



## **Important Notice**

In August 1, 2013, PABCO® Gypsum, a division of PABCO® building products, LLC acquired the QuietRock® business and operations from Serious Energy, Inc. Serious Energy, Inc. corporate structure and legal name changed through the years from Quiet Solution, Inc. to Serious Materials, Inc to Serious Energy, Inc. The acquisition of the QuietRock® business by PABCO® Gypsum includes the products, technical data, test reports and other intellectual property. For the avoidance of confusion, references to "Quiet Solution", "Serious Materials", or "Serious Energy" used within test reports, in general, should be understood as references to PABCO® Gypsum as of August 1, 2013.

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## TEST REPORT

FOR: Quiet Solution, LLC  
Sunnyvale, CA

Sound Transmission Loss Test  
RAL™-TL07-031

ON: ID 04: QuietRock 510 + 5/8" Type X Gypsum, 24" on  
Center Steel Stud Wall with R-13 Fiberglass and Double  
5/8" Type X Gypsum

Page 1 of 4

CONDUCTED: 25 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 04: QuietRock 510 + 5/8" Type X gypsum, 24" on center steel stud wall with R-13 fiberglass and double 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 152 mm (6 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 had a base layer of 5/8 inch Type X gypsum board and the other side a base layer of QuietRock 510 (QR 510). Both sides were finished with a layer of 5/8 inch Type X gypsum board. 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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THE RESULTS REPORTED ABOVE APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR MEASUREMENT. NO RESPONSIBILITY IS ASSUMED FOR PERFORMANCE OF ANY OTHER SPECIMEN.



## TEST REPORT

Quiet Solution, LLC

RAL™-TL07-031

25 January 2007

Page 2 of 4

Gypsum Wallboard: On one side, a base layer of 16 mm (0.625 in.) thick Type X gypsum board was applied vertically to the studs. On the other side, a base layer of 16 mm (0.625 in.) QuietRock QR 510 was applied vertically to the studs. The boards were attached to the studs with #6, 41 mm (1.625 in.) long bugle head drywall screws at 406 mm (16 in.) on centers. On both sides, a face layer of 16 mm (0.625 in.) thick Type X gypsum board was applied vertically to the studs. The boards were attached to the studs with #8, 64 mm (2.5 in.) long bugle head drywall screws at 406 mm (16 in.) on centers. Total weight of the gypsum board as measured was 203.2 kg (448 lbs.). Total weight of the QR 510 board as measured was 70.8 kg (156 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 293 kg (646 lbs.), an average of 43.4 kg/m<sup>2</sup> (8.9 lbs/ft<sup>2</sup>). The transmission area used in the calculations was 6.7 m<sup>2</sup> (72.5 ft<sup>2</sup>). The source and receiving room temperatures at the time of the test were 19±1°C (67±1°F) and 49±2% relative humidity. The source and receive reverberation room volumes were 178 m<sup>3</sup> (6,298 ft<sup>3</sup>) and 177 m<sup>3</sup> (6,255 ft<sup>3</sup>), respectively.

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NVLAP Lab Code 100227-0

ACCREDITED BY DEPARTMENT OF COMMERCE, NATIONAL VOLUNTARY LABORATORY  
ACCREDITATION PROGRAM FOR SELECTED TEST METHODS FOR ACOUSTICS.  
THE LABORATORY'S ACCREDITATION OR ANY OF ITS TEST REPORTS IN NO WAY CONSTITUTES  
OR IMPLIES PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NIST.

## TEST REPORT

Quiet Solution, LLC

RAL™-TL07-031

25 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	25	0.84		800	58	0.13	
125	38	0.54	2	1000	58	0.14	1
160	43	0.86		1250	59	0.11	1
200	44	0.50	2	1600	59	0.08	1
250	48	0.35	1	2000	57	0.09	3
315	52	0.26		2500	56	0.06	4
400	53	0.35	2	3150	59	0.05	1
500	56	0.16		4000	61	0.06	
630	57	0.18		5000	64	0.03	

STC=56

### ABBREVIATION INDEX

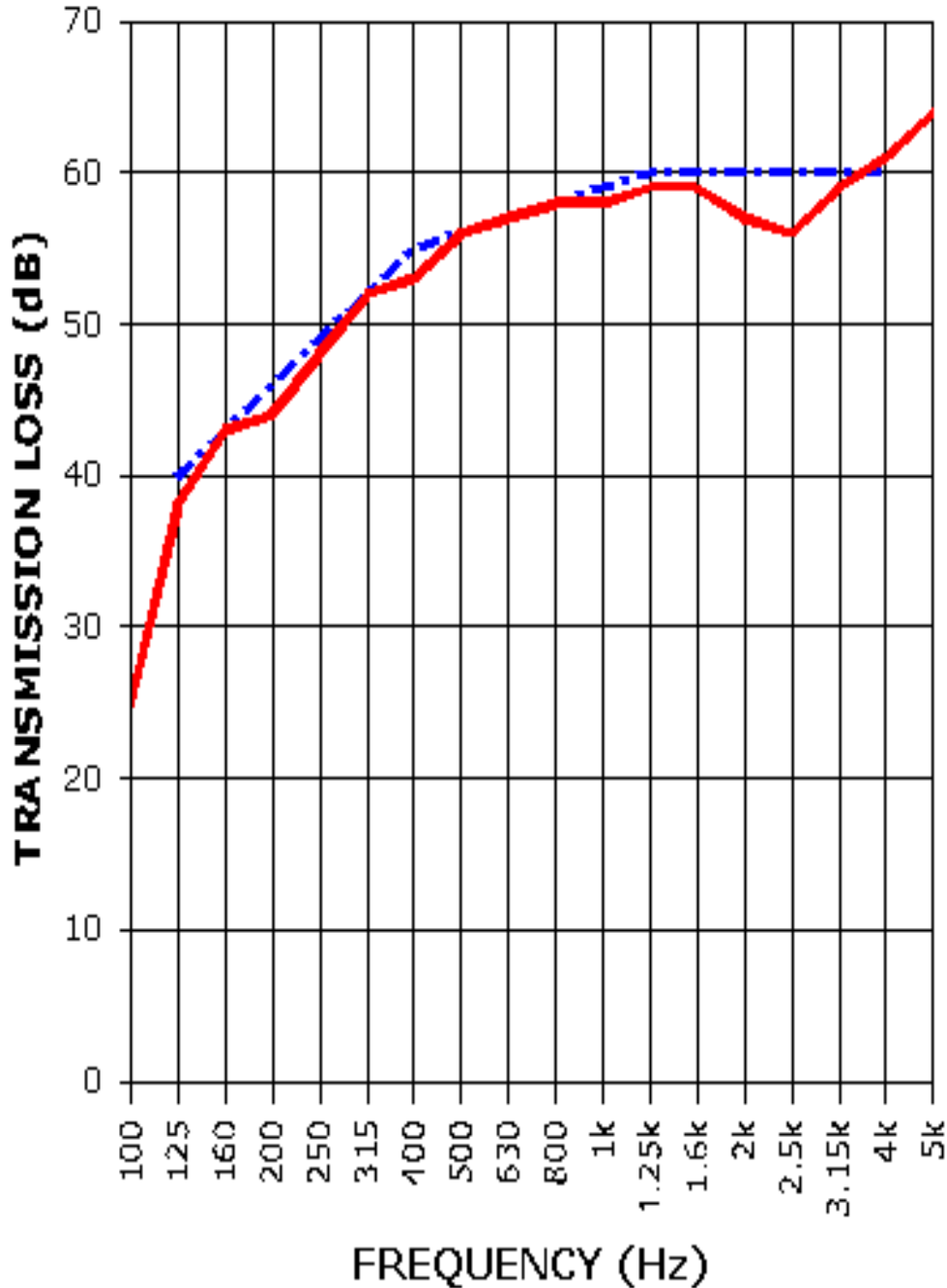
FREQ. = FREQUENCY, HERTZ, (cps)  
T.L. = TRANSMISSION LOSS, dB  
C.L. = UNCERTAINTY IN dB, FOR A 95% CONFIDENCE LIMIT  
DEF. = DEFICIENCIES, dB<STC CONTOUR (SUM OF DEF = 18)  
STC = SOUND TRANSMISSION CLASS

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**TEST REPORT**  
SOUND TRANSMISSION REPORT  
RAL - TL07-031



STC= 56

— TRANSMISSION LOSS  
- - - SOUND TRANSMISSION LOSS CONTOUR

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