

# **REPORT**

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 105030300 Date: August 28, 2022

REPORT NO. 105030300CRT-003h

SOUND TRANSMISSION LOSS TEST AND
CLASSIFICATION OF TEST #289067
ID: LIONS FLOOR LONE STAR SPIRIT COLLECTION
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 material. The sample was selected and supplied by the client and received at the laboratories on August 2, 2022. The material appeared to be in new, unused condition upon arrival.

## **AUTHORIZATION**

Signed Intertek Quotation No. Qu-01259122-0

### **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 E413-16, "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
- 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: #289067 ID: Lions Floor Lone Star Spirit Collection. The locking flooring planks with resilient backing measured 9.00 inches wide by 60 inches long by 0.20 inches thick. The flooring weighed 2.20 lbs./ft².

Date: August 28, 2022



# TEST #289067 ID: LIONS FLOOR LONE STAR SPIRIT COLLECTION OVER A WOOD JOIST FLOOR/CEILING ASSEMBLY WITH 0.75 INCH THICK GYPSUM CONCRETE TOPPING

1/3 Octave Band Center Frequency <u>Hertz</u>	Sound Transmission Loss in dB
80	30
100	37
125	36
160	35
200	45
250	44
315	49
400	50
500	52
630	52
800	54
1000	53
1250	55
1600	56
2000	56
2500	57
3150	61
4000	64
5000	66
Sound Transmission Class	53

# **PRECISION**

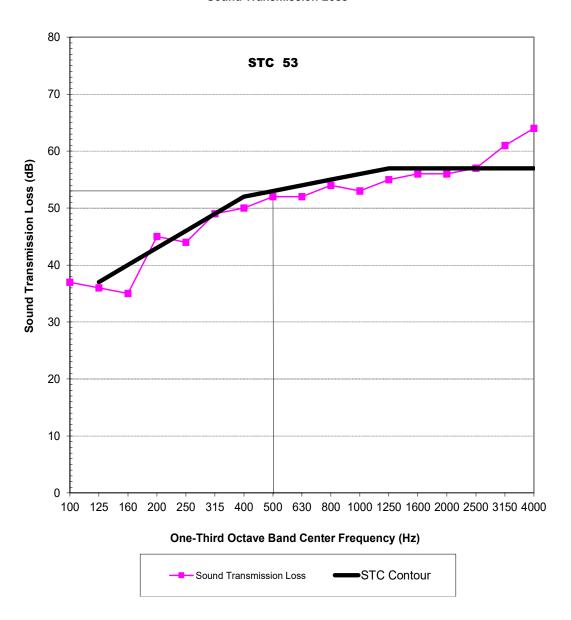
For the Intertek flooring test facility, the 95% confidence interval  $\Delta TL$ , is as follows:

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



# TEST #289067 ID: LIONS FLOOR LONE STAR SPIRIT COLLECTION OVER A WOOD JOIST FLOOR/CEILING ASSEMBLY WITH 0.75 INCH THICK GYPSUM CONCRETE TOPPING

### **Sound Transmission Loss**



**LIONS FLOOR** 

Date: August 28, 2022



# **REMARKS**

1. Ambient Temperature: 73°F

2. Relative Humidity: 61%

# **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: August 17, 2022

Report Approved by:

had A Marcy

Chad A. Morey
Technical Analyst

**Acoustical Testing** 

Report Reviewed By:

Brian Cyr Engineer

Dim Cy

**Acoustical Testing** 

Date: August 28, 2022

Attachments: None