

Test Report

FOR: **dB Sound Control**
Mt. Airy, NC

Sound Transmission Loss
RAL-TL17-076

CONDUCTED: 2017-03-01

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ON: dB Max - Barrier Material (fibrous side faces source)

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.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as dB Max - Barrier Material (fibrous side faces source). A full internal inspection performed on the test specimen by Riverbank personnel verified the manufacturer's description.

Test Specimen

Material: dB Max Barrier
Dimensions: 1219.2 mm (48 in.) x 2184.4 mm (86 in.)
Thickness: 6.1 mm (0.24 in.)



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Physical Measures

Overall Dimensions: 1.22 m (48.00 in.) wide by 2.18 m (86.00 in.) high
Overall Thickness: 6.10 mm (0.24 in.)
Overall Weight: 12.70 kg (28.00 lbs.)
Transmission Area: 2.65 m² (28.50 ft²)
Mass per Unit Area: 4.78 kg/m² (0.98 lbs./ft²)

Test Aperture

Size: 1.22 m (4.0 ft.) by 2.44 m (8.0 ft.)
Filler Wall: Yes
Sealed: Entire periphery (both sides) with dense mastic

Test Environment

Source Room

Volume: 178.3 m³ (6297.6 ft³)
Temperature: 22±0°C (72±1°F)
Humidity: 51±0%

Receive Room

Volume: 138.1 m³ (4876.8 ft³)
Temperature: 22±0°C (71±0°F)
Humidity: 52±1%

Requirements

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



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Figure 1 – Specimen mounted in the test opening.



Figure 2 – Detail of the test specimen.



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TEST RESULTS

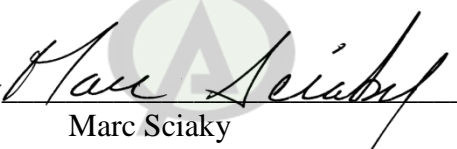
Sound transmission loss values are tabulated at the eighteen standard frequencies. A graphic presentation of the data and additional information appear on the following pages. The precision of the transmission loss test data is within the limits set by the ASTM Standard E90-09 (2016).

<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>	<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>
100	17	0.67		800	25	0.27	3
125	14	1.18		1000	27	0.18	2
160	16	0.54		1250	29	0.15	1
200	16	0.51		1600	30	0.12	
250	17	0.37	2	2000	32	0.12	
315	19	0.28	3	2500	34	0.07	
400	20	0.32	5	3150	36	0.09	
500	22	0.23	4	4000	38	0.08	
630	24	0.20	3	5000	40	0.08	


STC=26

ABBREVIATION INDEX

- FREQ. = FREQUENCY, HERTZ, (cps)
- T.L. = TRANSMISSION LOSS, dB
- C.L. = UNCERTAINTY IN dB, FOR A 95% CONFIDENCE LIMIT
- DEF. = DEFICIENCIES, dB<STC CONTOUR (SUM OF DEF = 23)
- STC = SOUND TRANSMISSION CLASS

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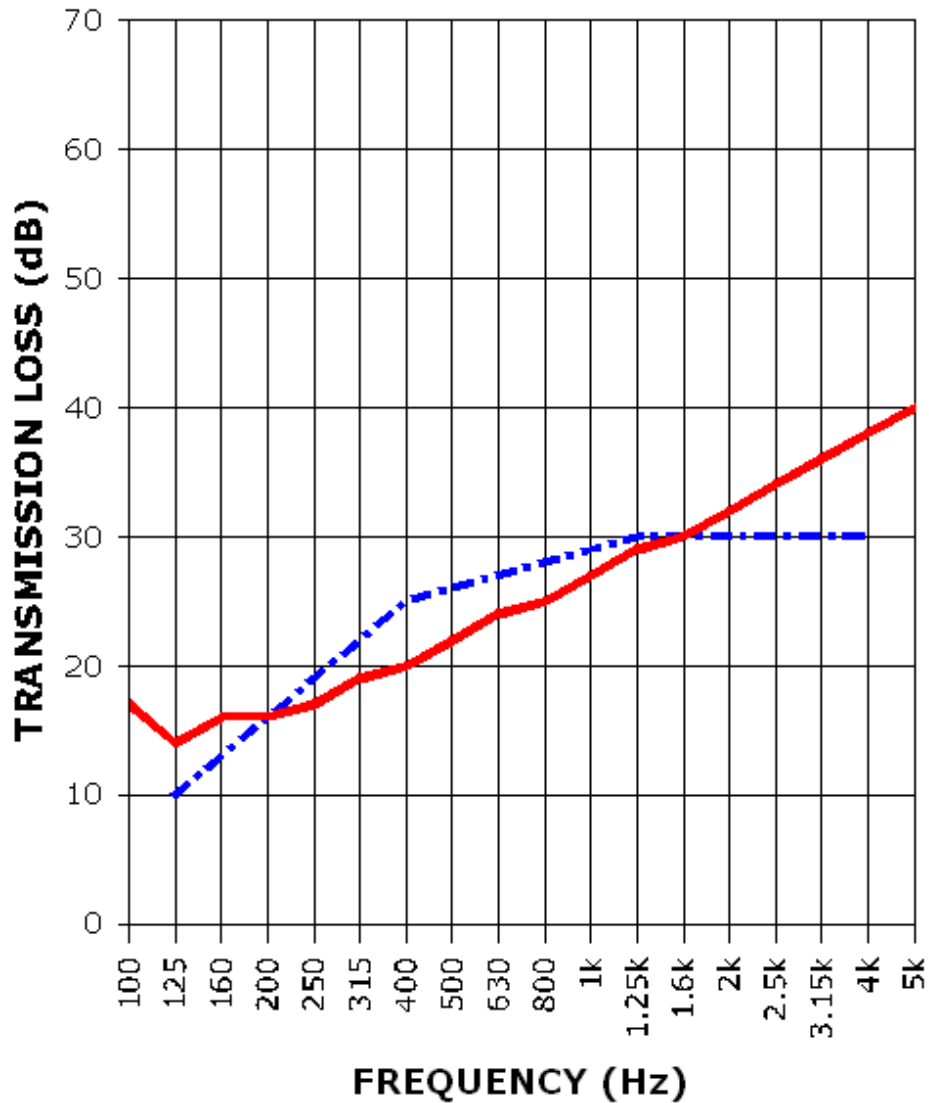
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SOUND TRANSMISSION REPORT
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TRANSMISSION LOSS
SOUND TRANSMISSION LOSS CONTOUR



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APPENDIX A: Extended Frequency Range Data

Specimen: dB Max - Barrier Material (fibrous side faces source) (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.

1/3 Octave Band Center Frequency (Hz)	Sound Transmission Loss (dB)	Uncertainty (95% ±)
31.5	5	1.12
40	16	0.90
50	11	0.96
63	9	0.85
80	6	1.00
100	17	0.67
125	14	1.18
160	16	0.54
200	16	0.51
250	17	0.37
315	19	0.28
400	20	0.32
500	22	0.23
630	24	0.20
800	25	0.27
1000	27	0.18
1250	29	0.15
1600	30	0.12
2000	32	0.12
2500	34	0.07
3150	36	0.09
4000	38	0.08
5000	40	0.08
6300	42	0.12
8000	43	0.11
10000	42	0.09
12500	35	0.08



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APPENDIX B: Instruments of Traceability

Specimen: dB Max - Barrier Material (fibrous side faces source) (See Full Report)

<u>Description</u>	<u>Model</u>	<u>Serial Number</u>	<u>Date of Certification</u>	<u>Calibration Due</u>
Bruel & Kjaer Pulse Analyzer - System4	Type 3560-C	2639093	2016-07-26	2017-07-26
Bruel & Kjaer Mic And Preamp E	Type 4943-B-001	2311441	2016-03-17	2017-03-17
Bruel & Kjaer Pistonphone	Type 4228	2781248	2016-07-25	2017-07-25
Omega Digital Thermo-Hygrometer A	Model # RH411	H0102487	2016-08-12	2017-08-12
Omega Digital Thermo-Hygrometer D	Model # RH411	H0102210	2016-07-13	2017-07-13

END



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