



1145-2



תאריך: 11 מאי 2015

# לוחות "איזוצף" עובי: 10 מ"מ

מדידת הפחתת רעש קול הולם של חיפויי רצפות  
על גבי רצפה מסיבית סטנדרטית עפ"י תקנים  
ISO 10140 חלקים: 1; 3; 4; 5.

מספר הדו"ח : 1145-2

|                                |              |
|--------------------------------|--------------|
| חב' פוליביד                    | לקוח         |
| קיבוץ משמר הנגב ד.נ. נגב 85315 | כתובת        |
| אינג' דויד פריד                | מהנדס מתקן   |
| 11-05-2010                     | תאריך הדו"ח  |
| 07-05-2015                     | תאריך המדידה |
| 11                             | מספר דפים    |
| 5                              | טקסט         |
| 1                              | נספח A       |
| 3                              | נספח B       |
| 2                              | נספח C       |



1145-2

**תוכן עניינים**

| סעיף | נושא                | עמוד |
|------|---------------------|------|
| 1    | מטרה                | 3    |
| 2    | ציוד המדידה         | 3    |
| 3    | המדידה              | 3    |
| 3.1  | תאריך ומיקום המדידה | 3    |
| 3.2  | תאור המדידה         | 3    |
| 3.3  | תאור מערכת הבדיקה   | 3    |
| 3.4  | חדר קליטה           | 3    |
| 3.5  | תאור הדוגמא         | 4    |
| 3.6  | תאור התקנה          | 4    |
| 4    | תנאי המדידה         | 4    |
| 5    | תוצאות המדידה       | 5    |
| 6    | הערות               | 5    |

| נספח | מס' עמודים |
|------|------------|
| A    | 1          |
| B    | 1,2,3      |
| C    | 1,2        |



1145-2

**1. מטרה**

עפ"י בקשתה של חב' פוליביד נבדק הערך המשוקלל להפחתת רעש קול הולם של חיפוי רצפה מסוג לוחות "איזוצף", בעובי 10 מ"מ המיוצר ע"י החברה, לבחינה בתנאי מעבדה עפ"י תקנים ISO 10140 חלקים 1;3;4;5.

**2. ציוד המדידה**

המדידות בוצעו באמצעות ציוד המדידה המפורט בנספח C, עמודים מס' 1, 2, לדו"ח זה. כל כיולי ציוד המדידה מבוצעים עפ"י הנחיות היצרן ונוהלי תקן ISO/IEC 17025.

**3. המדידה****3.1 תאריך ומיקום המדידה**

המדידה בוצעה עפ"י תקנים ISO 10140 חלקים 1;3;4;5 במתקן המעבדות לאקוסטיקה של חב' "איזוסאונד" מעבדות בע"מ, הממוקם ברח' הפלדה 3 אור יהודה, בתאריך 07-05-2015.

**3.2 תאור המדידה**

הלוחות הנבדקים הינם מסוג "איזוצף", המתאימים לקטגוריה חיפוי רצפות מס' 2, כהגדרתו בתקן ISO 10140-1 Annex H.

**3.3 תאור מערכת הבדיקה (מלמעלה למטה)**

- חדר שידור
- משטח בטון בעובי 6.5 ס"מ ובמידות 360 ס"מ X 280 ס"מ.
- הלוחות הנבדקים מטיפוס "איזוצף", 10 מ"מ.
- 140 מ"מ רצפת בטון.
- חדר קליטה.

**3.4 חדר קליטה**

- נפח: 53 מ"ק.
- קירות בנויים בניה מסיבית.
- תקרת בטון בעובי 140 מ"מ ובשטח של 15 מ"ר.



1145-2



### 3.5 תאור הדוגמא

חיפוי רצפה מדגם: "איזוצף", עשוי פוליסטירן מוקצף.  
עובי: 10 מ"מ.  
מידות לוח בודד: 50 ס"מ X 123 ס"מ.  
צפיפות: 8.0 ק"ג למ"ק.  
גודל המדגם: 360 ס"מ X 280 ס"מ.  
יצרן: חב' פוליביד.  
סופק לבדיקה ע"י: חב' פוליביד.

### 3.6 תאור ההתקנה

בתאריך 07/05/2015, הותקנה דוגמאת חיפוי רצפה דגם "איזוצף" על גבי משטח הבדיקה של חדר השידור במתקן המעבדה.  
הדוגמא הורכבה ממספר לוחות אשר נלקחו מאותו משלוח וחוברו בניהם באמצעות סרט דביק.  
הדוגמא הועמסה באמצעות משטח בטון בעובי 6.5 ס"מ ובמידות 360 ס"מ X 280 ס"מ, אשר הוכנה וסופקה ע"י חב' איזוסאונד.  
פטישיה תקנית הונחה בארבע נקודות שונות על גבי משטח בטון, בכפוף למגבלות המפורטות בתקן ISO 10140-3.  
דוגמאת חיפוי הרצפה אשר נבדקה היתה ללא פגע בזמן הבדיקה.  
שרטוטים וצילומים מפורטים בנספח B, עמודים 1-3.

### 4. תנאי המדידה

המדידות בוצעו במתקן המעבדות של חב' איזוסאונד מעבדות בע"מ אשר באור יהודה.  
חדרי הבדיקה וציוד המדידה תואמים ומכויילים לפי הדרישות המפורטות בתקנים ISO 10140 חלקים 1;3;4;5 ו-ISO 17025.  
המדידה בוצעה עפ"י הנורמות / תקנים המפורטים בנספח C עמוד 2.



1145-2

**5. תוצאות המדידה**

5.1 ההערכה בוצעה עפ"י תקן ISO 10140-3.

בנספח A, עמוד מס' 1, מתוארות תוצאות המדידה של האינדקס המשוקלל לבידוד קול הולם כהגדרתו בתקן ISO 10140-3, המתואר כ-  $\Delta L_w$ , של הלוחות הנבדקים. כמו כן מתוארות תוצאות גרפיות ומספריות המרוכזות בטבלת הבדיקה.

$$L_{n,w,r} (C_{1,r}) = 55 (3) \text{ dB}$$

$$\Delta L_w (\Delta L_{cl}) = 23 (9) \text{ dB}$$

**6. הערות**

את הדו"ח ניתן להפיץ או להעתיק אך ורק בכללותו, כולל כל נספחיו.

לפרסומו של תמצית הדו"ח נדרש אישורה הכתוב של חב' איזוסאונד מעבדות בע"מ.

השימוש בסמליל הרשות הלאומית להסמכת מעבדות מתייחס רק לבדיקות שנמצאות בהיקף ההסמכה של הארגון, ומבוצעות כמתחייב מכללי ההסמכה כמפורט בתעודת ההסמכה.

הרשות הלאומית להסמכת מעבדות אינה אחראית לתוצאות הבדיקה שערך הארגון ואין ההסמכה מהווה אישור לפריט, מערכת או תהליך שנבדק.

**אינג' דויד פריד**

מהנדס ראשי – איזוסאונד מעבדות בע"מ



1145-2

נספח A – עמוד 1

|   | <b>Brüel &amp; Kjær</b><br>Reduction of impact sound insulation by floor coverings<br>ISO 00140-8   | Test report page: 1   |                       |                          |                                     |                                |                      |                     |                                |                                   |                        |          |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
|---|---|---|-----------------------|--------------------------|-------------------------------------|--------------------------------|----------------------|---------------------|--------------------------------|-----------------------------------|------------------------|----------|--|------------------------|----------|--------------------------|------------------------|-----------------------|--------------------------|-------------------------------------|------------------------|----------------------|---------------------|------------------------|-----------------------------------|-----|------|------|------|------|-----|------|------|------|------|-----|------|------|-----|------|------|------|------|-----|------|------|------|------|-----|------|-----|-----|------|------|------|------|-----|------|------|------|------|-----|------|-----|-----|------|------|------|------|-----|------|------|------|------|-----|------|-----|-----|------|------|------|------|-----|------|------|------|------|-----|------|------|-----|------|------|------|------|-----|------|------|------|------|-----|------|------|-----|------|------|------|------|-----|------|------|------|------|-----|------|------|-----|------|------|------|------|-----|------|------|------|------|-----|------|------|-----|------|------|------|------|-----|------|------|------|------|-----|------|------|-----|------|-----|------|------|-----|------|-----|------|------|-----|------|------|------|------|-----|------|------|-----|------|-----|------|------|-----|------|------|------|------|-----|------|------|-----|------|-----|------|------|-----|------|------|------|------|-----|------|------|-----|------|-----|------|------|-----|------|------|------|------|-----|------|------|-----|------|-----|------|------|-----|------|------|------|------|-----|------|------|-----|------|------|------|------|-----|------|------|------|------|-----|------|------|-----|------|------|------|------|-----|------|------|------|------|-----|------|------|-----|------|-----|------|------|-----|------|------|------|------|-----|------|------|-----|------|-----|------|------|-----|------|------|
|   |   | Test reference: ISO 10140-3 1145-2  |                       |                          |                                     |                                |                      |                     |                                |                                   |                        |          |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
|   |   | Test date: 7/5/2015   |                       |                          |                                     |                                |                      |                     |                                |                                   |                        |          |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
|   |   | Operator: David F   |                       |                          |                                     |                                |                      |                     |                                |                                   |                        |          |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| Laboratory test facilities:<br><br>Reception room volume: 52.93 m <sup>3</sup><br>Reception room surface: 85.5 m <sup>2</sup><br>Exposed surface: 15 m <sup>2</sup>   | Average sound pressure level:<br><br>Microphone positions: 6 6<br>Source positions: 4 4<br>Linear averaging time: 30 s 30 s<br>Spatially independent positions: 24 24 | Reverberation time:<br><br>Microphone positions: 6 6<br>Source positions: 1 1<br>Number of repetition: 2 2<br>Number of decay curves: 12 12 |                       |                          |                                     |                                |                      |                     |                                |                                   |                        |          |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| <p> <b>Test specimen supplier:</b> POLYBID<br/> <b>Test specimen reference:</b> Test Request POLYBID LAB1432<br/> <b>Density:</b> 8 kg/m<sup>3</sup><br/> <b>Test specimen category:</b> 0<br/> <b>Test specimen curing period:</b> 0 days<br/> <b>Test specimen description:</b> לוחות איזופן - עובי 10 מ"מ         </p> <p style="text-align: right;"><i>BF means Bare Floor</i><br/><i>BFWFC means Bare Floor With Floor Covering</i></p> <p style="text-align: center;"> <b>Weighted impact sound insulation of the reference floor</b><br/> <math>L_{n,w,r}(C_{i,r}) = 55 (3) \text{ dB}</math><br/> <b>Weighted reduction of impact sound insulation</b><br/> <math>\Delta L_w(\Delta L_{Ci}) = 23 (9) \text{ dB}</math><br/> <i>both based on a result obtained by a laboratory method</i> </p>  |   |   |                       |                          |                                     |                                |                      |                     |                                |                                   |                        |          |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
|   |   |   |                       |                          |                                     |                                |                      |                     |                                |                                   |                        |          |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| <table border="1"> <thead> <tr> <th rowspan="2">Frequency<br/>Hz</th> <th colspan="5">Bare floor</th> <th colspan="5">Bare floor with floor covering</th> <th rowspan="2">L<sub>n,0</sub><br/>dB</th> <th rowspan="2">ΔL<br/>dB</th> </tr> <tr> <th>L<sub>i,0,m</sub><br/>dB</th> <th>B<sub>2,0</sub><br/>dB</th> <th>T<sub>2,0</sub><br/>s</th> <th>L<sub>i,0,c</sub><br/>dB</th> <th>A<sub>T2,0</sub><br/>m<sup>2</sup></th> <th>L<sub>i,m</sub><br/>dB</th> <th>B<sub>2</sub><br/>dB</th> <th>T<sub>2</sub><br/>s</th> <th>L<sub>i,c</sub><br/>dB</th> <th>A<sub>T2</sub><br/>m<sup>2</sup></th> </tr> </thead> <tbody> <tr><td>100</td><td>60.6</td><td>36.5</td><td>1.30</td><td>60.6</td><td>6.5</td><td>64.4</td><td>38.9</td><td>1.25</td><td>64.3</td><td>6.7</td><td>58.7</td><td>-4.0</td></tr> <tr><td>125</td><td>64.0</td><td>31.0</td><td>1.35</td><td>64.0</td><td>6.2</td><td>60.8</td><td>29.2</td><td>1.30</td><td>60.8</td><td>6.5</td><td>62.0</td><td>3.1</td></tr> <tr><td>160</td><td>67.2</td><td>29.1</td><td>1.77</td><td>67.2</td><td>4.7</td><td>61.8</td><td>27.9</td><td>1.75</td><td>61.8</td><td>4.8</td><td>63.9</td><td>5.3</td></tr> <tr><td>200</td><td>66.1</td><td>27.4</td><td>1.81</td><td>66.1</td><td>4.6</td><td>59.1</td><td>27.6</td><td>1.77</td><td>59.1</td><td>4.7</td><td>62.8</td><td>6.9</td></tr> <tr><td>250</td><td>69.9</td><td>22.7</td><td>1.84</td><td>69.9</td><td>4.5</td><td>56.5</td><td>21.8</td><td>1.80</td><td>56.5</td><td>4.6</td><td>66.4</td><td>13.3</td></tr> <tr><td>315</td><td>69.8</td><td>17.7</td><td>1.60</td><td>69.8</td><td>5.2</td><td>53.2</td><td>24.2</td><td>1.58</td><td>53.2</td><td>5.3</td><td>66.9</td><td>16.5</td></tr> <tr><td>400</td><td>70.0</td><td>15.9</td><td>1.43</td><td>70.0</td><td>5.8</td><td>50.8</td><td>20.9</td><td>1.43</td><td>50.8</td><td>5.8</td><td>67.6</td><td>19.1</td></tr> <tr><td>500</td><td>71.0</td><td>12.8</td><td>1.37</td><td>71.0</td><td>6.0</td><td>47.7</td><td>19.5</td><td>1.42</td><td>47.7</td><td>5.8</td><td>68.8</td><td>23.4</td></tr> <tr><td>630</td><td>71.6</td><td>10.1</td><td>1.23</td><td>71.6</td><td>6.7</td><td>44.6</td><td>14.0</td><td>1.25</td><td>44.6</td><td>6.6</td><td>69.8</td><td>27.1</td></tr> <tr><td>800</td><td>72.7</td><td>9.0</td><td>1.28</td><td>72.7</td><td>6.3</td><td>43.3</td><td>9.5</td><td>1.30</td><td>43.3</td><td>6.3</td><td>70.7</td><td>29.5</td></tr> <tr><td>1000</td><td>75.0</td><td>8.3</td><td>1.20</td><td>75.0</td><td>6.8</td><td>41.9</td><td>9.3</td><td>1.23</td><td>41.9</td><td>6.6</td><td>73.3</td><td>33.2</td></tr> <tr><td>1250</td><td>75.6</td><td>7.9</td><td>1.31</td><td>75.6</td><td>6.1</td><td>40.8</td><td>8.3</td><td>1.31</td><td>40.8</td><td>6.1</td><td>73.5</td><td>34.8</td></tr> <tr><td>1600</td><td>74.0</td><td>7.1</td><td>1.28</td><td>74.0</td><td>6.2</td><td>35.6</td><td>7.6</td><td>1.29</td><td>35.6</td><td>6.2</td><td>71.9</td><td>38.4</td></tr> <tr><td>2000</td><td>74.9</td><td>6.5</td><td>1.27</td><td>74.9</td><td>6.2</td><td>32.1</td><td>9.0</td><td>1.30</td><td>32.0</td><td>6.0</td><td>72.8</td><td>43.0</td></tr> <tr><td>2500</td><td>75.3</td><td>6.3</td><td>1.27</td><td>75.3</td><td>6.0</td><td>29.8</td><td>12.6</td><td>1.26</td><td>29.7</td><td>6.1</td><td>73.1</td><td>45.6</td></tr> <tr><td>3150</td><td>75.4</td><td>7.1</td><td>1.24</td><td>75.4</td><td>5.9</td><td>27.8</td><td>11.0</td><td>1.24</td><td>27.7</td><td>6.0</td><td>73.1</td><td>47.7</td></tr> <tr><td>4000</td><td>74.4</td><td>7.1</td><td>1.19</td><td>74.4</td><td>5.9</td><td>23.3</td><td>8.5</td><td>1.19</td><td>23.1</td><td>5.9</td><td>72.2</td><td>51.4</td></tr> <tr><td>5000</td><td>72.3</td><td>7.1</td><td>1.09</td><td>72.3</td><td>6.0</td><td>18.8</td><td>8.3</td><td>1.10</td><td>18.4</td><td>6.0</td><td>70.1</td><td>53.9</td></tr> </tbody> </table> <p style="text-align: center;"><i>Measured at 25.6 °C, 54.1 % and 101 kPa</i></p> |   |   | Frequency<br>Hz       | Bare floor               |                                     |                                |                      |                     | Bare floor with floor covering |                                   |                        |          |  | L <sub>n,0</sub><br>dB | ΔL<br>dB | L <sub>i,0,m</sub><br>dB | B <sub>2,0</sub><br>dB | T <sub>2,0</sub><br>s | L <sub>i,0,c</sub><br>dB | A <sub>T2,0</sub><br>m <sup>2</sup> | L <sub>i,m</sub><br>dB | B <sub>2</sub><br>dB | T <sub>2</sub><br>s | L <sub>i,c</sub><br>dB | A <sub>T2</sub><br>m <sup>2</sup> | 100 | 60.6 | 36.5 | 1.30 | 60.6 | 6.5 | 64.4 | 38.9 | 1.25 | 64.3 | 6.7 | 58.7 | -4.0 | 125 | 64.0 | 31.0 | 1.35 | 64.0 | 6.2 | 60.8 | 29.2 | 1.30 | 60.8 | 6.5 | 62.0 | 3.1 | 160 | 67.2 | 29.1 | 1.77 | 67.2 | 4.7 | 61.8 | 27.9 | 1.75 | 61.8 | 4.8 | 63.9 | 5.3 | 200 | 66.1 | 27.4 | 1.81 | 66.1 | 4.6 | 59.1 | 27.6 | 1.77 | 59.1 | 4.7 | 62.8 | 6.9 | 250 | 69.9 | 22.7 | 1.84 | 69.9 | 4.5 | 56.5 | 21.8 | 1.80 | 56.5 | 4.6 | 66.4 | 13.3 | 315 | 69.8 | 17.7 | 1.60 | 69.8 | 5.2 | 53.2 | 24.2 | 1.58 | 53.2 | 5.3 | 66.9 | 16.5 | 400 | 70.0 | 15.9 | 1.43 | 70.0 | 5.8 | 50.8 | 20.9 | 1.43 | 50.8 | 5.8 | 67.6 | 19.1 | 500 | 71.0 | 12.8 | 1.37 | 71.0 | 6.0 | 47.7 | 19.5 | 1.42 | 47.7 | 5.8 | 68.8 | 23.4 | 630 | 71.6 | 10.1 | 1.23 | 71.6 | 6.7 | 44.6 | 14.0 | 1.25 | 44.6 | 6.6 | 69.8 | 27.1 | 800 | 72.7 | 9.0 | 1.28 | 72.7 | 6.3 | 43.3 | 9.5 | 1.30 | 43.3 | 6.3 | 70.7 | 29.5 | 1000 | 75.0 | 8.3 | 1.20 | 75.0 | 6.8 | 41.9 | 9.3 | 1.23 | 41.9 | 6.6 | 73.3 | 33.2 | 1250 | 75.6 | 7.9 | 1.31 | 75.6 | 6.1 | 40.8 | 8.3 | 1.31 | 40.8 | 6.1 | 73.5 | 34.8 | 1600 | 74.0 | 7.1 | 1.28 | 74.0 | 6.2 | 35.6 | 7.6 | 1.29 | 35.6 | 6.2 | 71.9 | 38.4 | 2000 | 74.9 | 6.5 | 1.27 | 74.9 | 6.2 | 32.1 | 9.0 | 1.30 | 32.0 | 6.0 | 72.8 | 43.0 | 2500 | 75.3 | 6.3 | 1.27 | 75.3 | 6.0 | 29.8 | 12.6 | 1.26 | 29.7 | 6.1 | 73.1 | 45.6 | 3150 | 75.4 | 7.1 | 1.24 | 75.4 | 5.9 | 27.8 | 11.0 | 1.24 | 27.7 | 6.0 | 73.1 | 47.7 | 4000 | 74.4 | 7.1 | 1.19 | 74.4 | 5.9 | 23.3 | 8.5 | 1.19 | 23.1 | 5.9 | 72.2 | 51.4 | 5000 | 72.3 | 7.1 | 1.09 | 72.3 | 6.0 | 18.8 | 8.3 | 1.10 | 18.4 | 6.0 | 70.1 | 53.9 |
| Frequency<br>Hz   | Bare floor  |   |                       |                          |                                     | Bare floor with floor covering |                      |                     |                                |                                   | L <sub>n,0</sub><br>dB | ΔL<br>dB |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
|   | L <sub>i,0,m</sub><br>dB  | B <sub>2,0</sub><br>dB  | T <sub>2,0</sub><br>s | L <sub>i,0,c</sub><br>dB | A <sub>T2,0</sub><br>m <sup>2</sup> | L <sub>i,m</sub><br>dB         | B <sub>2</sub><br>dB | T <sub>2</sub><br>s | L <sub>i,c</sub><br>dB         | A <sub>T2</sub><br>m <sup>2</sup> |                        |          |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 100   | 60.6  | 36.5  | 1.30                  | 60.6                     | 6.5                                 | 64.4                           | 38.9                 | 1.25                | 64.3                           | 6.7                               | 58.7                   | -4.0     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 125   | 64.0  | 31.0  | 1.35                  | 64.0                     | 6.2                                 | 60.8                           | 29.2                 | 1.30                | 60.8                           | 6.5                               | 62.0                   | 3.1      |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 160   | 67.2  | 29.1  | 1.77                  | 67.2                     | 4.7                                 | 61.8                           | 27.9                 | 1.75                | 61.8                           | 4.8                               | 63.9                   | 5.3      |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 200   | 66.1  | 27.4  | 1.81                  | 66.1                     | 4.6                                 | 59.1                           | 27.6                 | 1.77                | 59.1                           | 4.7                               | 62.8                   | 6.9      |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 250   | 69.9  | 22.7  | 1.84                  | 69.9                     | 4.5                                 | 56.5                           | 21.8                 | 1.80                | 56.5                           | 4.6                               | 66.4                   | 13.3     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 315   | 69.8  | 17.7  | 1.60                  | 69.8                     | 5.2                                 | 53.2                           | 24.2                 | 1.58                | 53.2                           | 5.3                               | 66.9                   | 16.5     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 400   | 70.0  | 15.9  | 1.43                  | 70.0                     | 5.8                                 | 50.8                           | 20.9                 | 1.43                | 50.8                           | 5.8                               | 67.6                   | 19.1     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 500   | 71.0  | 12.8  | 1.37                  | 71.0                     | 6.0                                 | 47.7                           | 19.5                 | 1.42                | 47.7                           | 5.8                               | 68.8                   | 23.4     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 630   | 71.6  | 10.1  | 1.23                  | 71.6                     | 6.7                                 | 44.6                           | 14.0                 | 1.25                | 44.6                           | 6.6                               | 69.8                   | 27.1     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 800   | 72.7  | 9.0   | 1.28                  | 72.7                     | 6.3                                 | 43.3                           | 9.5                  | 1.30                | 43.3                           | 6.3                               | 70.7                   | 29.5     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 1000  | 75.0  | 8.3   | 1.20                  | 75.0                     | 6.8                                 | 41.9                           | 9.3                  | 1.23                | 41.9                           | 6.6                               | 73.3                   | 33.2     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 1250  | 75.6  | 7.9   | 1.31                  | 75.6                     | 6.1                                 | 40.8                           | 8.3                  | 1.31                | 40.8                           | 6.1                               | 73.5                   | 34.8     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 1600  | 74.0  | 7.1   | 1.28                  | 74.0                     | 6.2                                 | 35.6                           | 7.6                  | 1.29                | 35.6                           | 6.2                               | 71.9                   | 38.4     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 2000  | 74.9  | 6.5   | 1.27                  | 74.9                     | 6.2                                 | 32.1                           | 9.0                  | 1.30                | 32.0                           | 6.0                               | 72.8                   | 43.0     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 2500  | 75.3  | 6.3   | 1.27                  | 75.3                     | 6.0                                 | 29.8                           | 12.6                 | 1.26                | 29.7                           | 6.1                               | 73.1                   | 45.6     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 3150  | 75.4  | 7.1   | 1.24                  | 75.4                     | 5.9                                 | 27.8                           | 11.0                 | 1.24                | 27.7                           | 6.0                               | 73.1                   | 47.7     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 4000  | 74.4  | 7.1   | 1.19                  | 74.4                     | 5.9                                 | 23.3                           | 8.5                  | 1.19                | 23.1                           | 5.9                               | 72.2                   | 51.4     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |
| 5000  | 72.3  | 7.1   | 1.09                  | 72.3                     | 6.0                                 | 18.8                           | 8.3                  | 1.10                | 18.4                           | 6.0                               | 70.1                   | 53.9     |  |                        |          |                          |                        |                       |                          |                                     |                        |                      |                     |                        |                                   |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |     |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |      |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |      |      |     |      |      |     |      |     |      |      |     |      |      |



1145-2



### נספח B – עמוד 1

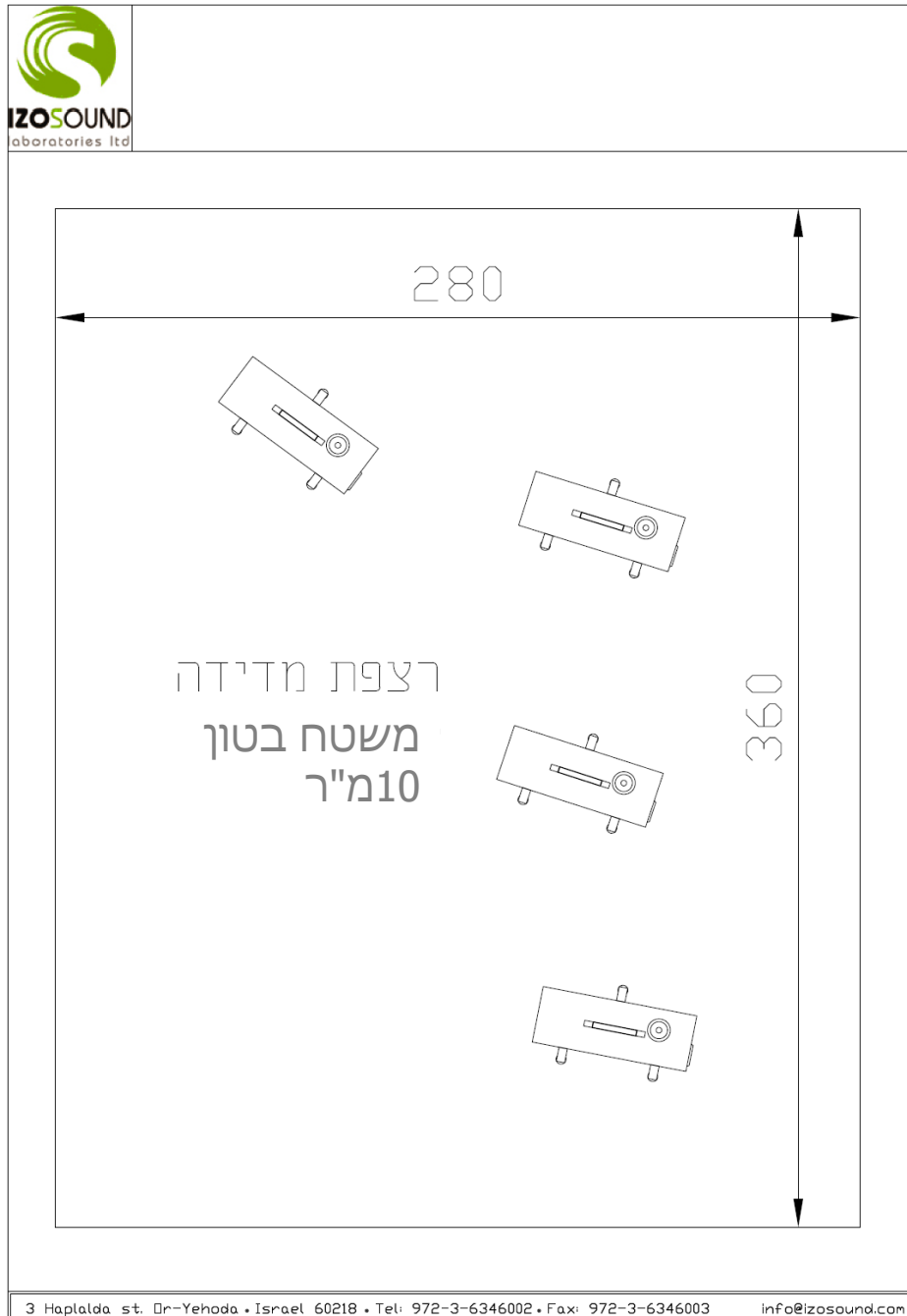




1145-2



## נספח B – עמוד 2

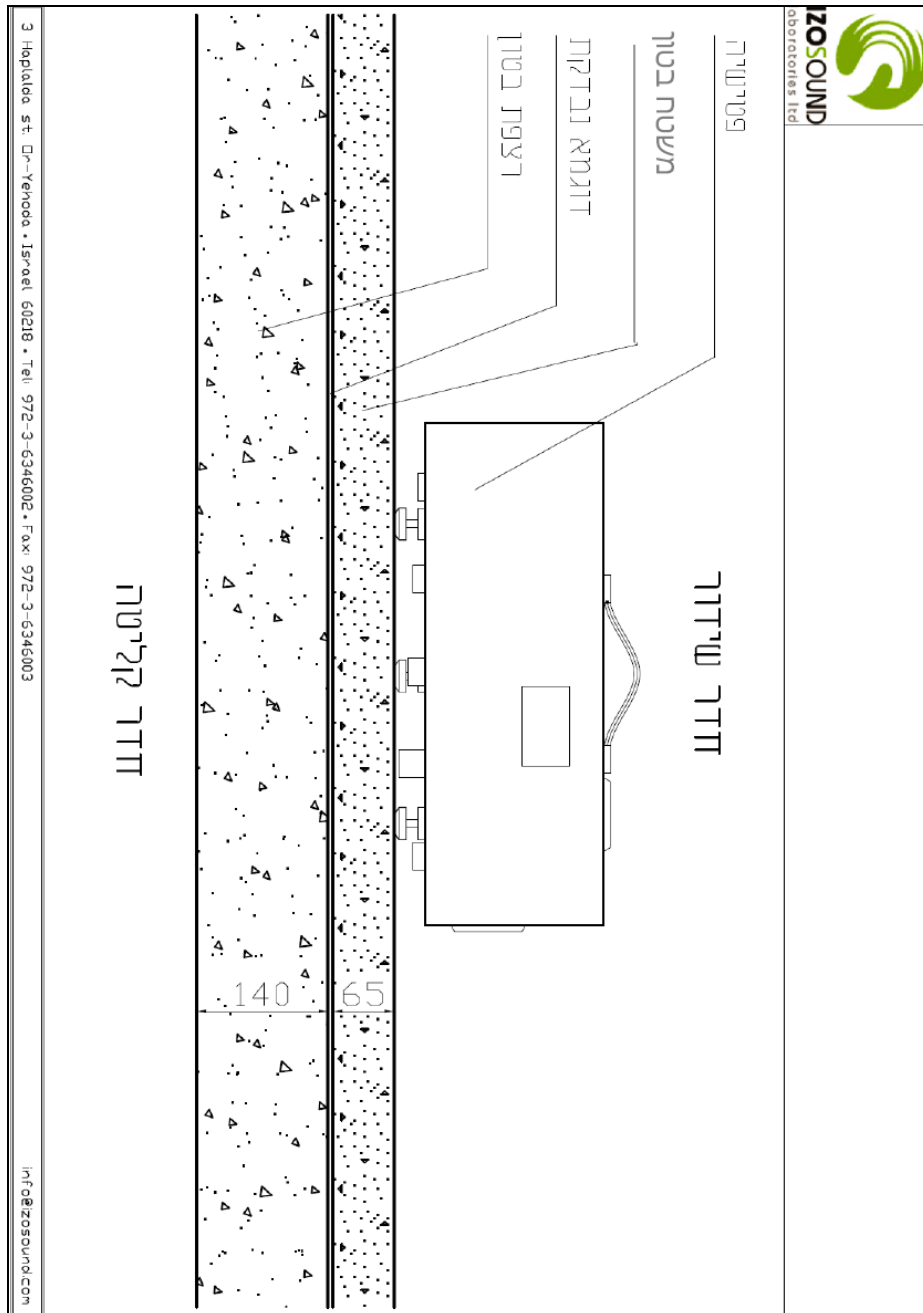






1145-2

### נספח B – עמוד 3





1145-2

**נספח C – עמוד 1**

רשימת ציוד המדידה אשר בו בוצעו מדידות האינדקס המשוקלל לבידוד קול הולם של דוגמת חיפוי הרצפה:

| Name  | Manufacturer  | Type                             | Serial No.   |
|---|---------------|----------------------------------|--|
| Pulse system  | Bruel & Kjaer | 3560C<br>E04                     | 2684723  |
| Pulse CPB Analysis software   | Bruel & Kjaer | 7771                             |  |
| ½" Diffuse field microphone<br>Preamplifier 2669L with<br>TEDS<br>(6 in receiving room) | Bruel & Kjaer | 4943                             | 2479500<br>2534039<br>2593879<br>2593880<br>2593885<br>2593887 |
| Omni power Omni directional<br>Sound Source   | Bruel & Kjaer | 4292                             | 017001   |
| Power Amplifier (300W) for<br>4296 Omni power source                                    | Bruel & Kjaer | 2716                             | 02587163   |
| ISO 10140-3 Analysis<br>software  | Bruel & Kjaer | BCK MT-ISO 10140-<br>3V02        |  |
| Excel Template  | Bruel & Kjaer | Corrected MT ISO<br>10140_1_3V02 |  |
| Sound level calibrator  | Bruel & Kjaer | 4231                             | 2545796  |
| Relative humidity transmitter   | ACI           | ACI/RH3-<br>D                    | 0002   |
| Thermistor temperature<br>sensor  | ACI           | ACI/10K-<br>CP-D-8"              | 0004   |
| Digital Barometer   | LUTRON        | PHB-318                          | 89983  |
| Tapping Machine   | Bruel & Kjaer | 3207                             | 2666882  |



1145-2

**נספח C – עמוד 2**  
**רשימת תקנים**

| No. | Name        | Title   | Edition                     |
|-----|-------------|---|-----------------------------|
| 1   | ISO 10140-1 | Laboratory measurement of sound insulation of building elements-<br>Part 1:<br>Application rules for specific products        | First edition<br>2010-09-01 |
| 2   | ISO 10140-3 | Laboratory measurement of sound insulation of building elements-<br>Part 3:<br>Measurement of impact sound insulation         | First edition<br>2010-09-01 |
| 3   | ISO 10140-4 | Laboratory measurement of sound insulation of building elements-<br>Part 4:<br>Measurement procedures and requirements        | First edition<br>2010-09-01 |
| 4   | ISO 10140-5 | Laboratory measurement of sound insulation of building elements-<br>Part 5:<br>Requirements for test facilities and equipment | First edition<br>2010-09-01 |
| 51  | ISO 354     | Measurements of the sound absorption in the reverberation room  | 2003-12                     |

--- 10 ---