

**REPORT**

FOR: Badger Cork

Sound Transmission Loss  
Test RAL™-TL98-186ON: 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 E90-97 and E413-87, 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 microphone used was a Bruel & Kjaer serial number 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 Klammer 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 transmission area used in the calculations was 2.0 m<sup>2</sup> (22 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.

THE RESULTS REPORTED ABOVE APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR MEASUREMENT. NO RESPONSIBILITY IS ASSUMED FOR PERFORMANCE OF ANY OTHER SPECIMEN.

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ACCREDITATION PROGRAM FOR SELECTED TEST METHODS FOR ACOUSTICS.  
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TEST RESULTS

Sound transmission loss values are tabulated at the eighteen standard frequencies. A graphic presentation of the data and additional information appear on the following pages. The precision of the TL test data are within the limits set by the ASTM Standard E90-97.

<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>	<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>
100	33	0.04	0	800	66	0.28	0
125	45	0.24	0	1000	69	0.27	0
160	47	0.21	0	1250	74	0.22	0
200	49	0.22	1	1600	78	0.21	0
250	50	0.24	3	2000	79	0.19	0
315	50	0.22	6	2500	82	0.14	0
400	51	0.36	8	3150	86	0.15	0
500	57	0.31	3	4000	88	0.10	0
630	63	0.34	0	5000	89	0.08	0

STC = 60

ABBREVIATION INDEX

- FREQ. = FREQUENCY, HERTZ, (cps)
- T.L. = TRANSMISSION LOSS, dB
- C.L. = UNCERTAINTY IN dB, FOR A 95% CONFIDENCE LIMIT
- DEF. = DEFICIENCIES, dB<STC CONTOUR
- STC = SOUND TRANSMISSION CLASS

Tested &  
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