

TEST REPORT

FOR: Quiet Solution, LLC
Sunnyvale, CA

Sound Transmission Loss Test
RAL™-TL07-027

ON: ID 14: QuietRock 528 (QR 528), 24" on Center Steel
Stud Wall with R-13 Fiberglass and 5/8" Type X
Gypsum

Page 1 of 4

CONDUCTED: 24 January 2007

TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-04 and E413-04, 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 (NVLAP Lab Code: 100227-0). A description of the measuring technique is available separately.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the client as ID 14: QuietRock 528 (QR 528), 24" on center steel stud wall with R-13 fiberglass and 5/8" Type X gypsum. The overall dimensions of the specimen as measured were nominally 2.46 m (97 in.) wide by 2.74 m (108 in.) high and 124 mm (4.875 in.) thick. The specimen was installed by the client directly into the laboratory's 2.74 m (9 ft) by 4.27 m (14 ft) wood-lined steel frame. A substantial filler wall was used in the remaining open area. Both the filler wall and test specimen were sealed on the periphery (both sides) with dense mastic.

The description of the specimen was as follows: The wall consisted of 25 gauge steel framing with R-13 fiberglass batt insulation. One side of the wall was finished with 5/8 inch Type X gypsum board and the other side was finished with QuietSolutions QR 528. A more detailed description of the wall assembly appears in the sections below.

Track, Studs and Insulation: Two 92 mm (3.625 in.) wide 25 gauge 2.74 m (108 in.) long steel runners were attached to the floor and ceiling with 32 mm (1.25 in.) Type S screws 610 mm (24 in.) on centers. Five (5) 92 mm (3.625 in.) wide 25 gauge 2.73 m (107.5 in.) long steel studs were spaced on 610 mm (24 in.) centers. The end studs were attached to the frame with 32 mm (1.25 in.) long screws spaced on 610 mm (24 in.) centers. All cavities formed by the track and studs were filled with faced R-13 fiberglass insulation measuring 89 mm (3.5 in.) thick. The total weight of the insulation was 9.3 kg (20.5 lbs).

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TEST REPORT

Quiet Solution, LLC

RAL™-TL07-027

24 January 2007

Page 2 of 4

Gypsum Wallboard: On one side, a layer of 16 mm (0.625 in.) thick Type X gypsum board was applied vertically to the studs with #6, 41 mm (1.625 in.) long bugle head drywall screws at 406 mm (16 in.) on centers. On the other side, a layer of 16 mm (0.625 in.) thick QR 528 board was applied vertically to the studs. The boards were attached to the studs with #6, 32 mm (1.25 in.) long bugle head drywall screws at 406 mm (16 in.) on centers. Total weight of the gypsum board as measured was 68.5 kg (151 lbs.). Total weight of the QR 528 board as measured was 103.4 kg (228 lbs.). All joints and seams were staggered for each board layer application. Joints were sealed with QuietSeal 350 (QS 350) acoustical caulk and metal taped. Screw heads remained exposed.

The weight of the specimen as measured was 191 kg (421 lbs.), an average of 28.3 kg/m² (5.8 lbs/ft²). The transmission area used in the calculations was 6.7 m² (72.5 ft²). The source and receiving room temperatures at the time of the test were 20±2°C (68±2°F) and 51±2% relative humidity. The source and receive reverberation room volumes were 178 m³ (6,298 ft³) and 177 m³ (6,255 ft³), respectively.

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TEST REPORT

Quiet Solution, LLC

RAL™-TL07-027

24 January 2007

Page 3 of 4

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 is within the limits set by the ASTM Standard E90-04.

<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	20	0.69		800	58	0.15	
125	33	0.56	7	1000	59	0.12	
160	39	0.43	4	1250	59	0.15	1
200	40	0.49	6	1600	60	0.12	
250	46	0.33	3	2000	58	0.14	2
315	50	0.29	2	2500	58	0.09	2
400	52	0.42	3	3150	60	0.05	
500	56	0.18		4000	58	0.09	2
630	57	0.20		5000	60	0.05	

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 (SUM OF DEF = 32)

STC = SOUND TRANSMISSION CLASS

Tested by Marc Sciaky Approved by David L. Moyer
Marc Sciaky David L. Moyer
Experimentalist Laboratory Manager

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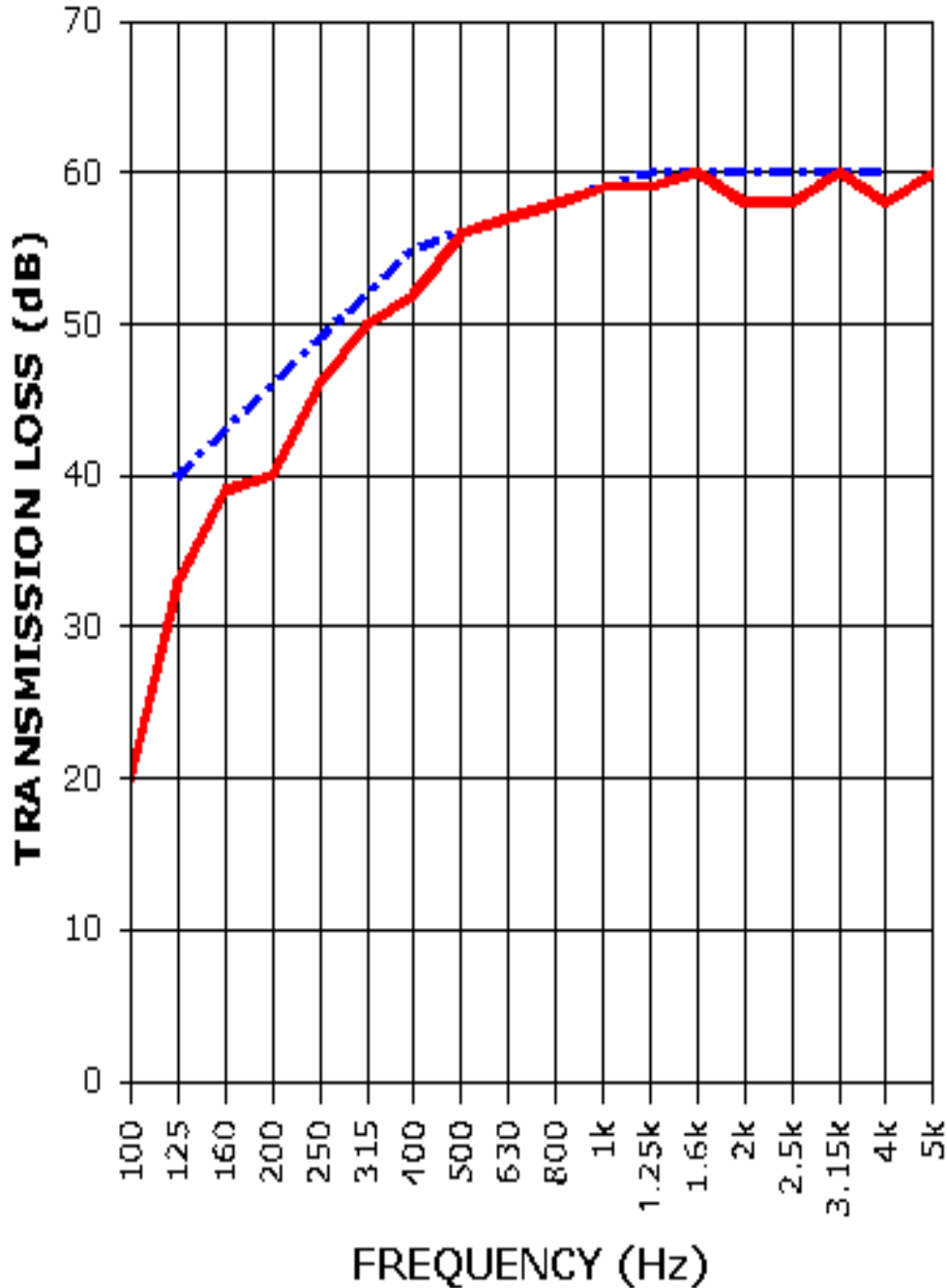


NVLAP Lab Code 100227-0

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TEST REPORT

**SOUND TRANSMISSION REPORT
RAL - TL07-027**



STC= 56



TRANSMISSION LOSS
SOUND TRANSMISSION LOSS CONTOUR

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