RIVERBANK ACOUSTICAL LABORATORIES

1512 S BATAVIA AVENUE
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An ALION Technical Center

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Test Report

FOR: **Solitrade**
Charlotte, NC

Sound Transmission Loss
RAL-TL18-591

CONDUCTED: 2018-10-09

ON: SoliBlock Wall HP

TEST METHOD

Riverbank Acoustical Laboratories™ is accredited by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) as an ISO 17025:2005 Laboratory (NVLAP Lab Code: 100227-0) and for this test procedure. The test reported in this document conformed explicitly with ASTM E90-09 (2016): "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements." The single number rating of the specimen was calculated according to ASTM E413-16: "Classification for Rating Sound Insulation." A description of the measuring procedure and room qualifications is available upon request. The transmission loss values are for a single direction of measurement. The product designation used in this report was provided to RAL by the sponsor and attributed to the specimen under test.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as SoliBlock Wall HP. A full external visual inspection performed on the test specimen by Riverbank personnel verified the manufacturer's description.

Test Specimen

Material:	Mass loaded vinyl sheet
Dimensions:	1222.38 mm (48.125 in.) x 2438.4 mm (96 in.)
Thickness:	1.78 mm (0.07 in.)
Overall Weight:	7.94 kg (17.5 lbs)
Mass per Unit Area:	Nominal @ 2.44 kg/m^2 (0.5 lbs/ft^2)
	Measured @ 2.66 kg/m^2 (0.545 lbs/ft^2)

Physical Measures

Overall Dimensions:	1.22 m (48 in) wide by 2.44 m (96 in) high
Overall Thickness:	1.78 mm (0.07 in.)
Overall Weight:	7.94 kg (17.5 lbs)
Transmission Area:	2.97 m² (32 ft²)
Mass per Unit Area:	2.67 kg/m² (0.55 lbs/ft²)

Test Aperture

Size:	1.22 m (4.0 ft.) by 2.44 m (8.0 ft.)
Filler Wall:	None
Sealed:	Entire periphery (both sides) with dense mastic

Test Environment

Source Room

Volume:	178.33 m³
Temperature:	22.2 °C ± 0.0 °C
Relative Humidity:	67.5 % ± 1.0 %

Receive Room

Volume:	131.48 m³
Temperature:	22.2 °C ± 0.0 °C
Relative Humidity:	67.0 % ± 0.0 %

Requirements

Temperature:	22º C +/- 2° C, not more than 3° C change over all tests.
Relative Humidity:	≥ 30%, not more than +/- 3% change over all tests.

Figure 1 – Specimen mounted in test opening, as viewed from source room

Figure 2 – Specimen mounted in test opening, as viewed from receive room

TEST RESULTS

Sound transmission loss values are tabulated at the eighteen standard frequencies. A graphic presentation of the data and additional information appear on the following pages. The precision of the transmission loss test data is within the limits set by the ASTM Standard E90-09 (2016).

FREQ.	TL	ΔTL	DEF.	FREQ.	TL	ΔTL	DEF.
100	12	0.75	0	800	20	0.15	3
125	10	0.77	0	1000	21	0.15	3
160	11	0.39	0	1250	23	0.17	2
200	12	0.46	0	1600	25	0.13	0
250	13	0.43	1	2000	26	0.14	0
315	14	0.25	3	2500	28	0.06	0
400	15	0.24	5	3150	29	0.07	0
500	17	0.24	4	4000	31	0.05	0
630	18	0.21	4	5000	33	0.07	0

STC=21

ABBREVIATION INDEX

FREQ. = FREQUENCY, HERTZ
TL = TRANSMISSION LOSS, dB
ΔTL = 95% CONFIDENCE INTERVAL FOR TL MEAUREMENTS, dB
DEF. = DEFICIENCIES, dB BELOW STC CONTOUR (SUM OF DEF = 25)
STC = SOUND TRANSMISSION CLASS

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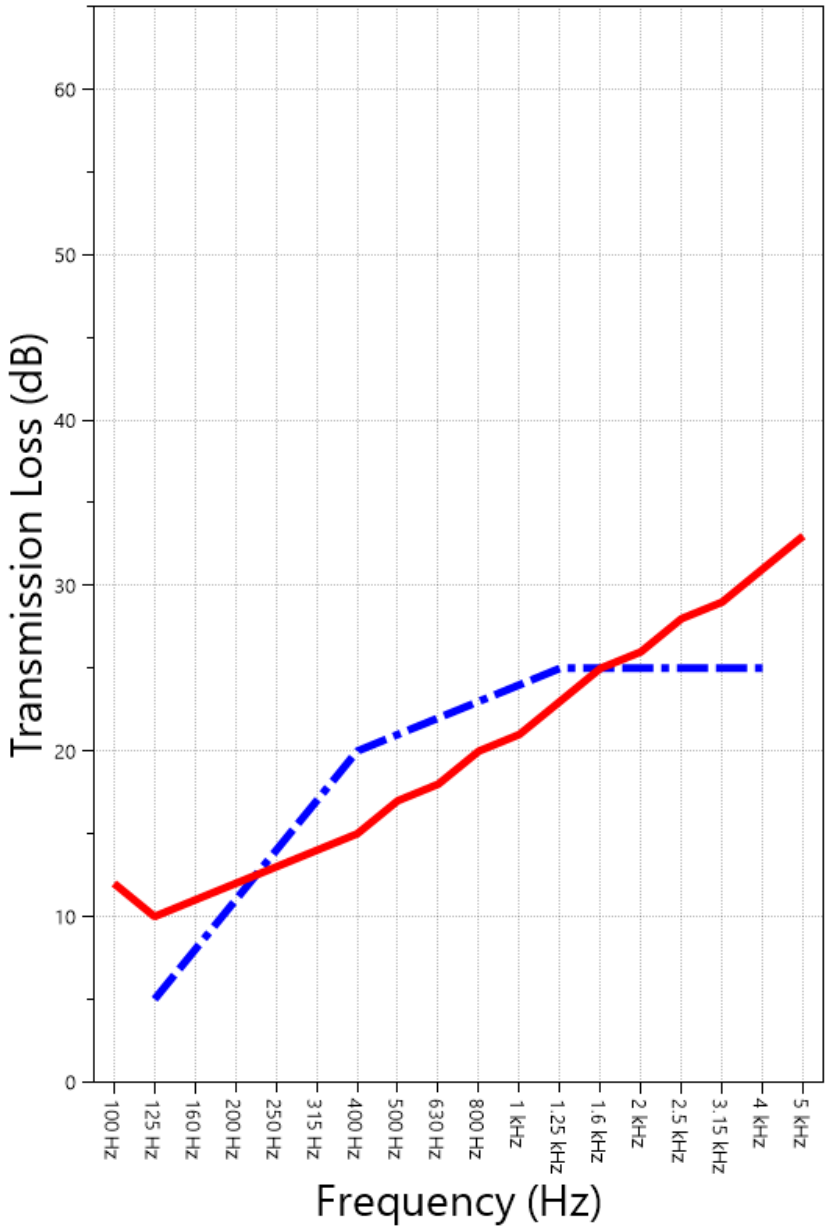
SOUND TRANSMISSION REPORT

SoliBlock Wall HP



STC=21

TRANSMISSION LOSS
SOUND TRANSMISSION CLASS CONTOUR

APPENDIX A: Extended Frequency Range Data

Specimen: SoliBlock Wall HP (See Full Report)

The following non-accredited data were obtained in accordance with ASTM E90-09 (2016), but extend beyond the defined frequency range of 100Hz to 5,000Hz. These unofficial results are representative of the RAL test environment only and intended for research & comparison purposes. Sampling precision observed during this procedure is reported below.

1/3 Octave Band Center Frequency (Hz)	**Sound Transmission Loss** (dB)	**95% Confidence Interval ΔTL (Eq. A2.5)** (dB)
31.5	11	1.11
40	10	0.34
50	7	1.35
63	4	1.46
80	5	0.99
100	12	0.75
125	10	0.77
160	11	0.39
200	12	0.46
250	13	0.43
315	14	0.25
400	15	0.24
500	17	0.24
630	18	0.21
800	20	0.15
1000	21	0.15
1250	23	0.17
1600	25	0.13
2000	26	0.14
2500	28	0.06
3150	29	0.07
4000	31	0.05
5000	33	0.07
6300	35	0.08
8000	36	0.13
10000	38	0.18
12500	39	0.19

APPENDIX B: Instruments of Traceability

Specimen: SoliBlock Wall HP (See Full Report)

Description	Model	Serial Number	Date of Certification	Calibration Due
System 2	Type 3160-A-042	3160-106974	2018-08-09	2019-08-09
Bruel & Kjaer Mic And Preamp D	Type 4943-B-001	2311440	2018-09-28	2019-09-28
Bruel & Kjaer Pistonphone	Type 4228	2781248	2018-08-06	2019-08-06
EXTECH Hygro 662	SD700	A083662	2017-11-20	2018-11-20
EXTECH Hygro 663	SD700	A083663	2017-11-20	2018-11-20

APPENDIX C: Revisions to Original Test Report

Date	Revision
2019-08-30	Page 1-7: The original manufacturer/requester identification and specimen designation were changed to facilitate a private label sales agreement. The original requester has provided a letter to RAL on their company letterhead certifying that the product identified has not changed in materials, composition, or manufacturing methods since the original test date and the product sold under the private label agreement is exactly identical to the original specimen described in the test report and sourced from the same manufacturing process. -EPW

END