

REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 103221617

Date: September 19, 2017

REPORT NO. 103221617CRT-001a

**SOUND ABSORPTION TEST
ON NYDREE ENGINEERED HARDWOOD FLOORING
(5 ¼ INCH WIDE BY 7/16 INCH THICK PLANKS)**

RENDERED TO

**NYDREE FLOORING
4608 QUEHANNA HIGHWAY
KARTHAUS, PA 16845**

INTRODUCTION

This report gives the results of a Sound Absorption test and the determination of the Noise Reduction Coefficient on hardwood flooring. The test specimen was selected and supplied by the client and received at the laboratories on September 15, 2017. The sample appeared to be in a new, unused condition.

AUTHORIZATION

Signed Intertek Quotation No. Qu-00794055

TEST METHOD

The specimen was tested in accordance with the American Society for Testing and Materials designation ASTM C423-2017, "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.

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 Nydree Engineered Hardwood Planks. The planks measured 5 ¼ inches wide by 7/16 inch thick and random lengths. The flooring weighed 1.77 lbs/ ft².

RESULTS OF TEST

ENGINEERED HARDWOOD FLOORING
(5 ¼ INCH WIDE BY 7/16 INCH THICK PLANKS)

<u>One Third Octave Band Center Frequency, Hz</u>	<u>Absorption Coefficients Sabins/ft²</u>	<u>Repeatability, r</u>	<u>Reproducibility, R</u>
80	0.00	0.14	0.14
100	0.01	0.15	0.27
125	<u>0.01</u>	0.11	0.22
160	0.00	0.11	0.23
200	0.01	0.09	0.17
250	<u>0.00</u>	0.07	0.15
315	0.05	0.09	0.22
400	0.05	0.14	0.16
500	<u>0.07</u>	0.09	0.14
630	0.12	0.06	0.14
800	0.11	0.07	0.14
1000	<u>0.07</u>	0.06	0.12
1250	0.08	0.05	0.13
1600	0.07	0.05	0.14
2000	<u>0.05</u>	0.05	0.13
2500	0.06	0.06	0.14
3150	0.06	0.08	0.15
4000	<u>0.06</u>	0.11	0.16
5000	0.08	0.15	0.21
<u>Sound Absorption Average (SAA)</u>	0.06	0.03	0.08

Absorption Coefficients – Sabins/ft.²
One-Third Octave Band Center Frequency, Hz

<u>IDENTIFICATION</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>NRC</u>
7/16 inch thick planks	0.01	0.00	0.07	0.07	0.05	0.06	0.05

MOUNTING: Type “A” per ASTM Designation E795-16, “Standard Practices for Mounting Test Specimens During Sound Absorption Tests”.

REMARKS

1. Aging Period: None
2. Ambient Temperature: 71°F
3. Relative Humidity: 48%

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.

Date of Test: September 18, 2017

Report Approved by:



Brian Cyr
Engineer
Acoustical Testing

Report Reviewed By:



James R. Kline
Engineer/Quality Supervisor
Acoustical Testing

Attachments: None