



## SOUND TRANSMISSION LOSS TEST REPORT NO. TL19-115

CLIENT: **Safti-Seal Inc.**  
5806 119th Ave. SE Ste. A #385  
Bellevue, WA, 98006

15 February 2019

TEST DATE: 22 January 2019

[Click here to enter text.](#)

### INTRODUCTION

The test was performed in accordance with ASTM E 90-09 (2016), *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions* and ASTM E2235-04 (2012), *Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods*. Copies of the test standard are available at [www.astm.org](http://www.astm.org). The test chamber source and receiving room volumes are 204 and 148.4 cubic meters respectively. Western Electro-Acoustic Laboratory is accredited by the United States Department of Commerce, National Institute of Standards and Technology under the National Voluntary Accreditation Program (NVLAP) Lab Code 100256-0 for this test procedure. This test report relates only to the item(s) tested. This report must not be used to claim product certification, approval, or endorsement by WEAL, NVLAP, NIST or any agency of the federal government.

### DESCRIPTION OF TEST SPECIMEN

The test specimen was a double wall assembly constructed from 51 mm (2-1/2 inch) 20 Gauge metal studs, 20 gauge 51 mm (2-1/2 inch) slotted track with 38.1 mm (1-1/2 inch slots) spaced 25.4 mm (1 inch) O.C., R-13 fiberglass insulation in stud cavities, and Type X gypsum board. Test frame included a mockup of a head of wall fluted metal deck profile with 76.2 (3 inches) deep flutes 304.8 mm (12 inches) O.C

### TEST CONFIGURATION

Source Side	Stud/Assembly	Airspace	Stud/Assembly	Receive Side
16 mm (5/8 inch) USG Type X 2 Layers	63.5 mm (2-1/2 inch) 20 Ga metal studs with R-13 fiberglass insulation	25 mm (1 inch) airspace	63.5 mm (2-1/2 inch) 20 Ga metal studs with R- 13 fiberglass insulation	16 mm (5/8 inch) USG Type X 2 Layers

- The metal 51 mm (2 1/2 inch) studs were spaced at 609 mm (24 inches) O.C. The top slotted track, bottom track, and edge studs were screwed directly to the test frame and metal deck overhead substrate 609 mm (24 inches) O.C. with a 25 mm (1 inch) air gap between
- Each wall cavity was filled with R-13 fiberglass insulation
- Flutes of metal deck were filled with 4 pcf mineral wool compressed 25% filling entire fluted areas with friction fit Safti-Seal foam faced Flute Guard profiles located over mineral wool in each flute one side and 6.35 mm (1/4 inch) tall embossment mid-valleys of deck profile filled with a dab of latex caulk
- On the source side, two layers of 16 mm (5/8 inch) Type X gypsum were installed vertically with joints staggered and screwed 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) O.C. in the field a 12.7 mm (1/2 inch) gap was intentionally left at the head of the wall to expose Safti-Seal Safti-Strip Tape and a 12.7 mm (1/2 inch) gap was intentionally left at the bottom of the wall along with 6 mm (1/4 inch) gaps left along vertical edge joints to expose Safti-Seal Smoke and Sound Tape. All screw heads were covered with foil tape.
- On the receiving side, two layers of 16 mm (5/8 inch) Type X gypsum were installed vertically with joints staggered and screwed 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) O.C. in the field a 12.7 mm (1/2 inch) gap was intentionally left at the head of the wall to expose Safti-Seal Safti-Strip Tape and a 12.7 mm (1/2 inch) gap was intentionally left at the bottom of the wall along with 6 mm (1/4

Report must be distributed in its entirety except with written permission from Western Electro-Acoustic Laboratory





## SOUND TRANSMISSION LOSS TEST REPORT NO. TL19-115

CLIENT: **Safti-Seal Inc.**  
5806 119th Ave. SE Ste. A #385  
Bellevue, WA, 98006

15 February 2019

TEST DATE: 22 January 2019

inch) gaps left along vertical joints to expose Safti-Seal Smoke and Sound Tape. All screw heads were covered with foil tape.


- On the source side Safti-Seal foam faced Flute Guard profiles were left exposed
- On the receiving side the Safti-Seal Flute Guard profiles were removed and compressed mineral wool in flutes was left exposed
- The overall dimensions of the wall assembly were 2.44 m (96 inches) wide by 2.44 m (96 inches) high by 215 m (8 1/2 inches) thick.
- The overall weight of the assembly was estimated to be 281 kg (620 lbs) for a calculated surface density of 47.3 km/m<sup>2</sup> (9.96 lbs.ft<sup>2</sup>)

### RESULTS OF THE MEASUREMENTS

One-third octave band sound transmission loss values are plotted and tabulated on the attached sheet. ASTM minimum volume requirements are met at 80 Hz and above. The Outdoor-Indoor Transmission Class rating determined in accordance with ASTM E 1332-10a was OITC-52. The Sound Transmission Class rating determined in accordance with ASTM E 413-10 was STC-58.

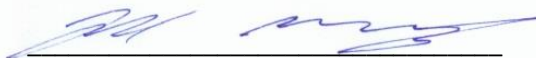
Respectfully submitted,  
Approved:

Western Electro-Acoustic Laboratory




---

Stephen A. Martin, Ph.D., P.E.  
Laboratory Director




---

Raul Martinez  
Acoustical Test Technician



# WESTERN ELECTRO - ACOUSTIC LABORATORY

TESTING • CALIBRATION • RESEARCH

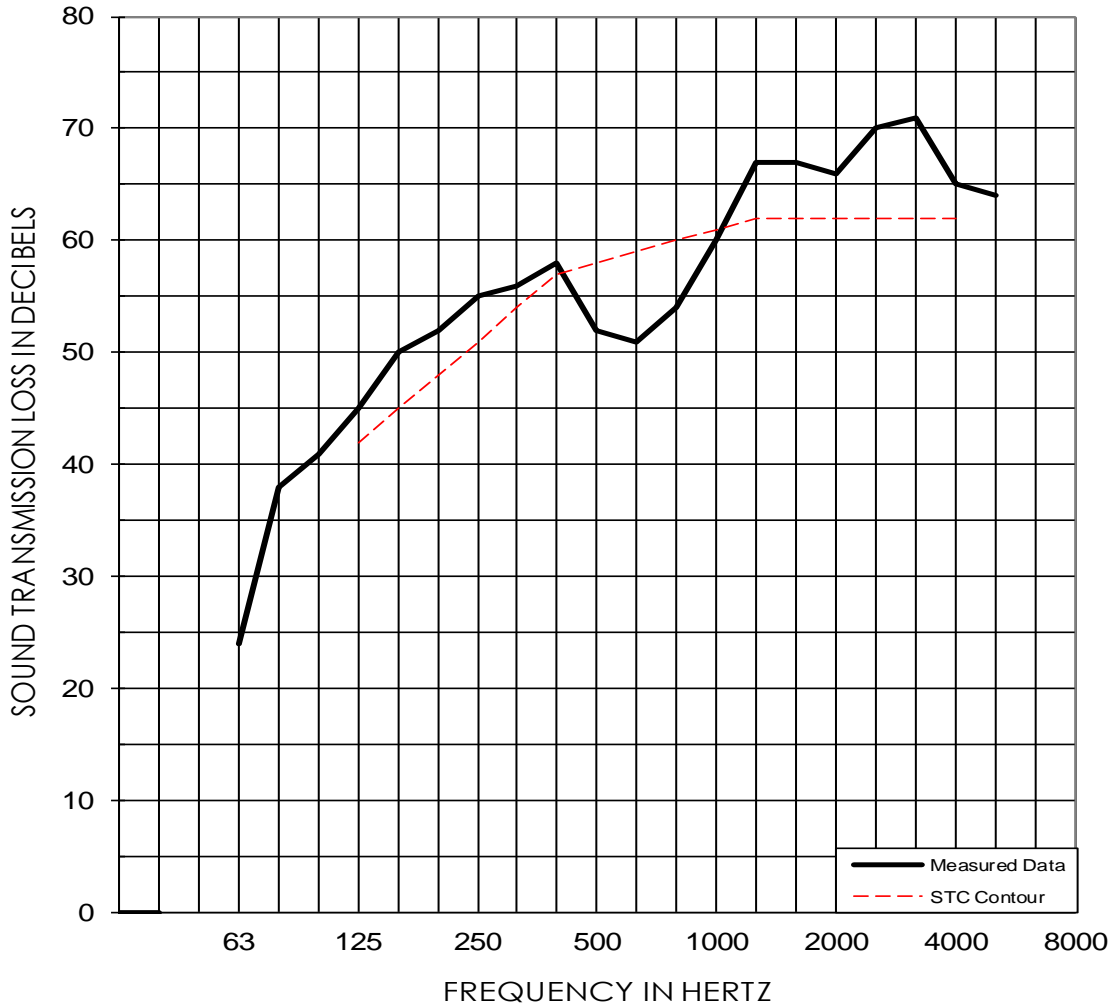
25132 Rye Canyon Loop Santa Clarita, California 91355 Tel: (661) 775-3741 Fax: (661) 775-3742 www.weal.com

## SOUND TRANSMISSION LOSS TEST REPORT NO. TL19-115

CLIENT: **Safti-Seal Inc.**  
 5806 119th Ave. SE Ste. A #385  
 Bellevue, WA, 98006

15 February 2019

TEST DATE: 22 January 2019



<b>1/3 OCT BAND CNTR FREQ</b>	<b>63</b>	<b>80</b>	<b>100</b>	<b>125</b>	<b>160</b>	<b>200</b>	<b>250</b>	<b>315</b>	<b>400</b>	<b>500</b>
TL in dB	24	38*	41*	45*	50*	52*	55*	56*	58*	52
95% Confidence in dB deficiencies	1.42	1.92	2.07	1.47	0.89	0.76	0.80	0.52	0.36	0.38
										(6)
<b>1/3 OCT BAND CNTR FREQ</b>	<b>630</b>	<b>800</b>	<b>1000</b>	<b>1250</b>	<b>1600</b>	<b>2000</b>	<b>2500</b>	<b>3150</b>	<b>4000</b>	<b>5000</b>
TL in dB	51	54	60	67	67	66	70*	71	65	64
95% Confidence in dB deficiencies	0.29	0.44	0.38	0.39	0.36	0.56	0.55	0.31	0.32	0.50
	(8)	(6)	(1)							

<b>EWR</b>	<b>OITC</b>	* Minimum estimate of transmission loss. Measurement limited by filler wall. Actual TL will be equal or greater than value reported.	Test Date: 22 January 2019	<b>STC</b>
60	52		Specimen Area: 64 sq.ft.	
			Temperature: 68 deg. F	
			Relative Humidity: 33 %	58
				(21)

Report must be distributed in its entirety except with written permission from Western Electro-Acoustic Laboratory

