



**ASTM C423 Sound Absorption**

<b>Brief Description:</b> Polyester nonwoven, 1" baseline @ 72 oz/sq yd	
<b>Full Room Date:</b> 8/23/2019	<b>Empty Room Date:</b> 8/23/2019
<b>Test Request:</b> A190025	<b>Tested By:</b> Really Rine
<b>Measurement Procedure:</b> Averaging algorithm is exponential	

<b>Test Method:</b> The sample was tested in compliance with ASTM C423 and ASTM E795	Type A - Surface Mounted
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**Test System:** Bruel & Kjaer Type LAN-XI 3160-A-042  
**Sound Source:** Bruel & Kjaer Generator Module Type 3160-A-042.  
 Creating broad band pink noise.

SN: 105319 and 105457

**Location:** Acoustics Lab B75

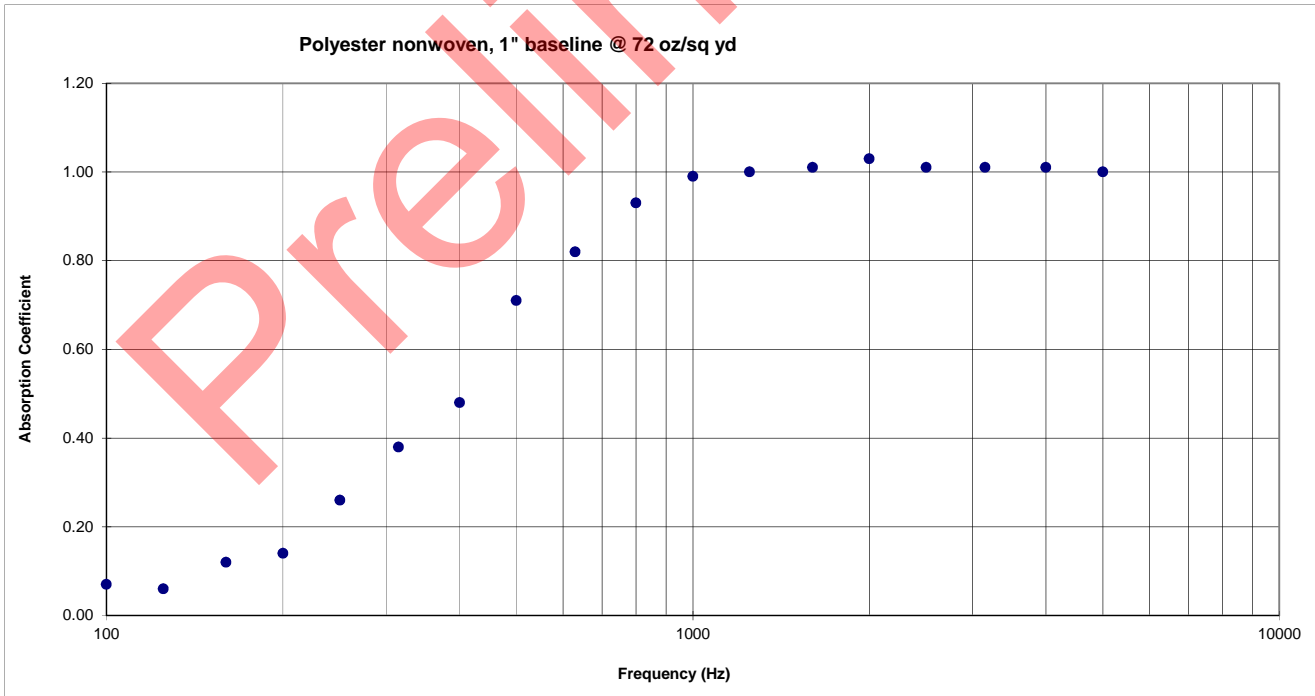
**Date:** 8/23/2019

**Summary of Test Results :**

Frequency (Hz)	Absorption Coefficient	Absorption (Metric Sabins)	Absorption (Standard Sabins)
100	0.07	0.44	4.76
125	0.06	0.41	4.40
160	0.12	0.81	8.74
200	0.14	0.98	10.50
250	0.26	1.77	19.07
315	0.38	2.58	27.76
400	0.48	3.26	35.05
500	0.71	4.78	51.43
630	0.82	5.54	59.59
800	0.93	6.28	67.59
1000	0.99	6.69	72.06
1250	1.00	6.80	73.22
1600	1.01	6.87	73.97
2000	1.03	6.95	74.76
2500	1.01	6.82	73.38
3150	1.01	6.87	73.95
4000	1.01	6.85	73.74
5000	1.00	6.79	73.08

	Empty Room	Full Room
Temperature (deg. C):	22.60	22.70
% Relative Humidity:	46.30	46.10
Date:	8/23/2019	8/23/2019
Atmospheric Pressure (kPa):	98.0	

<b>NRC</b>	<b>0.75</b>
<b>SAA</b>	<b>0.73</b>





<b>Full Description:</b>	<b>Tested By:</b>	Really Rine	
Weight (kg):	16.36	Weight (lb):	36.07
Area (sq. m):	6.77	Area (sq. ft.):	72.92
Mounting:	Type A - Surface Mounted		
Other Information:			

The purpose of this testing is to determine the sound absorptive properties of the submitted sample.

The test material description, whether by observation or as provided by the client, is as follows:  
Polyester nonwoven, 1" baseline @ 72 oz/sq yd

Each panel was characterized/measured in the Owens Corning Acoustic Research Center by Really Rine on August 22, 2019.

These measurements are documented below.  
All measurements and calculations were conducted in accordance with Owens Corning Test Method(s):  
W-01Ca, Density and Square Foot Weight  
D01-Bg, Thickness of Insulation Board Products

A NIST traceable tape measure was used to obtain the lengths and widths of each panel. The lengths provided here are an average of 3 measurements, and the widths are an average of 3 measurements per panel. Per D-01Ae, the thickness measurements are an average of 3 measurements per panel.

The sum total area of the sample was 72.92 square feet.

Length (in.)	Width (in.)	Thickness (in.)	Weight (lbs.)	Density (pcf)	Area wt.(psf)
108.83	96.48	1.03	36.07	5.78	0.49

The sum total area of the sample was 6.77 square meters.

Length (m)	Width (m)	Thickness (mm)	Weight (kg)	Density (kg/m <sup>3</sup> )	Area wt. (kg/m <sup>2</sup> )
2.76	2.45	26.10	16.36	92.54	2.42

Individual panel data are available upon request.  
All calculations and physical measurements include all components associated with this sample, unless otherwise noted.

The sample was given 24 hours to come to equilibrium with the atmospheric conditions of the test chamber.

The perimeter edge of the sample was sealed with an aluminum frame.  
The facing side of the sample was exposed to the sound field.  
The sample was placed in the designated ASTM C423 position within the 286.36 cu. m (10,110 cu. ft.) reverberation chamber. Details of this position may be obtained by request.  
All ASTM E795 mounting requirements were met for this test.  
The source speakers were located in positions 1 and 2 (standard locations) within the reverberation chamber. Details of this position may be obtained by request.

