

REPORT

FOR: Global Technology Systems

Impact Sound Transmission
Test RAL™-IN95-40ON: Badger Cork 2.5 mm AcoustiCORK™
Underlayment With A Floating Floor
On 6" Precast Concrete Slabs
With Suspended 5/8" Gypsum CeilingPage 1 of 3

CONDUCTED: 13 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 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 1440522.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the client as a Badger Cork 2.5 mm AcoustiCORK™ underlayment with a floating 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 412 mm (16.20 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 a 14 mm (0.5625 in.) thick floating wood floor, manufactured by Universal Flooring Limited, set on Badger Cork 2.5 mm (0.10 in.) thick, AcoustiCORK™ underlayment. The 2.5 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 5,758.7 kg (12,695.5 lbs) an average of 221.5 kg/m² (45.3 lbs/ft²). The source and receiving room temperatures at the time of the test were 22°C (72±2°F) and 61±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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Page 2 of 3TEST 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 E492-90.

<u>FREQ.</u>	<u>ISL</u>	<u>C.L.</u>	<u>DEV.</u>	<u>FREQ.</u>	<u>ISL</u>	<u>C.L.</u>	<u>DEV.</u>
100	58	0.51	8	630	37	0.27	0
125	53	0.57	3	800	32	0.19	0
160	53	0.28	3	1000	25	0.15	0
200	54	0.19	4	1250	19	0.14	0
250	53	0.26	3	1600	15 *	0.47	0
315	51	0.27	1	2000	13 *	0.14	0
400	47	0.23	0	2500	13 *	0.26	0
500	43	0.25	0	3150	8 *	0.29	0

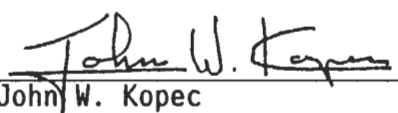
IIC = 62

ABBREVIATION INDEX

FREQ. = FREQUENCY, HERTZ, (cps)
 ISL = IMPACT SOUND PRESSURE LEVEL, dB
 C.L. = UNCERTAINTY IN dB, FOR A 95% CONFIDENCE LIMIT
 DEV. = DEVIATION
 IIC = IMPACT INSULATION CLASS
 * = INDICATES A CORRECTION WAS APPLIED TO THE DATA DUE TO BACKGROUND LEVELS IN THE RECEIVING ROOM

Tested and
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