REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 105030300 Date: April 30, 2024

REPORT NO. 105030300CRT-011e

**IMPACT SOUND TRANSMISSION TEST AND CLASSIFICATION OF
TEST NUMBER #306953
ID: SAVANNAH LAMINATE FLOORING
OVER A SIX INCH CONCRETE SLAB WITH A DROP CEILING**

RENDERED TO

LUX FLOORING

INTRODUCTION

This report gives the result of an impact Sound Transmission test on flooring. The sample was selected and supplied by the client and received at the laboratories on April 25, 2024. The material appeared to be in new, unused condition upon arrival.

AUTHORIZATION

Signed Intertek Quotation No. Qu-01436512-0

TEST METHOD

The floor system was tested in general accordance with the American Society for Testing and Materials designation ASTM E492-09 (Reapproved 2016), "Standard Test Method for Laboratory Measurement of Impact Sound Transmission through Floor-Ceiling Assemblies Using the Tapping Machine". It was classified in accordance with ASTM E989-21, entitled "Standard Classification for Determination of Single-Number Metrics for Impact Noise."

GENERAL

The test method is designed to measure the impact sound transmission performance of a floor-celing assembly, in a controlled laboratory environment. A standard tapping machine (Bruel & Kjaer Type 3207) was placed at four positions on the test floor that forms the horizontal separation between two rooms, one directly above the other. The data obtained was normalized to a reference room absorption of 10 square meters in accordance with the test method.

The standard also prescribes a single-figure classification rating called "Impact Insulation Class, IIC" which can be used by architects, builders, and code authorities for acoustical design purposes in building construction.

The IIC is obtained by matching a standard reference contour to the plotted normalized one-third octave band sound pressure levels at each test frequency. The greater the IIC rating, the lower the impact sound transmission through the floor-ceiling assembly.

INSTRUMENTATION

Equipment	Calibration Date	Calibration Due	Brand	Model	Asset
Microphone/Pre - DF	May 1, 2023	May 1, 2024	Brüel & Kjaer	4942	E450
Microphone	May 1, 2023	May 1, 2024	Brüel & Kjaer	4231	A227
Pulse Analyzer	May 1, 2023	May 1, 2024	Brüel & Kjaer	3110	E495

DESCRIPTION OF THE TEST SPECIMEN

The sample consisted of test sample #306953 ID: Savannah Laminate flooring. The locking plank floor with attached pad samples measured 9-1/4 inches wide by 59-3/8 inches long, and weighed 1.91 pounds per square foot.

DESCRIPTION OF THE FLOOR/CEILING ASSEMBLY

The floor/ceiling assembly system consisted of a 6 inch thick concrete floor with a drop ceiling below forming the horizontal separation between two rooms, one directly above the other. The drop ceiling consisted of 14 inch deep steel bar joists spaced 38 inches on center. The ceiling construction consisted of 2 x 4 inch wood bolted to the bar joists. The 2 x 4 inch wood was spaced 24 inches on center. Resilient channels (1/2 inch single leaf) were positioned on 16 inch centers between the furring strips and the 1/2 inch gypsum board. Sound attenuation batts (U.S.G. Thermofiber), four (4) inches in thickness were placed between the joists in the formed cavity. The receiving room below measured 1440 cubic feet.

RESULTS OF TEST

The data obtained in the room below the panel normalized to A_O = 10 square meters, is as follows:

1/3 Octave Band Center Frequency Hz	**TEST NUMBER #306953 ID: SAVANNAH LAMINATE FLOORING** 1/3 Octave Band Sound Pressure Level dB (re: 20 µPa)
100	55
125	56
160	57
200	55
250	56
315	56
400	56
500	56
630	55
800	50
1000	45
1250	43
1600	38
2000	36
2500	33
3150	26
Impact Insulation Class (IIC)	59

PRECISION

The 95% uncertainty level for each tapping machine location is less than 3 dB for the 1/3 octave bands centered in the range from 100 to 400 Hz and less than 2.5 dB for the bands centered in the range from 500 to 3150 Hz.

For the floor/ceiling construction, the 95% uncertainty limits (ΔL_n) for the normalized sound pressure levels were determined to be less than 2 dB for the 1/3 octave bands centered in the range from 100 to 3150 Hz.

RESULTS OF TEST

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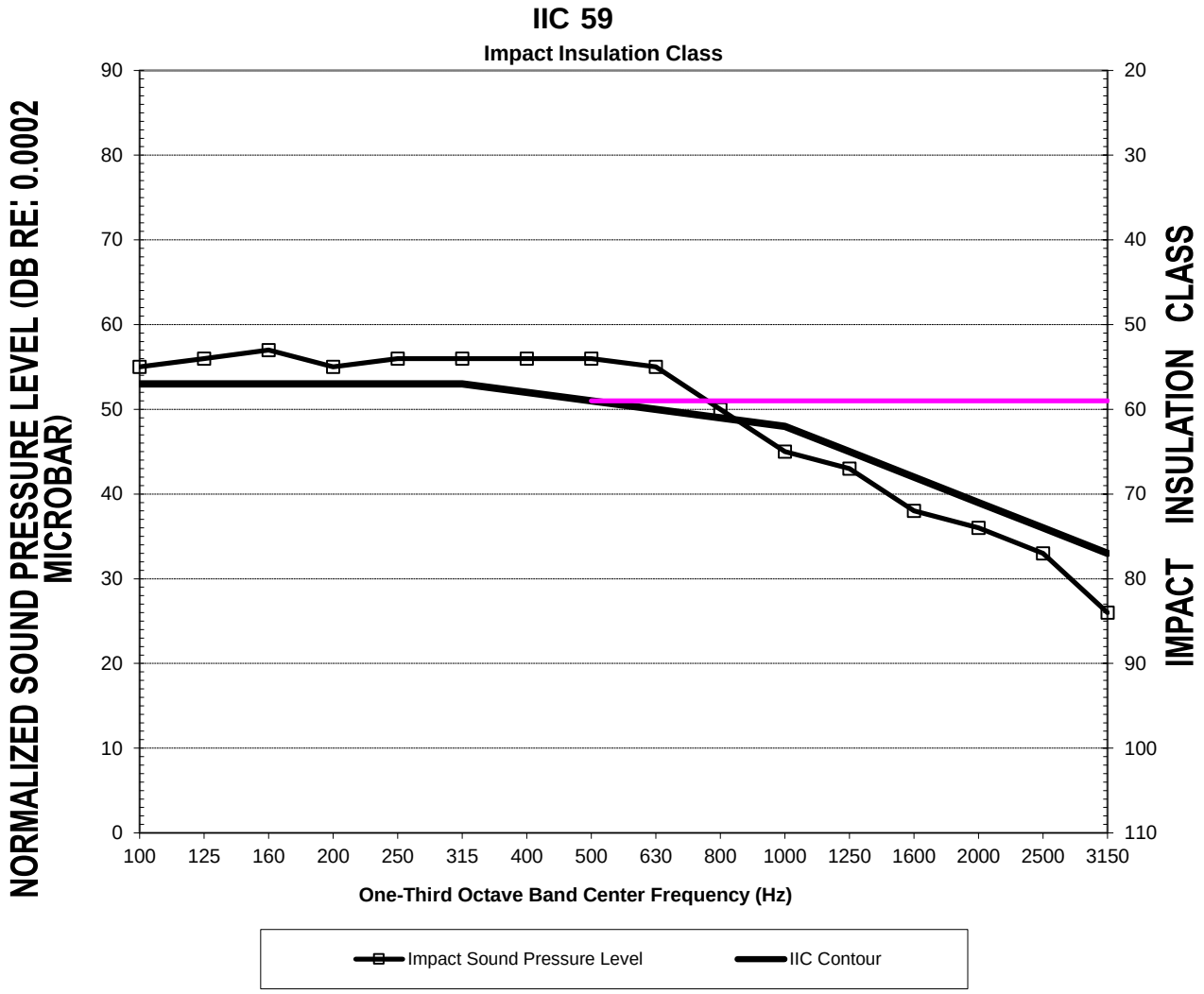

LUX FLOORING

REMARKS

1. Ambient Temperature: 73°F

2. Relative Humidity: 58%

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: April 30, 2024

Report Approved by:

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Acoustical Testing

Brian Cyr
Engineer
Acoustical Testing

Revision #	Approved By	Reviewed By	Comments
N/A			
N/A			
N/A			