



Order No. J20052639

July 5, 2001
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REPORT NO. J20052639-006A

**FIELD IMPACT SOUND TRANSMISSION TESTS
AND CLASSIFICATION OF FLOORING
OVER AN EIGHT INCH THICK CONCRETE
SLAB FLOOR/CEILING**

RENDERED TO

**MIDWEST PADDING
2500 OLD HADAR ROAD
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NORFOLK, NE 68702**

INTRODUCTION

This report gives the results of Field Impact Sound Transmission Tests and Classification of flooring over an eight inch thick concrete slab floor/ceiling. The testing was performed in a multi-level building under construction located at 28099 Perdido Beach Blvd., Orange Beach, AL 36561.

AUTHORIZATION

Purchase Order No. 9216 from Midwest Padding.

TEST METHOD

The specimens were tested in accordance with the American Society for Testing and Materials designations ASTM E1007-97, "Standard Test Method for Field Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structures", and classified in accordance with ASTM E989-89 (Re-approved 1999), entitled, "Standard Classification for Determination of Impact Insulation Class (IIC)".

An Independent organization testing for safety, performance, and certification.

TEST METHOD – Cont'd.

The method is designed to measure the impact sound transmission performance of a floor-ceiling assembly and associated supporting structures in field situations. A standard tapping machine (B&K Type 3204) was placed at four positions on the test specimen which formed the horizontal separation between two rooms, one directly above the other. The data obtained was normalized to reference room absorption of 10 square meters in accordance with the test method.

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

The FIIC 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 FIIC rating, the lower the impact sound transmission through the floor-ceiling assembly.

DESCRIPTION OF TEST SPECIMENS

The test specimens consisted of:

A. – 20 inch square porcelain tile bonded with polymer modified Thin-Set to Insulayment bonded with mastic to the 8 inch thick post tension slab (4000 psi) concrete subfloor.

B. – 20 inch square porcelain tile set direct with polymer modified Thin-Set to the 8 inch thick post tension slab (4000 psi) concrete subfloor.

The descriptions of the test specimens were supplied by the client.

The receiving room had a volume of approximately 26 m³ and contained surfaces of sheetrock, concrete and ceramic tiles.

RESULTS OF TEST

The data obtained in the room below the panel normalized to $A_0 = 10$ square meters, is as follows:

1/3 Octave Band Center Frequency Hz	1/3 Octave Band Sound Pressure Level dB re 0.0002 Microbar	
	Sample A	Sample B
100	45.0	47.5
125	44.5	48.8
160	45.2	51.7
200	46.8	54.0
250	50.0	53.1
315	54.3	54.6
400	54.2	56.9
500	49.0	58.9
630	46.5	59.2
800	46.4	60.3
1000	44.3	60.7
1250	43.0	60.8
1600	41.3	62.2
2000	40.5	63.1
2500	40.5	64.2
3150	39.9	63.8
Field Impact Insulation Class (FIIC)	60	36

REMARKS

Ambient Temperature: 86°F

Relative Humidity: 74%



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 Tests: June 21, 2001

Report Approved by:

A handwritten signature in black ink that reads 'James R. Kline'.

James R. Kline, Technician
Acoustical Testing

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