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™-TL98-280

ON: An 8" Concrete Slab Floor With
Ceramic Tile On 13 mm AcoustiCork®
CA8828 Cork Underlayment

CONDUCTED: 16 December 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 an 8" concrete slab floor with ceramic tile on 13 mm AcoustiCork® CA8828 cork underlayment. The overall dimensions of the specimen were nominally 4.27 m (168 in.) wide by 6.10 m (240 in.) long and 219 mm (8.6 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 8 mm (0.31 in.) thick glazed ceramic floor tile over 13 mm (0.5 in.) thick AcoustiCork® CA8828 cork underlayment that was laid over 15# building felt. This floor system was constructed on a 203 mm (8 in.) thick pre-stressed concrete sub-floor. The sub-floor consisted of ten nominally 610 mm (24 in.) wide by 4.24 m (167 in.) long by 203 mm (8 in) thick Flexicore® Model #824A-D-22 precast concrete slabs. The gaps between the slabs were filled with sand and sealed with caulk. The tile was set with accelerated latex modified thin-set mortar and grouted with polymer enhanced grout. The floor system was allowed to cure a minimum of 14 days before the test was conducted. The weight of the entire floor assembly as calculated was 8,052 kg (17,751 lbs) an average of 309.7 kg/m^2 (62.8 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±3°F) and 53±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 E90-97.

FREQ.	T.L.	C.L.	DEF.	FREQ.	T.L.	C.L.	DEF.
100	32	0.29	0	800	65	0.26	0
125	37	0.18	3	1000	69	0.27	0
160	38	0.22	5	1250	72	0.20	0
200	39	0.24	7	1600	74	0.22	0
250	42	0.34	7	2000	76	0.18	0
315	47	0.34	5	2500	81	0.13	0
400	52	0.35	3	3150	84	0.11	0
500	57	0.36	0	4000	87	0.08	0
630	62	0.29	0	5000	86	0.10	0

STC = 56

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

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