

1512 S BATAVIA AVENUE
GENEVA, IL 60134
630-232-0104

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

SPONSOR: **Sound Seal**
Agawam, MA

Sound Transmission Loss
RAL™-TL22-162

CONDUCTED: 2022-08-19
ON: Vivid BBC-2" - Indoor/Outdoor Curtain Panel

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TEST METHODOLOGY

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 17025:2017 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 E413-22: "Classification for Rating Sound Insulation." A description of the measurement procedure and room specifications is available upon request. The transmission loss values are for a single direction of measurement. The results presented in this report apply to the sample as received from the test sponsor.

SPECIMEN MEASUREMENTS & TEST CONDITIONS

The test specimen was designated by the sponsor as Vivid BBC-2" - Indoor/Outdoor Curtain Panel. Through a full external visual inspection performed on the test specimen, Riverbank personnel verified the following specimen properties:

Test Specimen

Dimensions:	2 blankets @ 1245 mm (49 in.) by 2743 mm (108 in.)
Thickness:	25 mm (1 in.)
Overall Weight:	43.77 kg (96.5 lbs)
Mass per Unit Volume:	252 kg/m ³ (15.8 lbs/ft ³)
Installation:	Approx. 51 mm (2 in.) overlap Foil tape over joints where pieces meet on source side

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Overall Specimen Measurements

Dimensions: 2.44 m (96.0 in) wide by 2.74 m (108.0 in) high
Thickness: 0.03 m (1.0 in)
Weight: 43.77 kg (96.5 lbs)
Overall Area: 6.689 m² (72. ft²)
Mass per Unit Area: 6.54 kg/m² (1.34 lbs/ft²)

Test Aperture

Opening Size: 2.74 m (9.0 ft.) by 4.27 m (14.0 ft.)
Filler Wall: Yes
Aperture Size: 2.44 m (96.0 in) wide by 2.74 m (108.0 in) high
Transmission Area: 6.689 m² (72. ft²)
Sealed: Entire periphery (both sides) with dense mastic

Test Environment

Source Room

Volume: 177.11 m³
Temperature: 22.5 °C ± 0.6 °C
Relative Humidity: 49.5 % ± 1.0 %

Receive Room

Volume: 178.33 m³
Temperature: 21.9 °C ± 0.6 °C
Relative Humidity: 50.5 % ± 1.0 %

Requirements

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



NVLAP LAB CODE 100227-0

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



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



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Figure 3 – Individual specimen blanket prior to perimeter sealing

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TEST RESULTS

Sound transmission loss values are tabulated at the eighteen standard frequency bands. 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). See Appendix A for identification of corrections applied to the reported data.

<u>FREQ.</u>	<u>TL</u>	<u>ΔTL</u>	<u>DEF.</u>	<u>FREQ.</u>	<u>TL</u>	<u>ΔTL</u>	<u>DEF.</u>
100	11	1.01	0	800	34	0.19	0
125	14	0.67	0	1000	38	0.18	0
160	14	0.87	2	1250	41	0.14	0
200	14	0.38	5	1600	43	0.14	0
250	17	0.39	5	2000	45	0.11	0
315	20	0.41	5	2500	47	0.08	0
400	22	0.30	6	3150	49	0.11	0
500	25	0.25	4	4000	49	0.09	0
630	30	0.13	0	5000	53	0.11	0

STC=29

ABBREVIATION INDEX

FREQ. = 1/3 OCTAVE BAND CENTER FREQUENCY, Hz

TL = TRANSMISSION LOSS, dB

ΔTL = 95% CONFIDENCE INTERVAL FOR TL MEASUREMENTS, dB

DEF. = DEFICIENCIES, dB BELOW SHIFTED STC CONTOUR (SUM OF DEF = 27)

STC = SOUND TRANSMISSION CLASS

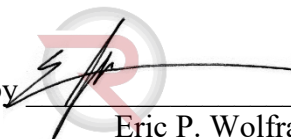
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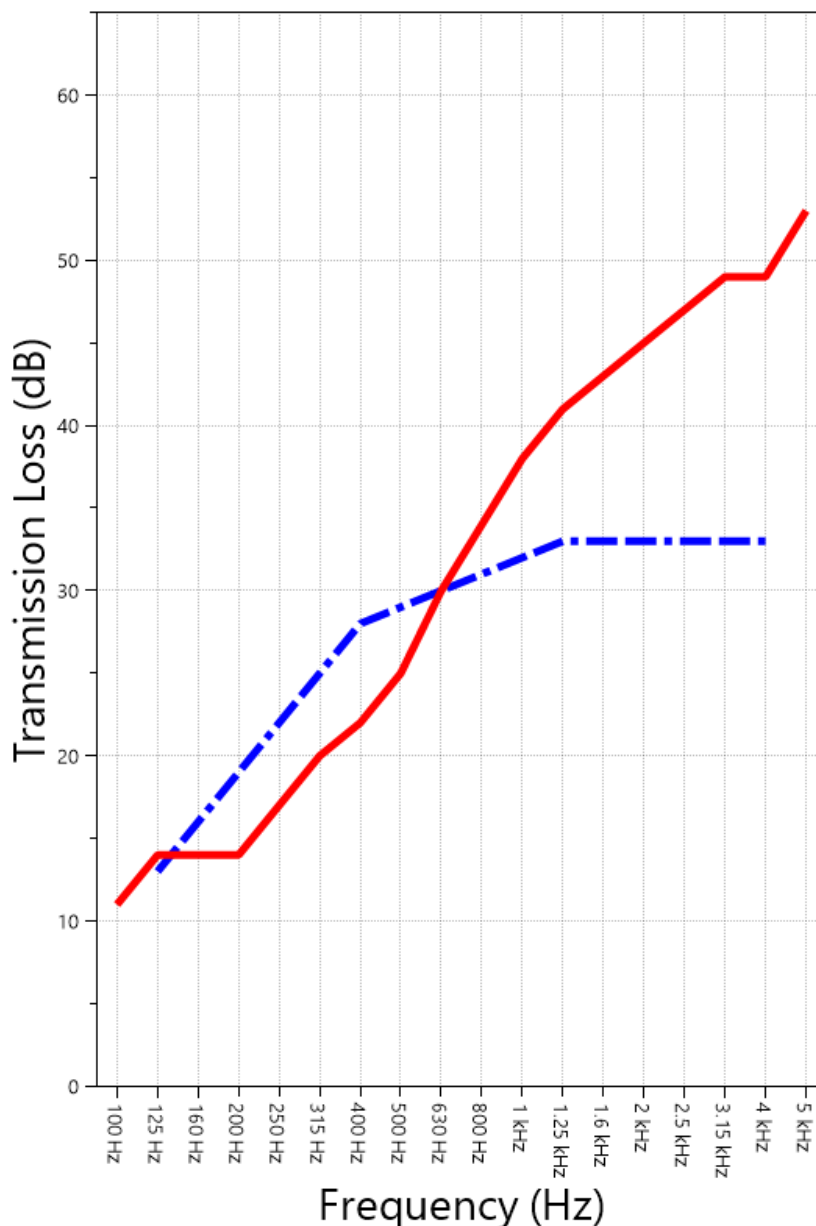
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SOUND TRANSMISSION REPORT Vivid BBC-2" - Indoor/Outdoor Curtain Panel



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TRANSMISSION LOSS

SOUND TRANSMISSION CLASS CONTOUR



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APPENDIX A: Extended Frequency Range Data

Specimen: Vivid BBC-2" - Indoor/Outdoor Curtain Panel (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. Corrections are detailed in Appendix B.

1/3 Octave Band Center Frequency (Hz)	Sound Transmission Loss (dB)	Applicable Corrections	Δ TL (Eq. A2.5) (dB)	Repeatability (dB)
31.5	11	Z F	1.30	1.01
40	17	Z	0.85	2.26
50	11		0.78	1.52
63	9		0.66	1.47
80	10		0.53	0.60
100	11		1.01	0.67
125	14		0.67	0.71
160	14		0.87	0.35
200	14		0.38	0.33
250	17		0.39	0.42
315	20		0.41	0.41
400	22		0.30	0.46
500	25		0.25	0.18
630	30		0.13	0.26
800	34		0.19	0.24
1000	38		0.18	0.27
1250	41		0.14	0.15
1600	43		0.14	0.12
2000	45		0.11	0.13
2500	47		0.08	0.19
3150	49		0.11	0.14
4000	49		0.09	0.17
5000	53		0.11	0.17
6300	57		0.24	0.21
8000	59		0.21	0.50
10000	60	Z	0.20	1.21
12500	58	Z F	0.38	1.74



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APPENDIX B: Glossary of Standardized Corrections and Adjustments

Specimen: Vivid BBC-2" - Indoor/Outdoor Curtain Panel (See Full Report)

Mark Interpretation

- A** Measured sound pressure levels in the receive room are within 10 dB of the ambient noise level at the marked frequency band. Receive room levels used to calculate Transmission Loss are corrected according to ASTM E90 Section 10.3.
- AA** Measured sound pressure levels in the receive room are within 5 dB of the ambient noise level at the marked frequency band. Receive room levels used to calculate Transmission Loss are corrected according to ASTM E90 Section 10.3.1. Transmission Loss values calculated from levels corrected this way will be less than or equal to Transmission Loss values from a hypothetical test using the same specimen and a receive room with idealized ambient sound levels of $(-\infty)$ dB.
- F** The reported Transmission Loss is within 10 dB of the laboratory flanking limit at the marked frequency band. The measured performance of the specimen may be limited by the performance of the laboratory building structure at this frequency band.
- Z** The reported Transmission Loss at the marked frequency band has been corrected according to ASTM E90 Section A3.2.7 to account for possible sound transmission through the filler assembly.
- ZZ** The reported Transmission Loss at the marked frequency band has been corrected according to ASTM E90 Section A3.2.8 to account for possible sound transmission through the filler assembly. Transmission Loss values corrected this way will be less than or equal to Transmission Loss values from a hypothetical test using the same specimen and an idealized filler assembly with a Sound Transmission Class rating of (∞) .

APPENDIX C: Glossary of Variability Metrics

Specimen: Vivid BBC-2" - Indoor/Outdoor Curtain Panel (See Full Report)

ΔTL , the 95% confidence interval for reported transmission loss values, is calculated from the standard deviation of the sets of measurements for source room sound pressure level, receive room sound pressure level, and receive room sound absorption. This metric is calculated in an effort to quantify the combined influences of room geometry, microphone positioning, and other varying environmental conditions on reported results.

Repeatability, expressed as a 95% confidence interval, is calculated from the standard deviation of transmission loss as obtained from a set of six (6) consecutive tests conducted according to this test method by RAL on 2020-02-13. The tests were performed on a specimen composed of 24 gauge steel paneling, using the same test opening as used in this report. This metric provides an estimate of the variation in results that might be observed if the test were repeated with no change to the installed specimen. Note that repeatability will vary with the construction type.

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APPENDIX D: Instruments of Traceability

Specimen: Vivid BBC-2" - Indoor/Outdoor Curtain Panel (See Full Report)

<u>Description</u>	<u>Model</u>	<u>Serial Number</u>	<u>Date of Certification</u>	<u>Calibration Due</u>
System 2	Type 3160-A-042	3160-106974	2022-08-10	2023-08-10
Bruel & Kjaer Mic And Preamp D	Type 4943-B-001	2311440	2021-09-30	2022-09-30
Bruel & Kjaer Pistonphone	Type 4228	2781248	2022-07-22	2023-07-22
EXTECH Hygro 663	SD700	A083663	2021-12-28	2022-12-28
EXTECH Hygro 639	SD700	A.103639	2021-11-30	2022-11-30

APPENDIX E: Revisions to Original Test Report

Specimen: Vivid BBC-2" - Indoor/Outdoor Curtain Panel (See Full Report)

<u>Date</u>	<u>Revision</u>
2022-08-22	Original report issued

END