.5	97	25	62	0.37	-
<b>STC RATING</b>	37 (Sound Transmission Class)						
<b>DEFICIENCIES</b>	25 (Sum of Deficiencies)						
<b>OITC RATING</b>	29 (Outdoor-Indoor Transmission Class)						

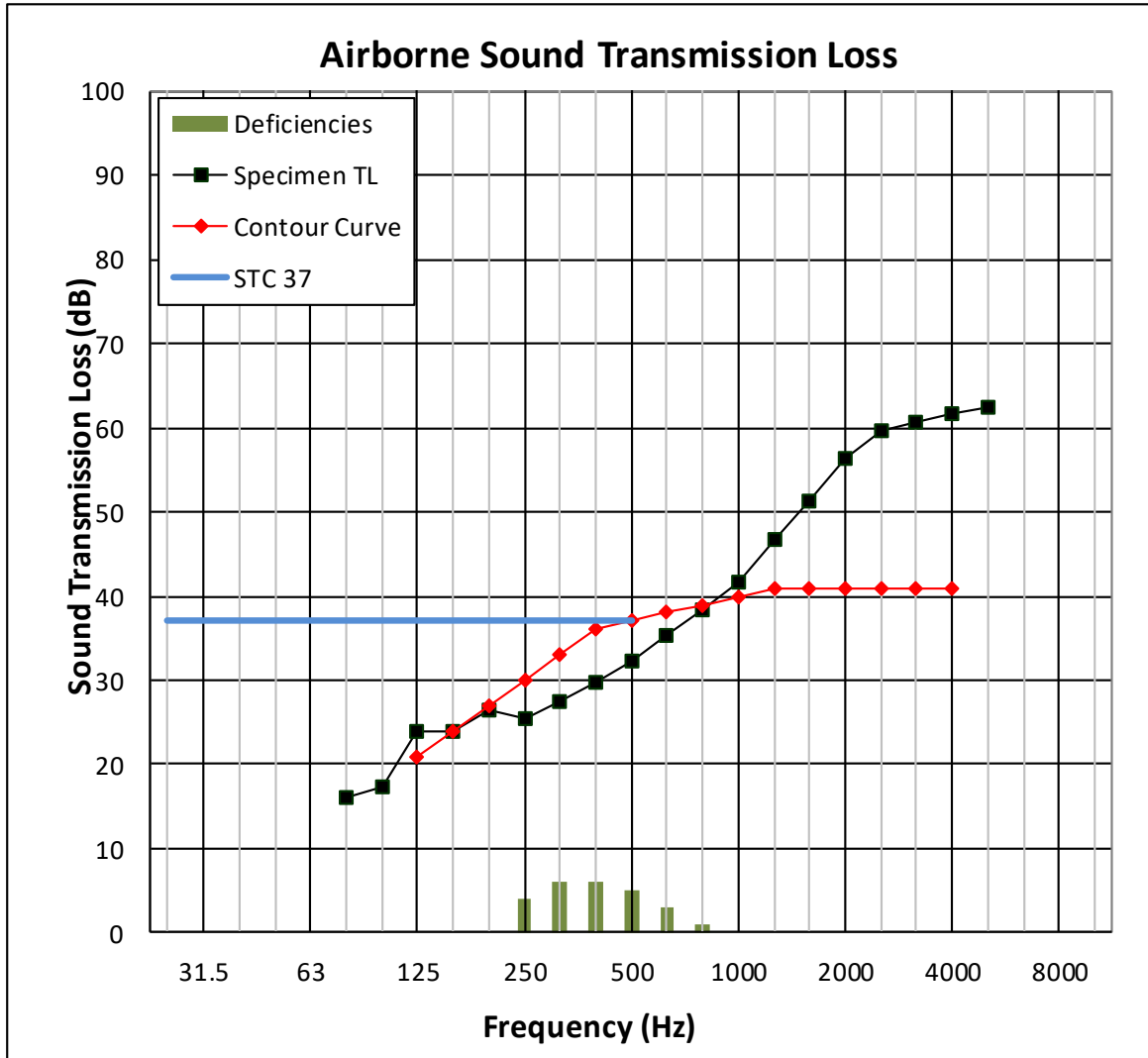
- Notes:**
- 1) Receive Room levels less than 5 dB above the Background levels are red.
  - 2) Specimen TL levels listed in red indicate the lower limit of the transmission loss.
  - 3) Specimen TL levels listed in green indicate that there has been a filler wall correction applied

## TEST REPORT FOR KINETICS NOISE CONTROL

Report No.: J8334.01-113-11-R0

Date: 08/09/19

### J8334.01 GRAPH





## TEST REPORT FOR KINETICS NOISE CONTROL

Report No.: J8334.01-113-11-R0

Date: 08/09/19

### SECTION 11

#### PHOTOGRAPHS



**Photo No. 1**  
**Receive Room View of Installed Test Specimen**



**Photo No. 2**  
**Source Room View of Installed Test Specimen**



Total Quality. Assured.

130 Derry Court  
York, Pennsylvania 17406

Telephone: 717-764-7700  
Facsimile: 717-764-4129  
[www.intertek.com/building](http://www.intertek.com/building)

## TEST REPORT FOR KINETICS NOISE CONTROL

Report No.: J8334.01-113-11-R0

Date: 08/09/19

### SECTION 12

#### REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	08/09/19	N/A	Original Report Issue