

**REPORT**

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 105030300

Date: March 23, 2023

**REPORT NO. 105030300CRT-007e**

**SOUND TRANSMISSION LOSS TEST AND  
CLASSIFICATION OF TEST NUMBER #295653  
ID: DISTRICT: 2MM/6 MIL  
OVER A WOOD JOIST FLOOR/CEILING ASSEMBLY  
WITH A 0.75 INCH THICK GYPSUM CONCRETE TOPPING**

**RENDERED TO****LIONS FLOOR****INTRODUCTION**

This report gives the result of a Sound Transmission Loss test on flooring. The sample was selected and supplied by the client and received at the laboratories on March 22, 2023. The material appeared to be in new, unused condition upon arrival.

**AUTHORIZATION**

Signed Intertek Quotation No. Qu-01328860-4

**TEST METHOD**

The specimen was tested in general accordance with the American Society for Testing and Materials designation ASTM E90-09 (2016), "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements" and classified in accordance with the American Society for Testing and Materials designation ASTM E413-22, "Classification for Rating Sound Insulation". The size of the source room for the measurements is smaller than the minimum recommended of 125m<sup>3</sup>. This leads to slightly elevated uncertainties in the measurement data at low frequencies and does not allow microphones to be placed in full accordance with section A.2.

## **GENERAL**

The sound-insulating property of a partition element is expressed in terms of the sound transmission loss. The procedure for determining this quantity is to mount (and perimeter seal) the test specimen as a partition between two reverberation rooms. Sound is introduced in one of the rooms (the source room) and measurements are made of the noise reduction between source room and receiving room. The rooms are so arranged and constructed that the only significant sound transmission between them is through the test specimen.

The purpose of the Sound Transmission Class (STC) is to provide a single figure rating that can be used for comparing the sound-insulating properties of partition elements used for general building design purposes. The higher the rating (STC) the greater the sound insulating properties of the partition.

## **DESCRIPTION OF THE FLOOR/CEILING ASSEMBLY**

The test floor is a 100 sq. ft. opening that forms the horizontal separation of the two rooms, one directly above the other. The materials used in the assembly from top to bottom are:

- 0.75 inch thick Gypsum Concrete
- $\frac{3}{4}$  inch thick tongue & groove OSB decking (glued and screwed)
- 18 inch high Open Web Trusses (spaced 24 inches on center)
- 3.5 inch, unfaced insulation installed at the top of the cavities
- Dietrich RC Deluxe Resilient Channels (spaced 16 inches on center) fastened at every intersection
- One layer of 5/8 inch thick Type C Gypsum Board (taped and finished with compound)

## **DESCRIPTION OF TEST SPECIMEN**

The test specimen consisted of test number #295653 ID: District: 2mm/6 mil. The plank flooring measured 7-1/4 inches wide by 48 inches long and weighed 0.74 pounds per square foot.

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1/3 Octave Band  
Center Frequency

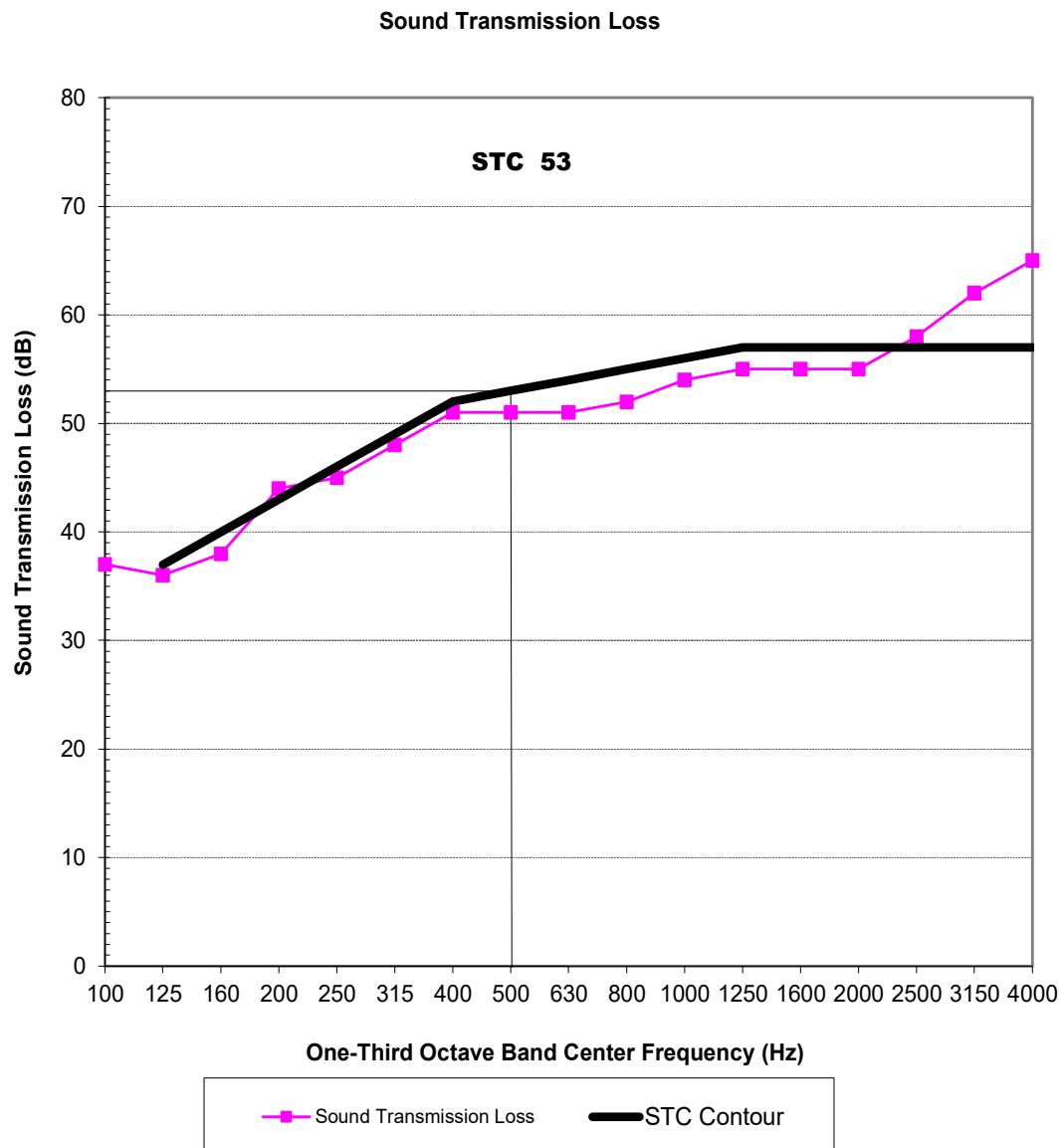
<u>Hertz</u>	<u>Sound Transmission Loss in dB</u>
80	30
100	37
125	36
160	38
200	44
250	45
315	48
400	51
500	51
630	51
800	52
1000	54
1250	55
1600	55
2000	55
2500	58
3150	62
4000	65
5000	69
Sound Transmission Class	53

**PRECISION**

For the Intertek flooring test facility, the 95% confidence interval  $\Delta TL$ , is as follows:

<u>Range of One-Third Octave Bands</u>	<u>Transmission Loss 95% Confidence Uncertainty, dB</u>
125 and 200	<4.0
250 and 315	<2.0
400 - 4000	<1.5

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**LIONS FLOOR**

**REMARKS**

1. Ambient Temperature: 70°F
2. Relative Humidity: 30%

**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: March 23, 2023

Report Approved by:



Joey Esce  
Project Engineer  
Acoustical Testing

Report Reviewed By:



Brian Cyr  
Engineer  
Acoustical Testing

Attachments: None