



Test report AMENDMENT n. 19RP02293  
10/16/2019. THIS TEST REPORT REPLACES  
THE PREVIOUS NUMBER 19RP01939 FOR  
SAMPLE ORIGIN CORRECTION

Spett.  
**ABITEX SRL.**  
Via E. Fermi 9/11, 35010  
Cadoneghe(PD)

|                       |  |
|-----------------------|--|
| Sample description    | <b>"Terawall Gold Silver Cruise Stealth" striped tufted, sandwich fabrics + siliceous fiber, total thickness: from 3 to 6 cm; mass per unit area: 1,3 kg/m<sup>2</sup></b>               |
| Origin                | <b>Production plant : Castello di Godego (TV)</b>  |
| Kind of sample        | <b>Panel</b>   |
| Sampling by           | <b>Client</b>  |
| Sampling date         | <b>n.d.</b>  |
| Sampler               | <b>Client</b>  |
| Receiving sample date | <b>09/18/2019</b>  |
| Acceptance date       | <b>09/18/2019</b>  |
| Test started on       | <b>09/18/2019</b>  |
| Test ended on         | <b>10/02/2019</b>  |
| Object                | <b>UNI EN ISO 10140-1:2016 + UNI EN ISO 10140-2:2010 + UNI EN ISO 10140-4:2010 +<br/>UNI EN ISO 717-1:2013<br/>Laboratory measurement airborne sound insulation of building elements</b> |

Acoustic sector Director  
**Ing. Antonio Scofano**

Digitally signed document made under the current legislation



Test report AMENDMENT n. 19RP02293  
 10/16/2019. THIS TEST REPORT REPLACES  
 THE PREVIOUS NUMBER 19RP01939 FOR  
 SAMPLE ORIGIN CORRECTION

## LABORATORY MEASUREMENT AIRBORNE SOUND INSULATION OF BUILDING ELEMENTS (STANDARD SERIES ISO 10140)

### 1. SAMPLE DESCRIPTION\*

Panel model name "Terawall Gold Silver Cruise Stealth" striped tufted, sandwich fabrics + siliceous fiber

Total thickness: from 3 to 6 cm

Mass per unit area: 1,3 kg/m<sup>2</sup>

Sealing of perimeter made with putty.

Specimen mounted by client.

Photos:



(\*)nominal data provided by the client

This Test Report cannot be reproduced, except in full, without prior written permission of the laboratory. Unless otherwise state the result shown in this report refer only to the sample(s) tested and such sample(s) are retained for 30 days.  
 ECARNRICERT S.R.L. Iscritta alla C.C.I.A.A. di Vicenza al nr. 175400 R.E.A. Capitale sociale €75.000,00 i.v.

# Any sample(s) and its information listed in this document are provided and identified by clients / N.A. not applicable / The sample(s) are retained for 30 days.



Test report AMENDMENT n. 19RP02293  
10/16/2019. THIS TEST REPORT REPLACES  
THE PREVIOUS NUMBER 19RP01939 FOR  
SAMPLE ORIGIN CORRECTION

## 2. REFERENCE STANDARDS

For the technical methods of measurement and determination of the indices that define the performance of building elements must be referred to the following ISO standards:

- ISO10140-1:2016 Acoustics. Laboratory measurement of sound insulation of building elements. Part 1: Application rules for specific products.
- ISO10140-2:2010 Acoustics. Laboratory measurement of sound insulation of building elements. Part 2: Measurement of airborne sound insulation.
- ISO10140-4:2010 Acoustics. Laboratory measurement of sound insulation of building elements. Part 4: Measurement procedures and requirements.
- ISO 10140-5:2014 Acoustics. Laboratory measurement of sound insulation of building elements. Part 5: Requirements for test facilities and equipment.
- ISO 717-1:2013 Acoustics. Rating of sound insulation in buildings and of building elements. Part 1: Airborne sound insulation.

## 3. EQUIPMENT

The measurements were performed using the following instruments:

- Sound level meter Bruel&Kjaer model 2250 (serial number 3011945), preamplifier Bruel&Kjare ZC-0032 (serial number 26331), microphone Bruel&Kjaer 4189 (serial number 3100355)
- Calibrator Bruel&Kjaer 4231 (serial number 4231);
- Omnidirectional source LookLine Kit103 (serial number AM14019);
- Tape measure Stanley Powerlock Classic 10 m / mod. 33-442 (Serial Number Mta-7144);
- Thermohygrometer Oregon ICE ALERT (Serial Number 09A14);
- Barometer HD 9908 T-BARO (Serial Number 05020942);

All the equipment and the measurement chain is to meet the requirements in class 1 of EN, we proceeded to the calibration of equipment before and after each series of measurements.


 Test report AMENDMENT n. 19RP02293  
 10/16/2019. THIS TEST REPORT REPLACES  
 THE PREVIOUS NUMBER 19RP01939 FOR  
 SAMPLE ORIGIN CORRECTION

#### 4. TEST ROOMS

The test environment consists of a source room that contains the noise source and a receiving room characterized acoustically by the equivalent sound absorption area.

At the source room was produced "pink noise" and were recorded sound pressure levels at various frequencies for bands 1/3 octave in the range between 100 and 5000 Hz in both the source room and in the receiving room.

At the receiving room were measured levels of residual noise and we proceeded to evaluate the acoustic characteristics of the room reverberation.

The measurements were made with reference to the procedure and test modes defined by the set of rules ISO 10140.

#### 5. RESULTS

The sound reduction index is evaluated from:

$$R = L_1 - L_2 + 10 \lg(S/A) \text{ [dB]}$$

where:

$c$  is the sound speed in the receiving room =  $331 + 0,6t$  [m/s];

$t$  is the average temperature in the receiving room [°C];

$L_1$  is the average sound pressure level in the source room [dB];

$L_2$  is the average sound pressure level in the receiving room [dB];

$S$  is the area of the free test opening in which the test specimen is installed [m<sup>2</sup>];

$A$  is the equivalent sound absorption area in the receiving room =  $(55,3/c)(V/T)$  [m<sup>2</sup>];

$V$  is the receiving room volume [m<sup>3</sup>];

$T$  is the reverberation time in the receiving room [s];

The evaluation index of the sound reduction index  $R_w$  is calculated according to the ISO 717-1.

$C$  e  $C_r$  are the spectrum adaptation terms according to ISO 717-1.



Test report AMENDMENT n. 19RP02293  
 10/16/2019. THIS TEST REPORT REPLACES  
 THE PREVIOUS NUMBER 19RP01939 FOR  
 SAMPLE ORIGIN CORRECTION

Area of test specimen = 1.76 m<sup>2</sup>

Transmitting test room temperature = 20.6 °C ± 0,4 °C. Receiving test room temperature = 20.4 °C ± 0,4 °C.

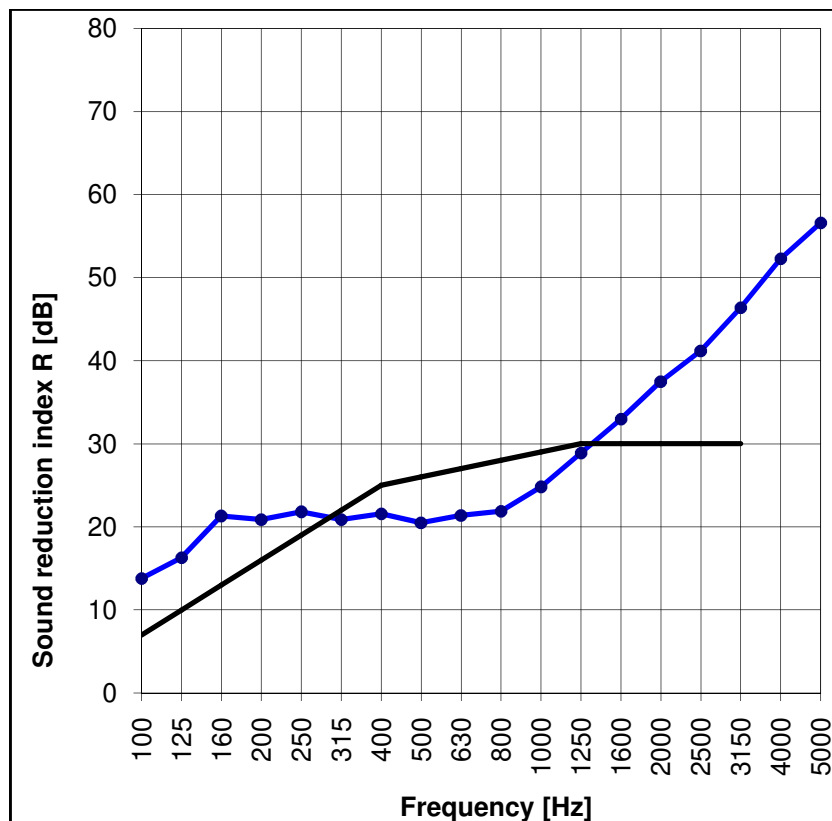
Transmitting test room relative humidity = 63 % ± 2 %. Receiving test room relative humidity = 63 % ± 2 %.

Static pressure = 100.1 kPa ± 0.06 kPa

Transmitting room volume = 77,1 m<sup>3</sup>

Receiving room volume = 66,4 m<sup>3</sup>

| Frequency<br><i>f</i><br>[Hz] | <i>R</i><br>1/3 octave band<br>[dB] |
|-------------------------------|-------------------------------------|
| 100                           | 13,8                                |
| 125                           | 16,3                                |
| 160                           | 21,3                                |
| 200                           | 20,9                                |
| 250                           | 21,8                                |
| 315                           | 20,9                                |
| 400                           | 21,6                                |
| 500                           | 20,5                                |
| 630                           | 21,4                                |
| 800                           | 21,9                                |
| 1000                          | 24,8                                |
| 1250                          | 28,9                                |
| 1600                          | 33,0                                |
| 2000                          | 37,5                                |
| 2500                          | 41,2                                |
| 3150                          | 46,4                                |
| 4000                          | 52,3                                |
| 5000                          | 56,6                                |



Evaluation according to ISO 717-1:

**$R_w(C; C_{tr}) = 26 (0; -3) \text{ dB}$**

Evaluation based on laboratory measurement  
 results obtained by an engineering method.

$C_{100-5000} = 1 \text{ dB}$

$C_{tr,100-5000} = -3 \text{ dB}$

Digitally signed document made under the current legislation

Acoustic sector Director  
**Ing. Antonio Scofano**

This Test Report cannot be reproduced, except in full, without prior written permission of the laboratory. Unless otherwise state the result shown in this report refer only to the sample(s) tested and such sample(s) are retained for 30 days.

ECAMRICERT S.R.L. Iscritta alla C.C.I.A.A. di Vicenza al nr. 175400 R.E.A. Capitale sociale €75.000,00 i.v.

# Any sample(s) and its information listed in this document are provided and identified by clients / N.A. not applicable / The sample(s) are retained for 30 days.