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## SOUND TRANSMISSION LOSS TEST REPORT NO. TL08-648

CLIENT:
Therma Tru
1750 Indian Wood Circle
Maumee, Ohio 43537
TEST DATE: 28 October 2008

## INTRODUCTION

The methods and procedures used for this test conform to the provisions and requirements of ASTM E 90-04, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions. Copies of the test standard are available at www.astm.org. The test chamber source and receiving room volumes are 204 and 148.4 cubic meters respectively. Western Electro-Acoustic Laboratory is accredited by NVLAP (National Voluntary Laboratory Accreditation Program) Lab Code 100256-0 for this test procedure. NVLAP is part of the United States Department of Commerce, National Institute of Standards and Technology (NIST). This test report relates only to the item(s) tested. Any advertising that utilizes this test report or test data must not imply product certification or endorsement by WEAL, NVLAP, NIST or the U.S. Government.

## DESCRIPTION OF TEST SPECIMEN

The test specimen was a Therma-Tru decorative insulating glass unit captured in an aluminum lite frame. The specimen was installed by sliding it completely into the test chamber opening and capturing it with screws on both sides. The specimen was sealed into the test chamber opening with a heavy duct seal putty around the entire perimeter on both sides. The glazing consisted of a 1 inch ( 25.4 mm ) triple glazed unit which was $3 / 8$ inch ( 9.5 mm ) laminated glass, $5 / 32$ inch ( 4 mm ) air space, $3 / 16$ inch ( 4.8 mm ) decorative glass, $5 / 32$ inch ( 4 mm ) and $1 / 8$ inch ( 3.2 mm ) double strength glass. The laminated glass sandwich consisted of $5 / 32$ inch ( 4 mm ) annealed glass, . 090 inch ( 2.3 mm ) PVB interlayer, and $1 / 8 \mathrm{inch}(3 \mathrm{~mm}$ ) annealed glass. The unit was sealed only on the exterior side with a Bostick glazing bead and was captured by screwing together the two frame members. The dimensions of the specimen were 23-7/8 inches $(606 \mathrm{~mm})$ wide by $65-7 / 8$ inches ( 1.67 m ) high by $2-3 / 4$ inches ( 69.9 mm ) thick. The overall weight of the specimen was 92.5 lbs . ( 42 kg ) for a calculated surface density of $8.47 \mathrm{lbs} . / \mathrm{ft}^{2}\left(41.4 \mathrm{~kg} / \mathrm{m}^{2}\right)$.

## RESULTS OF THE MEASUREMENTS

One-third octave band sound transmission loss values are plotted and tabulated on the attached sheet. ASTM minimum volume requirements are met at 80 Hz and above. The Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-39. The Outdoor-Indoor Transmission Class determined in accordance with ASTM E 1332-90(2003) was OITC-32. The Exterior Wall Rating was EWR 38.

Approved:


Respectfully submitted, Western Electro-Acoustic Laboratory



| 1/3 OCT BND CNTR FREQ |  |  | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TL in dB |  |  | *21 | *26 | 27 | 28 | 24 | 23 | 27 | 28 | 33 | 36 |
| 95\% Confidence in dB |  |  | 1.42 | 1.92 | 2.07 | 1.47 | 0.89 | 0.76 | 0.80 | 0.52 | 0.36 | 0.38 |
|  |  |  |  |  |  |  | (2) | (6) | (5) | (7) | (5) | (3) |
| 1/3 OCT BND CNTR FREQ |  |  | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| in dB |  |  | 39 | 41 | 43 | 45 | 47 | 48 | 49 | 51 | 51 | 52 |
| $95 \%$ Confidence in dB deficiencies |  |  | $\begin{gathered} 0.29 \\ (1) \end{gathered}$ | $0.44$ | 0.38 | 0.39 | 0.36 | 0.56 | 0.55 | 0.31 | 0.32 | 0.50 |
|  |  |  |  | Specimen Area: 10.92 sq.ft. Temperature: 75.9 deg . F |  |  |  |  |  |  |  | STC |
|  | 32 |  |  | 39 |
|  |  |  |  | (29) |

