

**TEST REPORT**

FOR: Badger Cork

Impact Sound Transmission  
Test RAL™-IN98-37ON: A California Lightweight Floor  
With Laminated Hardwood Flooring  
On 6 mm AcoustiCork® UnderlaymentPage 1 of 3

CONDUCTED: 2 September 1998

TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E492-90 and E989-89, 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. A description of the measuring technique is available separately. The serial number of the measuring microphone was 951371.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated as a California lightweight floor with hardwood flooring on 6 mm AcoustiCork® underlayment. The overall dimensions of the specimen were nominally 4.27 m (168 in.) wide by 6.10 m (240 in.) long and 333 mm (13.1 in.) thick. The specimen was constructed by Klamer Construction Co. directly in the laboratory's 4.27 m (14 ft) by 6.10 m (20 ft) test opening and was sealed on the periphery (both sides) with a dense mastic. The description of the specimen was as follows: From the top down, the floor consisted of Harris-Tarkett 13 mm (0.50 in.) thick laminated hardwood flooring over 6 mm (0.25 in.) thick AcoustiCork® underlayment that was laid over 15# building felt. This floor system was constructed on a Maxxon Corporation nominal 38 mm (1.5 in.) thick, 112 pcf dry density Dura-Cap gypsum concrete underlayment poured over a layer of 15 lb. roofing felt that was laid directly on a plywood sub-floor. The plywood sub-floor was nailed to two-by-ten wood joists that were spaced on 406 mm (16 in.) centers. The cavities between the joists contained friction fit 89 mm (3.5 in.) thick fiberglass insulation. RC-1 resilient channels were attached to the joists on 610 mm (24 in.) centers with 32 mm (1.25 in.) Type W screws, one screw per joist. The 16 mm (0.625 in.) thick Type X drywall ceiling was attached to the RC-1 channels with 25 mm (1 in.) Type S drywall screws spaced on 305 mm (12 in.) centers. The Dura-Cap underlayment was allowed to cure for 30 days before the test was conducted. The weight of the entire floor assembly as calculated was 2,903.7 kg (6,401.5 lbs) an average of 111.7 kg/m<sup>2</sup> (22.9 lbs/ft<sup>2</sup>). The source and receiving room temperatures at the time of the test were 22°C (72±2°F) and 63±2% relative humidity.

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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 E492-90 and ASTM E989-89.

<u>FREQ.</u>	<u>L<sub>n</sub></u>	<u>C.L.</u>	<u>DEV.</u>	<u>FREQ.</u>	<u>L<sub>n</sub></u>	<u>C.L.</u>	<u>DEV.</u>
100	63	0.24	8	630	46	0.16	0
125	59	0.31	4	800	43	0.21	0
160	58	0.24	3	1000	38	0.17	0
200	57	0.18	2	1250	32	0.26	0
250	57	0.23	2	1600	28	0.22	0
315	59	0.20	4	2000	28	0.19	0
400	56	0.16	2	2500	31	0.22	0
500	52	0.26	0	3150	24	0.22	0

IIC = 57

## ABBREVIATION INDEX

FREQ. = FREQUENCY, HERTZ, (cps)  
L<sub>n</sub> = NORMALIZED IMPACT SOUND PRESSURE LEVEL, dB  
C.L. = UNCERTAINTY IN dB, FOR A 95% CONFIDENCE LIMIT  
DEV. = DEVIATION  
IIC = IMPACT INSULATION CLASS

Submitted by *Peter E. Straus*  
for Peter E. Straus  
Senior Experimentalist

Reviewed by *John W. Kopec*  
John W. Kopec  
Laboratory Manager

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