



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

REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 3148942

Date: July 24, 2008

REPORT NO. 3148942CRT-003a

SOUND ABSORPTION TEST ON A LAPOLLA FL500 WALL SAMPLE

RENDERED TO

**LAPOLLA INDUSTRIES INC.
15402 VANTAGE PARKWAY EAST
SUITE 322
HOUSTON, TX, 77032**

INTRODUCTION

This report gives the results of Sound Absorption tests and the determination of the Noise Reduction Coefficient on a LaPolla FL500 spray applied foam filled wall sample. The test specimen was selected and supplied by the client and received at the laboratories on July 16, 2008. The sample appeared to be in a new, unused condition.

AUTHORIZATION

Signed Intertek Quotation No. 500076656.

TEST METHOD

The specimen was tested in accordance with the American Society for Testing and Materials designation ASTM C423-02a, "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 a Lapolla wall section. The sample was labeled FL500 had a 0.5 pcf spray applied foam fill. The sample was 8 feet wide by 8 feet tall. The construction of the sample was witnessed by an Intertek representative, Jeffrey Patterson, on June 16, 2008. The wall consisted of 2x4 studs with 24 inch on center spacing with 5/8" sheetrock on both sides and a foam filler.

RESULTS OF TESTS

LAPOLLA FL500 WALL SAMPLE

| <u>One Third Octave Band Center Frequency, Hz</u> | <u>Absorption Coefficients Sabins/ft²</u> | <u>Percent Uncertainty</u> |
|---|--|--------------------------------|
| 100 | 0.02 | 4.66 |
| 125 | 0.46 | 3.10 |
| 160 | 0.28 | 3.35 |
| 200 | 0.19 | 3.26 |
| 250 | 0.16 | 2.17 |
| 315 | 0.09 | 2.06 |
| 400 | 0.13 | 1.96 |
| 500 | 0.05 | 2.16 |
| 630 | 0.12 | 1.36 |
| 800 | 0.15 | 1.12 |
| 1000 | 0.10 | 1.22 |
| 1250 | 0.11 | 1.23 |
| 1600 | 0.09 | 0.84 |
| 2000 | 0.13 | 0.49 |
| 2500 | 0.13 | 0.49 |
| 3150 | 0.13 | 0.60 |
| 4000 | 0.13 | 0.51 |
| 5000 | 0.08 | 0.84 |
| <u>Sound Absorption Average (SAA)</u> | 0.11 | |

| <u>IDENTIFICATION</u> | <u>Absorption Coefficients – Sabins/ft.²</u> | | | | | | |
|-----------------------|---|------------|------------|-------------|-------------|-------------|------------|
| | <u>125</u> | <u>250</u> | <u>500</u> | <u>1000</u> | <u>2000</u> | <u>4000</u> | <u>NRC</u> |
| | 0.46 | 0.16 | 0.05 | 0.10 | 0.13 | 0.13 | 0.10 |
| Precision ± | 0.05 | 0.02 | 0.02 | 0.01 | 0.01 | 0.02 | |

MOUNTING: Type “A” per ASTM Designation E795-00, “Standard Practices for Mounting Test Specimens During Sound Absorption Tests”.



REMARKS

1. Aging Period: None
2. Ambient Temperature: 71°F
3. Relative Humidity: 51%

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 24, 2008

Report Approved by:

Brian Cyr
Engineer
Acoustical Testing

Report Reviewed By:

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Attachments: None