



SOUND TRANSMISSION LOSS TEST REPORT NO. TL19-182

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

2 May 2019

TEST DATE: 16 April 2019

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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. 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 wall assembly constructed from 92.1 mm (3 5/8 inch) 20ga metal studs, 20ga metal Safti-Seal 105.5 mm (4 1/8 inch) RC track profiles (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, 12 mm (1/2 inch) resilient channel, and Type X gypsum board.

TEST CONFIGURATION

Source Side	Stud/Assembly	Top and Bottom Tracks	Receive Side
16 mm (5/8 inch) USG Type X 1 Layer	92.1 mm (3 5/8 inch) 20ga studs & R-13 fiberglass insulation	Safti-Seal 20ga RC profiles with 12.5 mm (1/2 inch) rib leg	16 mm (5/8 inch) USG Type X 2 Layers

- The metal studs were 92.1 mm (3-5/8 inch) 20 ga metal studs and were spaced at 609.6 mm (24 inches) O.C.
- The top track was Safti-Seal RCS 20ga metal track profile 105.5 mm (4-1/8 inch) with one 76.2 mm (3 inch) long slotted flange having 8.1 mm (1 1/2 inch) slots 25.4 mm (1 inch) O.C. and one 63.5 (2 1/2 inch) solid ribbed flange with 12.7 mm (1/2 inch) inward protrusion. The sill track was 105.5 mm 4-1/8 inch) 20ga metal with one 50.8 mm (2 inch) solid flange and one 50.8 mm (2 inch) solid ribbed flange with 12.7 mm (1/2 inch) inward protrusion. All track and edge studs were screwed directly to the test chamber opening 609.6 mm (24 inches) O.C.
- R-13 un-faced full width 609.6 mm (24 inch) fiberglass batts, 88.9 mm (3-1/2 inch) thick, were installed in stud spaces.
- On source room side, 25 gauge RC-1 resilient channels were oriented with the resilient leg above the screw leg. The center of the top channel was 101.6 mm (4" inches) below the top of the wall and the center of the bottom channel was 101.6 mm (4" inches) above the bottom of the wall with horizontal rows spaced 609.6 mm (24 inches) O.C.
- On source room side one layer of 15.9 mm (5/8 inch) thick Type X gypsum board was located vertically with joints staggered and screwed to the channels at 305 mm (12 inches) O.C. with 31.8 mm (1 1/4 inch) drywall screws.





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- On the receiving room side two layers of 15.9 mm (5/8 inch) thick Type X gypsum board were located vertically with joints staggered and screwed to studs and bottom track 203 mm (8 inches) O.C. around perimeter and 305 mm (12 inches) O.C in the field using 31.8 mm (1 1/4 inch) drywall screws.
- On both sides, a 19.05 mm (3/4 inch) gap was intentionally left at the head of the wall to expose Safti-Seal Safti-Strip gasket and a 19.05 mm (3/4 inch) tall joint sealed with Safti-Seal Smoke-n-Sound Strip gasket seal was filled with drywall and caulk at the bottom of the wall. On both sides, the vertical joints and perimeters were sealed with a bead of caulking and foil tape except at the bottom of wall. All screw heads were covered with metal foil tape.
- The overall dimensions of the wall assembly were 2.44 m (96 inches) wide by 2.44 m (96 inches) high by 136.5 mm (5 3/8 inches) thick. The overall weight of the assembly was estimated to be 281 kg (625 lbs) for a calculated surface density of 47.3 km/m² (9.76 lbs/ft²).

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-40. The Sound Transmission Class rating determined in accordance with ASTM E 413-10 was STC-53.

Respectfully submitted,
Approved:

Western Electro-Acoustic Laboratory



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



Raul Martinez
Acoustical Test Technician



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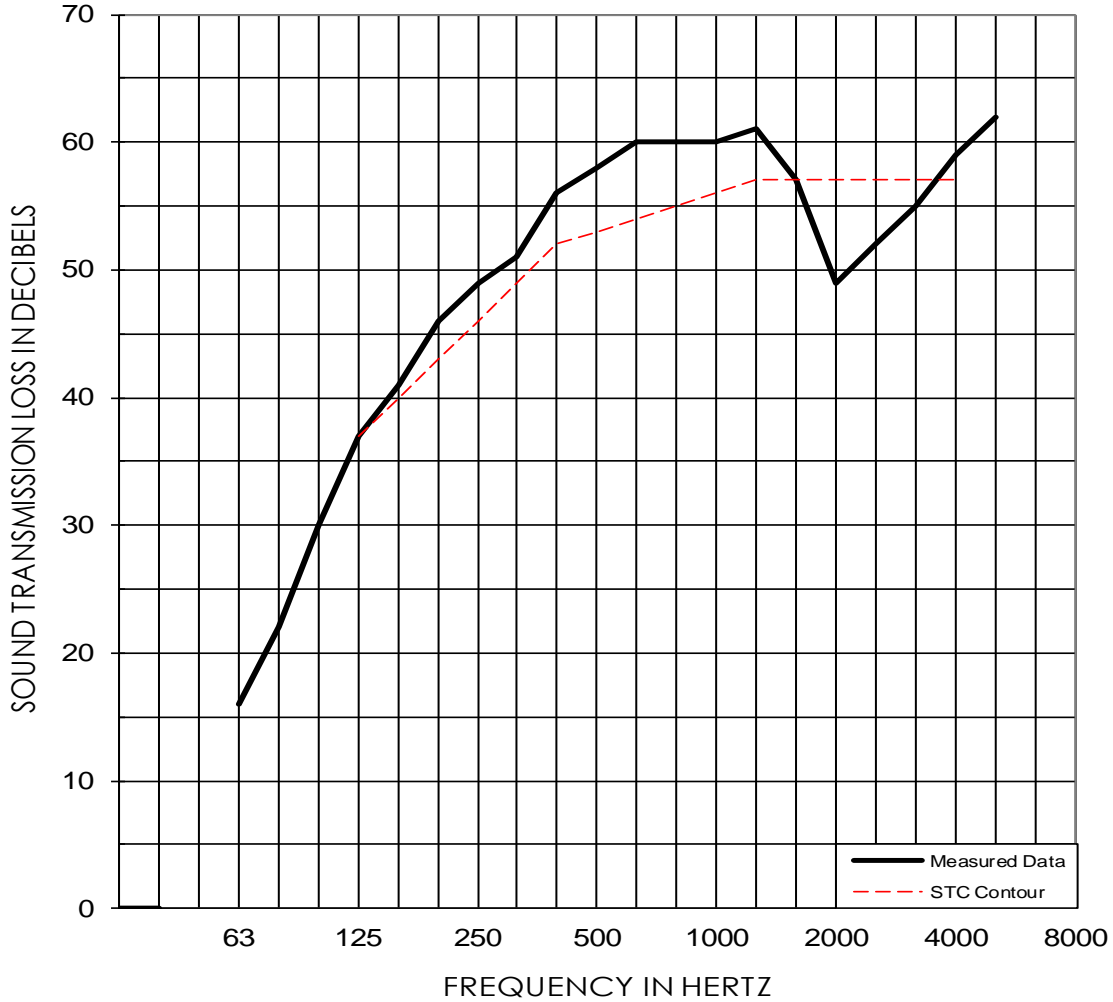
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1/3 OCT BAND CNTR FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB	16	22	30	37	41	46	49	51	56	58
95% Confidence in dB deficiencies	1.42	1.92	2.07	1.47	0.89	0.76	0.80	0.52	0.36	0.38
1/3 OCT BAND CNTR FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB	60	60	60	61	57	49	52	55	59	62
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
EWR	OITC	Test Date: 16 April 2019								STC
57	40	Specimen Area: 64 sq.ft.								53
		Temperature: 68.2 deg. F								(15)
		Relative Humidity: 43 %								

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