Endure Acoustics

Title: Sound Absorption Test Results

Product: Microperf Metal Lay-In (a.k.a. Silk Metal)

Application: Ceiling

Testing Standard: ASTM C423 (E-400 Mount)

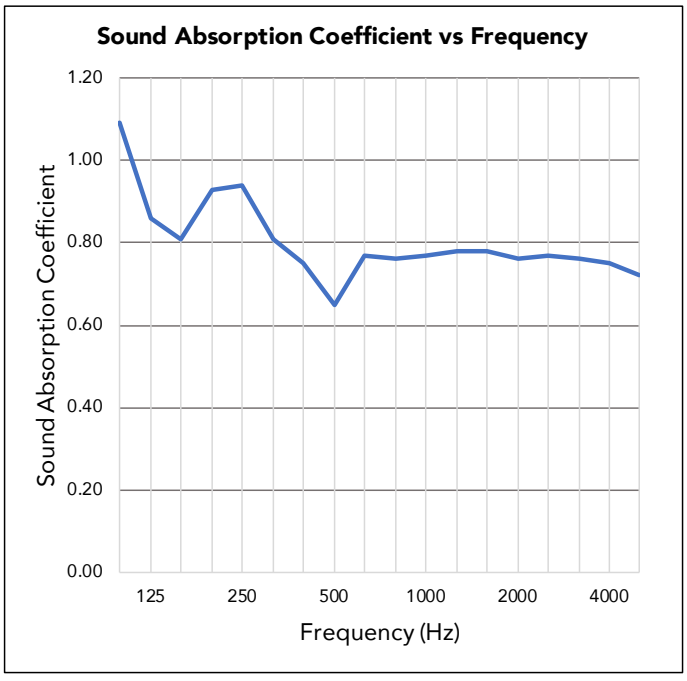
Test Date: 5/24/2010

Why this test: This test evaluates a products efficiency of absorbing sound at multiple frequencies. The test simulates the product's acoustical performance as insulation.

Test Result Summary: NRC - 0.80; SAA - 0.79

NRC	SAA
0.80	0.79

Frequency (Hz)	Absorption Coefficient
100	1.09
125	0.86
160	0.81
200	0.93
250	0.94
315	0.81
400	0.75
500	0.65
630	0.77
800	0.76
1000	0.77
1250	0.78
1600	0.78
2000	0.76
2500	0.77
3150	0.76
4000	0.75
5000	0.72



Test ID: RAL-A10-100

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TEST REPORT

Sound Absorption Test,
RAL™-A10-100

ON: Silk Metals Ceiling Panel

CONDUCTED: 24 May 2010

TEST METHOD

The test method conformed explicitly with the requirements of the ASTM Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method: ASTM C423-09a and E795-05. Riverbank Acoustical Laboratories has been accredited by the

U.S. Department of Commerce, National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure (NVLAP Lab Code: 100227-0). A description of the measuring procedure and room qualifications is available separately.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as Silk Metals Ceiling Panel. The overall dimensions of the specimen as measured were nominally 2.4 m (94.5 in.) wide by 2.74 m (108 in.) long and 25.4 mm (1 in.) thick. The specimen consisted of twenty (20) pieces. Sixteen (16) pieces were nominally 600 mm (23.625 in.) wide by 600 mm (23.625 in.) long and 25.4 mm (1 in.) thick. Four (4) pieces were nominally 343 mm (13.5 in.) wide by 600 mm (23.625 in.) long and 25.4 mm (1 in.) thick. The specimen was tested in the laboratory's 292 m^3 (10,311 ft^3) test chamber.

The manufacturer's description of the specimen was as follows: Silk Metals Ceiling Panel. The tiles consisted of formed micro perforated metal panels. The metal steel thickness as measured was 0.38 mm (0.015 in.) thick.

The weight of the entire specimen as measured was 15.5 kg (34.3 lbs), an average of 2.3 kg/m^2 (0.48 lbs/ft^2). The area used in the calculations was 6.6 m^2 (70.9 ft^2). The room temperature at the time of the test was 21° C (70° F) and 62±1% relative humidity.

MOUNTING E-400

The test specimen was mounted with an airspace behind it. The number designates the distance in mm from the exposed face of the test specimen to the test surface. The perimeter was sealed using metal framing.

TEST REPORT

RAL™-A10-100

24 May 2010

TEST RESULTS

1/3 Octave Center Frequency (Hz)	Absorption Coefficient	Total Absorption In Sabins
100	1.09	77.41
** 125	0.86	60.92
160	0.81	57.09
200	0.93	65.67
** 250	0.94	66.41
315	0.81	57.77
400	0.75	52.88
** 500	0.65	46.28
630	0.77	54.48
800	0.76	53.88
** 1000	0.77	54.27
1250	0.78	55.02
1600	0.78	55.22
** 2000	0.76	54.09
2500	0.77	54.57
3150	0.76	53.90
** 4000	0.75	53.10
5000	0.72	51.38

SAA = 0.79
NRC = 0.80

TEST RESULTS (Continued)

The sound absorption average (SAA) is defined as a single number rating, the average, rounded to the nearest 0.01, of the sound absorption coefficient of a material for the twelve one-third octave bands from 200 through 2500 Hz, inclusive.

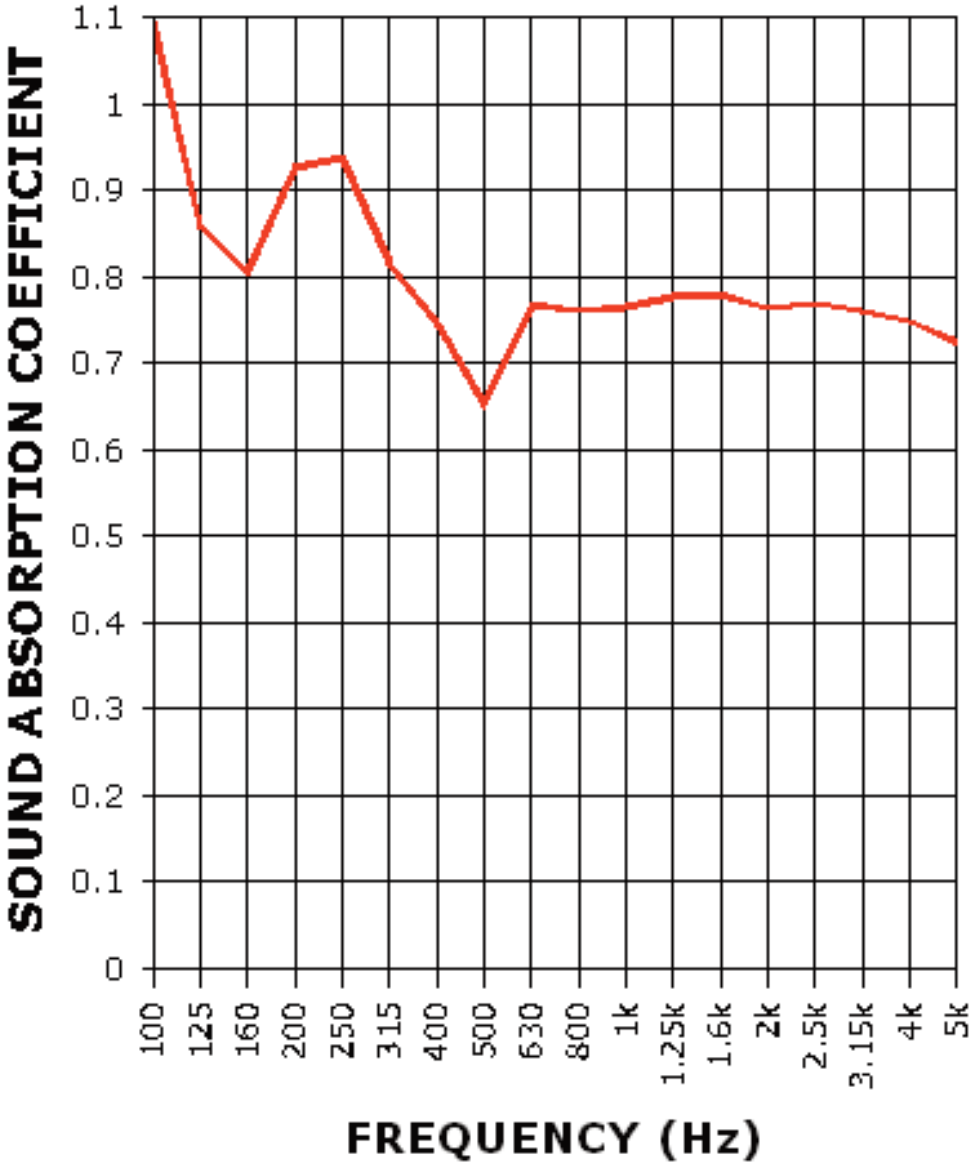
The noise reduction coefficient (NRC) is defined from previous versions of this same test method as the average of the coefficients at 250, 500, 1000, and 2000 Hz, expressed to the nearest integral multiple of 0.05.

Tested by _____ Approved by _____

Marc Sciaky
Experimentalist

David L. Moyer
Laboratory Manager

SOUND ABSORPTION REPORT
RAL-A10-100



SAA=0.79
NRC=0.80