

TEST REPORT

FOR: Serious Materials, Inc.
Sunnyvale, CA

Impact Sound Transmission Test
RAL™-IN08-801

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ON: Laminate Wood Flooring over QuietPad 420 on
6 Inch Concrete Slabs

CONDUCTED: 13 February 2008

TEST METHOD

The measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E492-04 and E989-06, as well as other pertinent standards. Riverbank Acoustical Laboratories has been accredited by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure (NVLAP Lab Code: 100227-0). A description of the measuring technique is available separately. Notably the finish floor and underlayment portion of the specimen under test was one of several finish floor and underlayment specimens concurrently installed on the same full size substrate. As a result an exception to the E492 tapping machine positions was that the tapping machine locations were offset up to a maximum of 2.4 m (96 in.) from the midpoint of the floor and not at the intersection of the diagonals. For this exception on concrete substrates at RAL it has been demonstrated that there is no measurable significance on the results.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated as laminate wood flooring over QuietPad 420 on 6 inch concrete slabs. The overall dimensions of the finished floor system were nominally 1.32 m (52 in.) wide by 1.20 m (47.25 in.) long. The overall dimensions of the 6 inch concrete floor were nominally 4.27 m (14 ft) by 6.10 m (20 ft). The thickness of the finished floor system and concrete floor was 166 mm (6.55 in.) thick. The specimen was constructed directly in the laboratory's 4.27 m (14 ft) by 6.10 m (20 ft) test opening which was sealed on the periphery (both sides) with dense mastic.

The description of the specimen was as follows: From the top down, the floor consisted of laminate wood floor over QuietSolutions QF420 on 152 mm (6 in.) thick wire reinforced concrete. A more detailed description of the test assembly appears in the following sections.

Prefinished Laminate Flooring

The finished floor consisted of laminate wood flooring measuring 14 mm (0.55 in.) thick and

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NVLAP Lab Code 100227-0

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provided as nominal 191 mm (7.5 in.) wide planks with tongue and groove profile. Total weight of the laminate floor was 13.2 kg (29 lbs.). Prior to installation of the floor, nominal 2 mm (0.0625 in.) thick QuietSolutions QF420 was loose laid over the subfloor assembly. Total weight of the underlayment was 0.5 kg (1 lb.).

Concrete Floor

The concrete slab sub-floor consisted of ten nominally 610 mm (24 in.) wide by 4.23 m (166.5 in.) long by 152 mm (6 in.) thick wire reinforced concrete slabs. Weight of the concrete slab was 8,599 kg (18,958 lbs).

The weight of the entire specimen as calculated was 8,613 kg (18,988 lbs.). The source and receiving room temperatures at the time of the test were $23\pm 2^{\circ}\text{C}$ ($74\pm 2^{\circ}\text{F}$) and $51\pm 2\%$ relative humidity. The source and receive reverberation room volumes were 140 m^3 ($4,930\text{ ft}^3$) and 80 m^3 ($2,815\text{ ft}^3$), respectively.

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TEST RESULTS

Sound pressure levels at 1/3 octave intervals, normalized to 10 square meters, are given in tabular form. The impact insulation class, IIC, was computed in accordance with ASTM E989-89 and ASTM E492-04.

<u>FREQ.</u>	<u>Ln</u>	<u>C.L.</u>	<u>DEV</u>	<u>FREQ.</u>	<u>Ln</u>	<u>C.L.</u>	<u>DEV</u>
100	63	0.49	5	800	50	0.23	
125	61	0.77	3	1000	43	0.19	
160	62	0.69	4	1250	38	0.15	
200	60	0.80	2	1600	34	0.13	
250	63	0.53	5	2000	31	0.10	
315	64	0.47	6	2500	27	0.11	
400	62	0.48	5	3150	23	0.08	
500	57	0.32	1	4000	19	0.07	
630	52	0.20		5000	17	0.06	

IIC=54

ABBREVIATION INDEX

FREQ. = FREQUENCY, HERTZ, (cps)
Ln = NORMALIZED IMPACT SOUND PRESSURE LEVEL, dB
C.L. = UNCERTAINTY IN dB, FOR A 95% CONFIDENCE LIMIT
DEV. = DEVIATION, dB > IIC CONTOUR (SUM OF DEV = 28)
IIC = IMPACT INSULATION CLASS

Tested by Marc Sciaky Approved by David L. Moyer
Marc Sciaky David L. Moyer
Experimentalist Laboratory Manager

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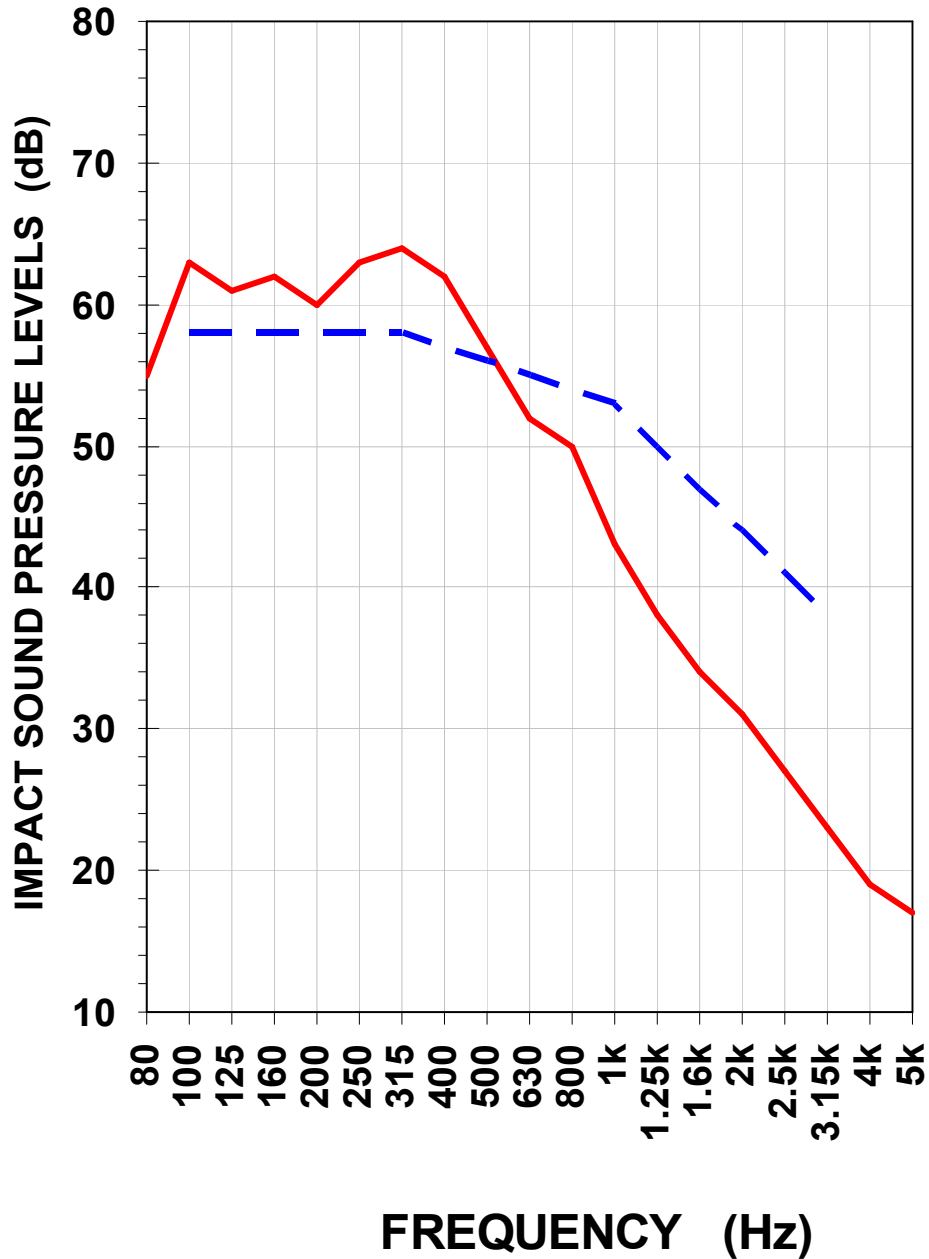


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**IMPACT SOUND TRANSMISSION REPORT
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IIC= 54



IMPACT SOUND PRESSURE LEVEL
IMPACT INSULATION CLASS CONTOUR

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