RIVERBANK ACOUSTICAL LABORATORIES
OF
IIT RESEARCH INSTITUTE
1512 BATAVIA AVENUE
GENEVA, ILLINOIS 60134
630/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

REPORT

FOR: Badger Cork

Sound Transmission Loss
Test RAL™-TL95-366

ON: Badger Cork 6 mm AcoustiCORK®
Underlayment With A Parquet Wood Floor
On 6" Precast Concrete Slabs
With Suspended 5/8" Gypsum Ceiling

Revision 17 February 1998

CONDUCTED: 17 November 1995

TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-90 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 1440522.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the client as a Badger Cork 6 mm AcoustiCORK underlayment with a parquet wood floor on 6" precast concrete slabs with suspended 5/8" gypsum ceiling. The overall dimensions of the specimen were nominally 4.27 m (168 in.) wide by 6.10 m (240 in.) long and 411 mm (16.2 in.) thick. The specimen was constructed 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 7.9 mm (0.313 in.) thick, parquet flooring nailed glued to Badger Cork 6 mm (0.236 in.) thick, AcoustiCORK underlayment. The 6 mm AcoustiCORK was set on a 6 mil plastic vapor barrier which was laid directly on the concrete slab sub-floor. The sub-floor consisted of ten nominally 610 mm (24 in.) wide by 4.23 m (166.5 in.) by 152 mm (6 in.) thick wire reinforced concrete slabs. Split drive pins were inserted into the bottom of the slabs on 1.22 m (48 in.) centers and used to tie 12 gauge hanger wire for the suspended ceiling. The hanger wires were tied to allow for a nominal 229 mm (9 in.) plenum depth from the bottom of the slabs to the top of the ceiling. Cold rolled steel carrying channels were tied to the hanger wires and twelve 24 gauge galvanized steel DWC channels (hat channels) were saddle tied perpendicular to the cold rolled channels with double strands of 24 gauge tie wire. A layer of 16 mm (0.625 in.) thick Type X wallboard was attached to the DWC channels. The joints between the wallboard sheets were taped and covered with joint compound. The plenum between the sub-floor and the ceiling contained a single layer of 89 mm (3.5 in.) thick, R-11 unfaced fiberglass insulation. The weight of the entire specimen as determined was 5,810 kg (12,810 lbs) an average of 223.5 kg/m^2 (45.7 lbs/ft^2). The transmission area used in the calculations was 26 m^2 (280 ft^2). The source and receiving room temperatures at the time of the test were 20°C (68±2°F) and 57±2% relative humidity.

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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 E90-90.

FREQ.	T.L.	C.L.	DEF.	FREQ.	T.L.	C.L.	DEF.
100	38	3.79	0	800	67	0.24	0
125	44	3.72	2	1000	71	0.20	0
160	49	1.73	0	1250	75	0.25	0
200	49	1.44	3	1600	79	0.20	0
250	50	0.36	5	2000	81	0.21	0
315	52	0.37	6	2500	81	0.18	0
400	56	0.84	5	3150	86	0.16	0
500	58	0.29	4	4000	90	0.13	0
630	63	0.29	0	5000	93 *	0.09	0

STC = 62

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
* = INDICATES A CORRECTION WAS APPLIED TO THE DATA DUE TO BACKGROUND NOISE LEVELS IN THE RECEIVING ROOM

Submitted by _____ Reviewed by _____
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