

REPORT

FOR: The Noble Company

ON: NobleSeal Sound Isolation System On A
Flexicore® Precast Concrete Slab Floor
With No Ceiling

Sound Transmission Loss
Test RAL™-TL95-216

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CONDUCTED: 14 July 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 as NobleSeal Sound Isolation System on a Flexicore® precast concrete slab floor with no ceiling. The overall dimensions of the specimen were nominally 4.27 m (168 in.) wide by 6.10 m (240 in.) long and 221 mm (8.7 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 Summitville 6" x 6" Old Town quarry tile grouted with Summitville Polychrome sanded joint filler. The NobleSeal Sound Isolation System consisted of dry latex mortar thin set on a layer of NobleSeal Sound Isolation Sheet (SIS) and 15# roofing felt. 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. A visual inspection verified the description of the specimen. The weight of the entire specimen as determined was 7,401 kg (16,317 lbs) an average of 285 kg/m² (58.3 lbs/ft²). The transmission area used in the calculations was 26 m² (280 ft²). The source and receiving room temperatures at the time of the test were 20°C (70±2°F) and 59±2% relative humidity.

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TEST RESULTS

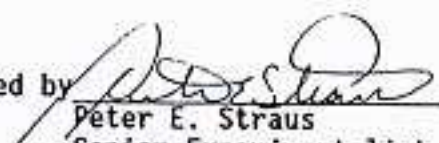
Sound transmission loss values are tabulated at the eighteen standard frequencies. A graphic presentation of the data and additional information appear on the following pages. The precision of the TL test data are within the limits set by the ASTM Standard E90-90.

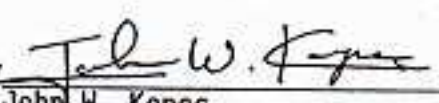
<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>	<u>FREQ.</u>	<u>T.L.</u>	<u>C.L.</u>	<u>DEF.</u>
100	31	0.10	0	800	55	0.33	2
125	40	0.34	0	1000	57	0.28	1
160	40	0.27	2	1250	58	0.25	1
200	43	0.32	2	1600	59	0.26	0
250	44	0.35	4	2000	61	0.20	0
315	47	0.38	4	2500	65	0.18	0
400	48	0.32	6	3150	69	0.12	0
500	50	0.28	5	4000	73	0.14	0
630	53	0.30	3	5000	73	0.10	0

STC = 55

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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