



FOR THE SCOPE OF
ACCREDITATION UNDER NVLAP LAB
CODE 100402-0.

REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 3172342

Date: July 20, 2009

REPORT NO. 3172342CRT-025

**SOUND ABSORPTION TEST
ON TEST # 121695 ID: N1486 TIARA
FABRIC OVER TYPE X GYPSUM BOARD**

RENDERED TO

**SHAW INDUSTRIES SPECIALITY MARKETS
500 EAST FRANKLIN STREET
DALTON, GA, 30721**

INTRODUCTION

This report gives the results of Sound Absorption tests and the determination of the Noise Reduction Coefficient on Test # 121695 ID: N1486 Tiara Fabric over Type X gypsum board. The test specimen was selected and supplied by the client and received at the laboratories on May 29, 2009. The sample appeared to be in a new, unused condition.

AUTHORIZATION

Signed Intertek Quotation No. 500130145.

TEST METHOD

The specimen was tested in accordance with the American Society for Testing and Materials designation ASTM C423-08, "Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method".

GENERAL

This test method describes the measurement of sound absorption by analyzing the decay rate of sound in a reverberation room. The difference of the decay with and without the specimen in the room is utilized to determine the sound absorption of the specimen under test. Intertek Testing Services Acoustical Facilities utilizes a 16,640 cu. ft. (470 cubic meter) reverberation room.

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GENERAL - Cont'd

The sound absorption coefficient is ideally defined as the fraction of the randomly incident sound power absorbed by the material. The greater the coefficient, the greater the sound absorption.

The Noise Reduction Coefficient (NRC) is a single number rating obtained by taking the arithmetic average of the absorption coefficients at 250, 500, 1000, and 2000 Hz rounded to the nearest multiple of 0.05.

The Sound Absorption Average (SAA) is a single number rating obtained by taking the arithmetic average of the one-third octave bands from 200 through 2500 Hz rounded to the nearest 0.01.

DESCRIPTION OF TEST SPECIMEN

The test specimen consisted of an 8 foot wide by 9 foot long test area covered with fabric identified as Test # 121695 ID: N1486 Tiara Fabric over Type X Gypsum Board over the concrete floor of our 16,640 cu. ft. reverberation room. The Gypsum Board had an NRC of 0.10 when tested alone. The fabric weighed approximately 0.17 pounds per square yard.



RESULTS OF TEST

TEST # 121695 ID: N1486 TIARA

<u>One Third Octave Band Center Frequency, Hz</u>	<u>Absorption Coefficients Sabins/ft²</u>	<u>Percent Uncertainty</u>
100	0.00	4.45
125	0.02	6.24
160	0.15	2.76
200	0.03	2.30
250	0.05	2.16
315	0.07	1.56
400	0.18	2.10
500	0.15	1.62
630	0.20	1.85
800	0.25	1.40
1000	0.29	1.09
1250	0.33	0.88
1600	0.34	0.90
2000	0.38	0.89
2500	0.39	0.79
3150	0.45	0.83
4000	0.47	0.75
5000	0.53	0.77
<u>Sound Absorption Average (SAA)</u>	0.22	

<u>IDENTIFICATION</u>	<u>Absorption Coefficients – Sabins/ft.² One-Third Octave Band Center Frequency, Hz</u>						
	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>NRC</u>
	0.02	0.05	0.15	0.29	0.38	0.47	0.20
Precision ±	0.05	0.02	0.02	0.01	0.01	0.02	

MOUNTING: Type “A” per ASTM Designation E795-05, “Standard Practices for Mounting Test Specimens During Sound Absorption Tests”.



REMARKS

1. Aging Period: None
2. Ambient Temperature: 72°F
3. Relative Humidity: 57%

CONCLUSION

The test method employed for this test has no pass-fail criteria, therefore, the evaluation of the test results is left to the discretion of the client.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test: July 17, 2009

Report Approved by:

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Attachments: None