

625 RIVERBANK DRIVE
GENEVA, IL 60134
630-232-0104

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

SPONSOR: **Kirei**
San Diego, CA

Sound Absorption
RAL™-A24-058

CONDUCTED: 2024-02-01

Page 1 of 8

ON: 24mm Coral Screen

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 C423-23: "Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method." The specimen mounting was performed according to ASTM E795-23: "Standard Practices for Mounting Test Specimens During Sound Absorption Tests." A description of the measurement procedure and room specifications are available upon request. The results presented in this report apply to the sample as received from the test sponsor.

INFORMATION PROVIDED BY SPONSOR

The test specimen was designated by the sponsor as 24mm Coral Screen. The following nominal product information was provided by the sponsor prior to testing. The accuracy of such sponsor-provided information can affect the validity of the test results.

Product Under Test

Product Name: 24mm Coral Screen
Manufacturer: Kirei

SPECIMEN MEASUREMENTS & TEST CONDITIONS

Through a full external visual inspection performed on the test specimen, Riverbank personnel verified the following information:

Test Specimen

Material: PET felt screen
Dimensions: 1165 mm (45.875 in.) by 2743 mm (108 in.)
Thickness: 24.93 mm (0.9815 in.)
Overall Weight: 4.99 kg (11 lbs)

625 RIVERBANK DRIVE
GENEVA, IL 60134
630-232-0104

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Kirei
2024-02-01

RAL™-A24-058
Page 2 of 8

Overall Specimen Properties

Size: 1.17 m (45.875 in) wide by 2.74 m (108.0 in) long
Thickness: 0.02 m (0.9815 in)
Weight: 4.99 kg (11.0 lbs)
Mass per Unit Area: 1.56 kg/m² (0.32 lbs/ft²)
Calculation Area: 6.393 m² (68.81 ft²)

Test Environment

Room Volume: 291.98 m³
Temperature: 21.7 °C ± 0.3 °C (Requirement: ≥ 10 °C and ≤ 5 °C change)
Relative Humidity: 59.25 % ± 2.9 % (Requirement: ≥ 40 % and ≤ 5 % change)
Barometric Pressure: 98.4 kPa (Requirement not defined)

MOUNTING METHOD

Type K Mounting: The specimen was placed in the reverberation room in an upright position at an oblique angle to and at least 1.52 m (60 in.) from all walls. Per sponsor request, the perimeter edges were left exposed, as would be typical of a field installation of the product under test.

625 RIVERBANK DRIVE
GENEVA, IL 60134
630-232-0104

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Kirei
2024-02-01

RAL™-A24-058

Page 3 of 8

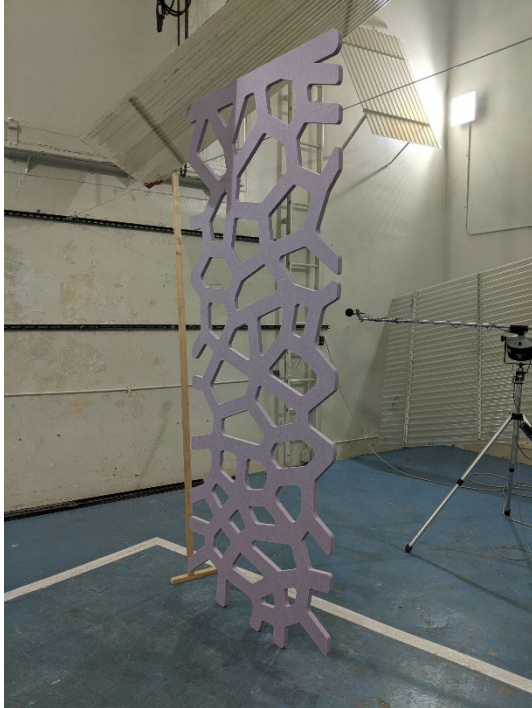


Figure 1 – Specimen mounted in test chamber

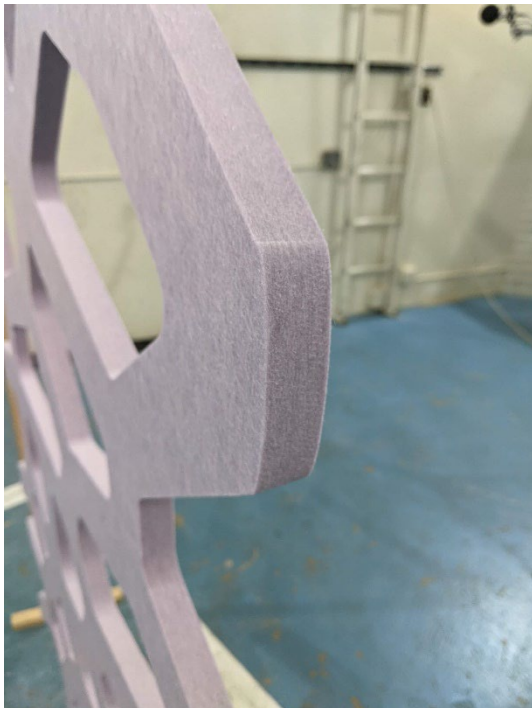


Figure 2 – Detail of specimen material

625 RIVERBANK DRIVE
 GENEVA, IL 60134
 630-232-0104

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
 WALLACE CLEMENT SABINE

Kirei
 2024-02-01

RAL™-A24-058
 Page 4 of 8

TEST RESULTS

Specimen total absorption and absorption coefficient are tabulated at the eighteen standard frequencies. A graphic presentation of the data and additional information appear on the following pages.

1/3 Octave Center Frequency (Hz)	Total Absorption (m ²)	Total Absorption (Sabins)	Absorption Coefficient
100	0.02	0.17	0.00
** 125	0.19	2.01	0.03
160	0.05	0.52	0.01
200	0.26	2.79	0.04
** 250	0.40	4.32	0.06
315	0.69	7.48	0.11
400	0.89	9.58	0.14
** 500	1.22	13.17	0.19
630	1.63	17.59	0.26
800	2.11	22.69	0.33
** 1000	2.70	29.04	0.42
1250	3.20	34.44	0.50
1600	3.54	38.09	0.55
** 2000	3.83	41.27	0.60
2500	4.07	43.82	0.64
3150	3.90	42.02	0.61
** 4000	3.99	42.95	0.62
5000	3.88	41.81	0.61

SAA = 0.32
NRC = 0.30

625 RIVERBANK DRIVE
GENEVA, IL 60134
630-232-0104

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Kirei
2024-02-01

RAL™-A24-058
Page 5 of 8

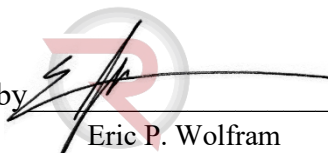
TEST RESULTS (continued)

The sound absorption average (SAA) is defined in ASTM C423-23 Section 3.1.1 as the arithmetic average of the sound absorption coefficients of a material for the twelve one-third octave bands from 200 Hz through 2500 Hz, inclusive, rounded to the nearest integer multiple of 0.01.

The noise reduction coefficient (NRC) is defined from previous versions of ASTM C423 as the arithmetic average of the sound absorption coefficients at 250 Hz, 500 Hz, 1000 Hz, and 2000 Hz, rounded to the nearest integer multiple of 0.05.

Tested by 
Marc Sciaky
Senior Experimentalist

Report by 
Keith Kimberling
Test Engineer

Approved by 
Eric P. Wolfram
Laboratory Manager

625 RIVERBANK DRIVE
GENEVA, IL 60134
630-232-0104

Test Report

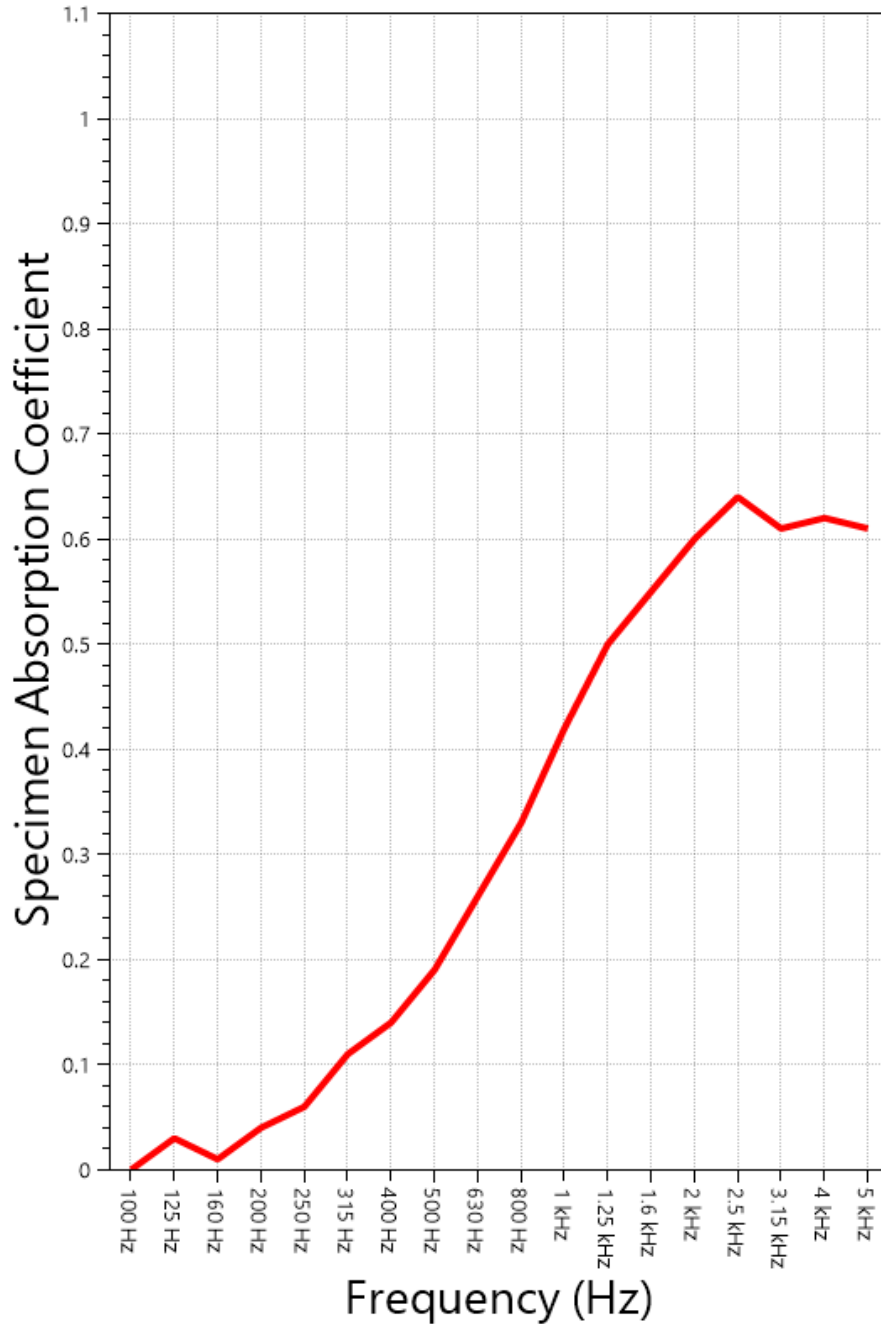
www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Kirei
2024-02-01

RAL™-A24-058
Page 6 of 8

SOUND ABSORPTION REPORT
24mm Coral Screen



SAA = 0.32
NRC = 0.30



RIVERBANK ACOUSTICAL LABORATORIES IS ACCREDITED BY NVLAP (LAB CODE 100227-0) FOR ACOUSTICAL TESTING SERVICES IN ACCORDANCE WITH ISO/IEC 17025:2017 AND FOR THIS PROCEDURE. THIS REPORT MUST NOT BE USED BY THE CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY RAL, NVLAP, NIST, OR ANY AGENCY OF THE U.S. GOVERNMENT. THIS REPORT SHALL NOT BE MODIFIED WITHOUT THE WRITTEN APPROVAL OF RAL. THE RESULTS REPORTED APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR TESTING; RAL ASSUMES NO RESPONSIBILITY FOR THE PERFORMANCE OF ANY OTHER SAMPLE.

625 RIVERBANK DRIVE
 GENEVA, IL 60134
 630-232-0104

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
 WALLACE CLEMENT SABINE

Kirei
 2024-02-01

RAL™-A24-058
 Page 7 of 8

APPENDIX A: Extended Frequency Range Data

Specimen: 24mm Coral Screen (See Full Report)

The following non-accredited data were obtained in accordance with ASTM C423-23, 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)	Total Absorption (Sabins)	Absorption Coefficient
31.5	5.79	0.08
40	-4.52	-0.07
50	-10.44	-0.15
63	0.19	0.00
80	-4.40	-0.06
100	0.17	0.00
125	2.01	0.03
160	0.52	0.01
200	2.79	0.04
250	4.32	0.06
315	7.48	0.11
400	9.58	0.14
500	13.17	0.19
630	17.59	0.26
800	22.69	0.33
1000	29.04	0.42
1250	34.44	0.50
1600	38.09	0.55
2000	41.27	0.60
2500	43.82	0.64
3150	42.02	0.61
4000	42.95	0.62
5000	41.81	0.61
6300	42.35	0.62
8000	40.62	0.59
10000	32.90	0.48
12500	31.72	0.46

625 RIVERBANK DRIVE
GENEVA, IL 60134
630-232-0104

Test Report

www.riverbankacoustics.com

FOUNDED 1918 BY
WALLACE CLEMENT SABINE

Kirei
2024-02-01

RAL™-A24-058
Page 8 of 8

APPENDIX B: Instruments of Traceability

Specimen: 24mm Coral Screen (See Full Report)

<u>Description</u>	<u>Model</u>	<u>Serial Number</u>	<u>Date of Certification</u>	<u>Calibration Due</u>
System 1	Type 3160-A-042	3160-106968	2023-07-17	2024-07-17
Bruel & Kjaer Mic And Preamp G	Type 4943-B-001	2525858	2023-05-03	2024-05-03
Bruel & Kjaer Pistonphone	Type 4228	2781248	2023-07-12	2024-07-12
EXTECH Hygro 6015	SD700	A.116015	2023-05-31	2024-05-31

APPENDIX C: Revisions to Original Test Report

Specimen: 24mm Coral Screen (See Full Report)

<u>Date</u>	<u>Revision</u>
2024-02-06	Original report issued

END