



Title: Sound Absorption Test Results

Product: 1" StrandTec with 2" Cellulose Fiber Acoustical Backer

Application: Ceiling with open plenum

Testing Standard: ASTM C423-E400

Test Date: 10/11/2017

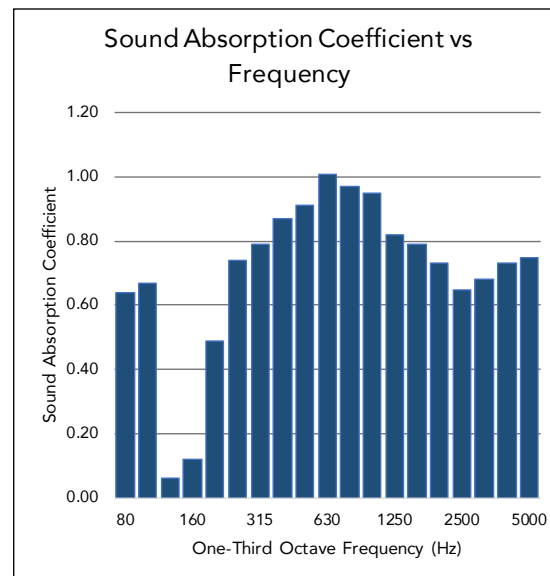
Why this test: This test evaluates a products efficiency of absorbing sound at multiple frequencies. The test simulates the product installation in a ceiling with a plenum above, i.e. ceiling tile installed into ceiling grid.

Test Result Summary: NRC - 0.85; SAA - 0.81

NRC
0.85

SAA
0.81

Frequency (Hz)	Absorption Energy (m ²)	Absorption Samples (m ²)	Absorption Coefficient
80	5.14	4.17	0.64
100	5.84	4.41	0.67
125	4.67	0.42	0.06
160	4.31	0.76	0.12
200	5.37	3.24	0.49
250	5.06	4.84	0.74
315	4.72	5.14	0.79
400	4.43	5.70	0.87
500	4.76	5.94	0.91
630	5.05	6.64	1.01
900	5.58	6.38	0.97
1000	5.90	6.23	0.95
1250	6.97	5.38	0.82
1600	7.57	5.20	0.79
2000	8.64	4.78	0.73
2500	9.58	4.26	0.65
3150	10.66	4.45	0.68
4000	12.58	4.80	0.73
5000	14.68	4.90	0.75



Test ID: ESP026258P-3

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SOUND ABSORPTION TESTING CONDUCTED ON a 1" Cementitious Wood Fiber Acoustic Board with 2" 3# CFAB Backer

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Report Number: ESP026258P-3



TESTING CERT #1479.01

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Noise Reduction Coefficient (ASTM C423-09a)

INTRODUCTION:

This report presents the results of acoustical testing of a 1" Cementitious Wood Fiber Acoustic Board with a 2", 3# CFAB Backer. This testing was requested by Mr. Conor Cook of ASI and was conducted on September 18, 2017.

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The results stated in this report represent only the specific construction and acoustical conditions present at the time of the test. Measurements performed in accordance with this standard on nominally identical constructions and acoustical conditions may produce different results.

TEST RESULTS SUMMARY:

<i>Noise Reduction Coefficient (NRC) Test Type E400 Mount</i>				Test Results		
Test #	Sample Identification	Total Weight (lbs)	Weight (psf)	NRC	SAA	--
3	1" Cementitious Wood Fiber Acoustic Board w/2", 3# CFAB Backer	189.0	2.68	0.85	0.81	--

Tabular and graphical presentations of the data are presented under "TEST RESULTS" below.

TEST PROCEDURE AND EQUIPMENT:

Sound Absorption Test

ASTM C 423-17, "Sound Absorption and Sound Absorption Coefficient by the Reverberation Room Method", was followed in every respect. The samples were placed in a Type E400 mounting method in accordance with ASTM E795-16.

NRC was calculated by rounding the sound absorption coefficients for 250, 500, 1000 and 2000 Hz to the nearest 0.05. SAA was calculated by rounding the sound absorption coefficients for the twelve frequencies from 200 Hz to 2500 Hz to the nearest 0.01.

TEST EQUIPMENT:

Item Description	ID #	Manufacturer/Model	Serial #	Calibration Due
1/2" Pressure Condenser Microphone	PT-162-108	Gras/46AD	167994	1/3/18
Microphone Calibrator	PT-162-076	Norsonic/1251	29144	6/30/18
Data Acquisition Module	PT-162-107	National Instruments/NI9234	1735986-1893EB3	6/1/18
Temp and Humidity Transmitter	PT-162-077	Dwyer Instruments/Series RH	M90714-E4SV-Y	6/1/18

SPECIMEN DESCRIPTION: (Also see "Test Results")

The Specimen was described as a 1" Cementitious Wood Fiber Acoustic Board. 2", 3# density CFAB backer was placed behind the Wood Wool. The overall sample size was 94.75" x 107.125" or 70.49 ft².

Test Result:

SOUND ABSORPTION ASTM C423

General Information

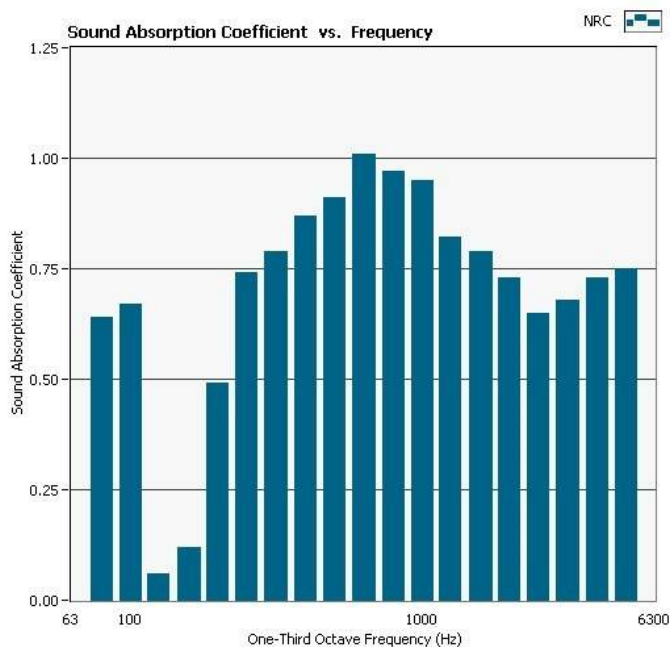
Project No:	ESP026258P-3
Customer:	ASI
Test Date:	09-18-2017
Specimen ID:	1" Cementitious Wood Fiber Acoustic Board
Specimen Description:	Acoustic Panel added CFAB 2 inch
Specimen Dimensions - Area:	94.75" W x 107.12" H - 70.49 ft²
Operator:	AMW

Data Table

	absorption empty (m²)	absorption * sample (m²)	Absorption Coefficient
80	5.14	4.17	0.64
100	5.84	4.41	0.67
125	4.67	0.42	0.06
160	4.31	0.76	0.12
200	5.37	3.24	0.49
250	5.06	4.84	0.74
315	4.72	5.14	0.79
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2000	8.64	4.78	0.73
2500	9.58	4.26	0.65
3150	10.66	4.45	0.68
4000	12.59	4.80	0.73
5000	14.69	4.90	0.75

Room Conditions

Temperature	21.6 °C
R.H.	48 %
ATM	983 hPa



NRC

0.85

SAA

0.81

* based on an extended plane area of 70.49 ft²



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