



**Acoustic and Insulation
Product Testing Laboratories**

2790 Columbus Road, Granville, OH 43023

CLIENT: Marcel Dery
Saint-Gobain Performance Plastics Corp.
P.O. Box 1137
701 Daniel Webster Hwy.
Merrimack, NH 03054

REPORT NO. A070073
Proposal No. A07013
Date: 30 May 2007

TITLE: ASTM C423 E400 Mount Testing of Fabrisorb IA

Purpose

Perform ASTM C423 E400 mount testing on Fabrisorb IA.

Samples Submitted

1 panel (8' x 9') of Fabrisorb IA material

Testing Method

All samples were placed in the designated ASTM C423 position within the 10,110 cubic foot reverberation chamber. All samples were mounted in accordance with ASTM E795 Type E400 Mount requirements. An ASTM approved aluminum frame was used to seal the perimeter edge of each sample. In all cases, of the samples that had a facing, the facing was exposed to the sound field.

The test method conformed explicitly to the requirements of the ASTM Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method: ASTM C423 – 99a and E795-05. The Owens Corning Test Method M-01Aa conforms explicitly to ASTM and NVLAP requirements and describes in detail the method used by this lab in conducting sound absorption tests. A description of the measuring technique is available separately. Details pertaining to Reverberation Suite 1 are available upon request.



This laboratory (100109-0) is accredited by NVLAP of the National Institute of Standards and Technology for specified tests in accordance with prescribed test methods and accreditation criteria. The use of the NVLAP logo and/or this report does not constitute or imply product certification or endorsement by NVLAP or any agency of the US Government for the product tests referenced herein.

The information provided herein is based on controlled laboratory conditions. The test specimen identification is as provided by the client and Owens Corning Acoustic and Insulation Product Testing Laboratories accepts no responsibility for any inaccuracies therein. Owens Corning Acoustic and Insulation Product Testing Laboratories makes no warranty that the results provided herein are representative of actual use conditions. Each user should independently evaluate the data provided and make their own decision as to whether the data is reliable and representative for their service conditions.

Accuracy and Accreditation

Owens Corning Acoustic and Insulation Product Testing Laboratories have been accredited by the U.S. Department of Commerce, as administered through the National Institute of Standards and Technology (NIST), under the National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure. The percentage of uncertainty for the required 95% confidence limits is outlined per frequency band in section 13 of the ASTM Standard Test Method for Sound Absorption Coefficients by the Reverberation Room Method: ASTM C423 – 99a. Tables 2 and 3 show the reproducibility (R) and repeatability (r) of an inter-laboratory comparison beginning in 1980.

Summary of Results

Summations and details of the test(s) and test results are provided on the attached data sheet(s).

Signature On File

Mindy Wallace
Venue Lead, Acoustic Research Center
Owens Corning
Acoustic and Insulation Product
Testing Laboratories

Signature On File

David A. Burd
Lab Lead, Acoustic Research Center
Owens Corning
Acoustic and Insulation Product
Testing Laboratories



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Test Number C423_070161

ASTM C423 Sound Absorption

Brief Description: Fabrisorb IA

Date:	5/23/2007		
Test Request:	A070073	Tested By:	Mindy Wallace
Measurement Procedure:	Averaging algorithm is exponential.		Notebook No.: N/A
			Page No.: N/A

Test Method: The sample was tested in compliance with ASTM C423 and ASTM E795.

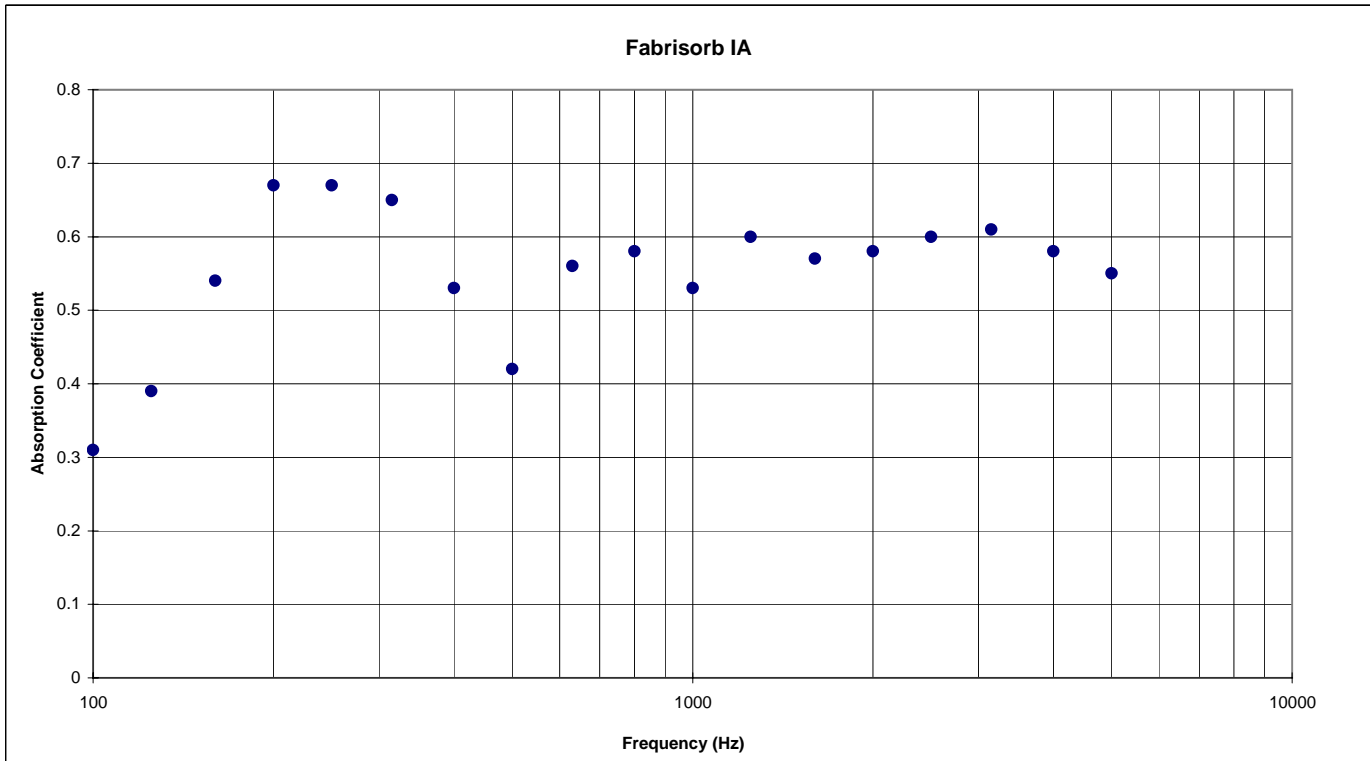
Test System: Bruel & Kjaer Type 3560 SN: 2447687 **Calibration Frequency:** 250 Hz
Sound Source: Delta Noise Generator creating Pink Noise **Type:** Pistonphone **Level:** 124.00 dB
Location: Acoustics Lab B75 **Date:** 5/23/2007

Summary of Test Results :

Frequency (Hz)	Absorption Coefficient	Absorption (Metric Sabines)	Empty Room	Full Room
100	0.31	2.08		
125	0.39	2.63		
160	0.54	3.58		
200	0.67	4.48		
250	0.67	4.48		
315	0.65	4.36		
400	0.53	3.54		
500	0.42	2.83		
630	0.56	3.77		
800	0.58	3.89		
1000	0.53	3.54		
1250	0.60	4.01		
1600	0.57	3.81		
2000	0.58	3.89		
2500	0.60	4.04		
3150	0.61	4.09		
4000	0.58	3.87		
5000	0.55	3.67		

Temperature (deg. C):	23.20	23.30
% Relative Humidity:	44.90	46.20
Absorption Correction	5/23/2007	5/23/2007
FALSE		

NRC	0.55
SAA	0.58





Acoustic and Insulation Product Testing Laboratories

Test Number C423_070161

ASTM C423 Sound Absorption

Full Description:	Tested By:	Mindy Wallace	
Weight (kg):	2.32	Weight (lb):	5.12
Area (sq. m):	6.69	Area (sq. ft.):	72.00
Mounting:	Type E400 - Ceiling Panels with Plenum		
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:

Fabrisorb IA

Each panel was characterized/measured in the Owens Corning Acoustics Lab
by Mindy Wallace on 23-May-07

These measurements are documented below.

A standard tape measure was used to obtain the lengths and widths of the sample fabric. The lengths provided are an average of 2 measurements and the widths are an average of 3 measurements.

The thickness measurements are an average of 5 measurements. These thickness measurements were taken along the edges of the panel with a micrometer.

The sum total area of the sample was 72.00 square feet.

Length (in.)	Width (in.)	Thickness (in.)	Weight (lbs.)	Density (pcf)	Sq.ft.wt.(psf)
96.00	108.00	0.01	5.12	85.33	0.07

Individual panel data 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 as well as 48 hours lying flat to rid the sample fabric of any wrinkles.

Any gaps between the sample and the perimeter edge frame were sealed with duct tape allowing no more than 1/8" intruding upon the panel.

The sample was placed in an ASTM approved 8ft x 9ft. 1/8 inch thick aluminum Type E400 Mount frame.

The sample was placed in the designated ASTM C423 position within the 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 these positions may be obtained by request.