Reinventing construction

Silence, comfort and durability
Cork, an exceptional raw material

Cork is the outer bark of the cork oak tree (Quercus Suber L.), the 100% natural plant tissue covering the trunk and branches.

It consists of a honeycomb-like structure of microscopic cells filled with an air-like gas and coated mainly with suberin and lignin. One cubic centimetre of cork contains about 40 million cells.

Cork is also known as “nature's foam” due to its alveolar cellular structure. It has a closed-cell structure making it lightweight, airtight and watertight, resistant to acids, fuels and oils, and impervious to rot.

It is sustainably harvested by specialised professionals without damaging the trunk, thus enabling the tree to grow another layer of outer bark that, in time, will be re-harvested. Over the course of the cork oak tree’s life, that lasts 200 years on average, the cork may be stripped around 17 times. This means that cork is not only a natural raw material, it is also renewable and recyclable.
Acousticork, the sound of silence

Amorim Cork Composites develops specific compound formulations for acoustic insulation and vibration isolation which offer highly insulating or dampening materials in compliance with a wide range of environmental conditions and chemical resistance levels.

See below the possible applications of Acousticork materials.
ITECONS attests Acousticork’s performance

Research

ITECons - Institute for Research and Technological Development for Construction, Energy, Environment and Sustainability is a non-profit organization dedicated to providing a dynamic knowledge interface between the scientific community and industry.

It has over 50 associate members, including businesses, municipal ties and other research institutions.

Technical assessment body

ITECons has been accredited by the Portuguese Accreditation Institute to perform over 220 different tests.

It operates a certified quality management system, and is a notified body - Testing Laboratory - to perform CE marking. As a Technical Assessment Body, ITECons is also able to support industry by issuing European Technical Assessments to allow CE marking.

Why Acousticork?

Fast-moving times require acoustic comfort

Growing urbanization and rising populations in urban areas are leading to more stringent noise and vibration standards and norms. As a result there is higher demand for high-quality and efficient sound insulation and vibration isolation (from internal or external sources in each building).

Ensuring peace and quiet isn’t a mere luxury. It’s already a human need - to guarantee quality of life and work in our fast-moving era.

Every day, new buildings are being erected on plots of land subject to vibrations, in areas with dense infrastructures. Sources of disturbance are often located near railway lines, roads or industrial complexes. Unless appropriate action is taken, buildings are defenceless against such vibrations.

Many apartments blocks also have underground car parks, commercial establishments on the ground floor (such as a shopping mall) or even a gym on an intermediate floor. In these situations, various factors may subject buildings to shocks, which have an impact on their structure and are perceived by residents as noticeable vibrations or secondary airborne noise.

ACOUSTICORK natural base materials for demanding applications

Amorim Cork Composites develops specific compound formulations for acoustic insulation and vibration isolation which offer highly insulating or dampening materials in compliance with a wide range of environmental conditions and chemical resistance levels.

Cork absorbs energy due to its unique compressibility and recovery characteristics, yielding higher loss factors that are essential for the dampening function. Cork’s extremely low Poisson Ratio improves the behaviour of such materials in dynamic loading applications. Cork also brings durability to the applied solution.

Acoustic Insulation

The Acousticork range is divided into two main families: Acoustic Insulation and Vibration Isolation. This book refers to Acoustic Insulation Materials, and includes datasheets of underlays, underscreeds and wall-bearing materials.
| 01  | Underlay | T61 | 9   |
|     |          | T66 | 13  |
|     |          | T22 | 17  |
| 02  | Underscreed | U32 | 23  |
|     |            | U22 | 27  |
|     |            | U85 | 31  |
|     |            | U34 | 35  |
| 03  | Wall Bearing | MS-R0 | 41  |
|     |            | MS-R1 | 43  |
|     |            | MS-R2 | 45  |
01
Underlay
**Underlay**

**Acousticork** has solutions for different types of final flooring.

When a thicker solution is not an option, Acousticork offers high performance with reduced thickness: This durable and long-term resilient underlay will protect your floor:

- Compatible with underfloor heating systems;
- Able to withstand repeated loads of short duration;
- Resistant with very heavy loads at rest;
- Compatible with laminate boards with click-lock systems.

### Floor Covering

<table>
<thead>
<tr>
<th>Floor Covering</th>
<th>thickness</th>
<th>T61</th>
<th>T66</th>
<th>T22</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Laminate</strong>&lt;sup&gt;(1)&lt;/sup&gt;</td>
<td>2 mm</td>
<td>20 dB</td>
<td>19 dB</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>3 mm</td>
<td>54 dB</td>
<td>47 dB</td>
<td>-</td>
</tr>
<tr>
<td><strong>Glue down wood</strong></td>
<td>3 mm</td>
<td>26 dB</td>
<td>18 dB</td>
<td>49 dB</td>
</tr>
<tr>
<td></td>
<td>3 mm perforated</td>
<td>59 dB</td>
<td>51 dB</td>
<td>-</td>
</tr>
<tr>
<td><strong>Ceramic</strong>&lt;sup&gt;(2)&lt;/sup&gt;</td>
<td>5 mm</td>
<td>16 dB</td>
<td>16 dB</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>3 mm</td>
<td>50 dB</td>
<td>51 dB</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>4,5 mm</td>
<td>52 dB</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Resilient</strong>&lt;sup&gt;(3)&lt;/sup&gt;</td>
<td>3 mm</td>
<td>19 dB</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>3 mm</td>
<td>61 dB</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

(1) Non-glued
(2) Or natural stone
(3) LVT, vinyl, etc.


**T61**

Material Data Sheet

---

**Thermal Conductivity:** 0.04 W/mK (1)

---

**ISO 8301**

**ACoustical Results**

**Physical and Mechanical Properties**

<table>
<thead>
<tr>
<th>Material Description &amp; Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agglomerated Cork underlay for impact noise and thermal insulation.</td>
</tr>
</tbody>
</table>

**Product Specification**

- 1.5mm resilient acoustic underlay made of agglomerated cork with PU (polyurethane) elastomer bonding agent for impact noise insulation for different types of flooring, with a density of 175kg/m³ and an impact noise reduction $\Delta L_w$ of ___dB.

**Key Features**

- Natural and sustainable product
- Impact noise reduction and thermal insulation properties
- High durability and long term resilience
- High performance with reduced thickness
- Tested according to MMFA/EPLF requirements group 1

**Thermal Properties**

- Thermal Conductivity: 0.04 W/mK (1)

**Physical and Mechanical Properties**

<table>
<thead>
<tr>
<th>Specific Weight (1)</th>
<th>150 - 200 Kg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength (1)</td>
<td>&gt; 200 KPa</td>
</tr>
<tr>
<td>Compression at 0.7MPa (1)</td>
<td>30%</td>
</tr>
<tr>
<td>Recovery after 0.7MPa (1)</td>
<td>&gt; 70%</td>
</tr>
</tbody>
</table>

**Acoustical Results**

<table>
<thead>
<tr>
<th>Flooring</th>
<th>Laminate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness (mm)</td>
<td>2</td>
</tr>
<tr>
<td>$\Delta L_w$ (dB) (1)</td>
<td>20</td>
</tr>
<tr>
<td>IIC (dB) (2)</td>
<td>54</td>
</tr>
<tr>
<td>Flooring</td>
<td>Glued Down Wood</td>
</tr>
<tr>
<td>Thickness (mm)</td>
<td>3</td>
</tr>
<tr>
<td>$\Delta L_w$ (dB) (1)</td>
<td>26</td>
</tr>
<tr>
<td>IIC (dB) (2)</td>
<td>59</td>
</tr>
<tr>
<td>Flooring</td>
<td>Ceramic (or Natural Stone)</td>
</tr>
<tr>
<td>Thickness (mm)</td>
<td>5</td>
</tr>
<tr>
<td>$\Delta L_w$ (dB) (1)</td>
<td>16</td>
</tr>
<tr>
<td>IIC (dB) (2)</td>
<td>50</td>
</tr>
</tbody>
</table>

**Standards**

- ISO 10140-3 and ISO 717-2
- ASTM E492-09 & ASTM E989-06

**Standard Dimensions**

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>2</th>
<th>3</th>
<th>3 perforated</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width (m) x Length (m)</td>
<td>1x10</td>
<td>1x10</td>
<td>0.5x10</td>
<td>1x10</td>
</tr>
</tbody>
</table>

Others sizes available upon request.
ACOUSTICAL RESULTS


<table>
<thead>
<tr>
<th>Thickness</th>
<th>Flooring</th>
<th>IICc</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 mm</td>
<td>Laminate</td>
<td>54 dB</td>
</tr>
<tr>
<td>3 mm</td>
<td>Glued Down Wood</td>
<td>59 dB</td>
</tr>
<tr>
<td>3 mm perforated</td>
<td>Glued Down Wood</td>
<td>51 dB</td>
</tr>
<tr>
<td>5 mm</td>
<td>Ceramic (or Natural Stone)</td>
<td>50 dB</td>
</tr>
</tbody>
</table>

Test apparatus (ΔLn & IIC)

01. Floor covering composed by glued down wood, non glued laminate floor or ceramic or natural stone tiles
02. Agglomerated cork resilient layer - T61
03. Reinforced concrete slab of thickness 140mm

Normalized impact sound pressure level and IIC rating determined according ASTM E492-09 and ASTM E989-06 standards.
LOAD DEFLECTION

CREEP DEFLECTION @ 0.0045MPA (% OF START HEIGHT)

INSTALLATION

GLUED FLOORS

Physical and Mechanical Properties

1. Reinforced concrete slab
2. Adhesive
3. Agglomerated cork resilient layer - T61
4. Floor covering composed by glued down wood, ceramic or nature stone
5. Perimeter insulation barrier
6. Vapor barrier
7. Floor covering composed by non glued laminate floor

Note: Following ISO8013-1998 measured in Cantilever Test System
The following installation instructions are recommended by Amorim Cork Composites, but are not intended as a definitive project specification. They are presented in an attempt to be used with recommended installation procedures of the flooring manufacturers.

**Room Conditions**
Temperature > 10ºC / Room moisture content < 75%.

**Subfloor**
All subfloor work should be structurally sound, clear and level. The moisture content of the subfloor should not be more than 2.5% (CM) by weight measured on concrete subfloors.

**Vapor Insulation Barrier (only for Non Glued Floors)**
PE (Polyethylene) vapor insulation barrier covering the entire flooring area, minimum 50mm wide vertically around the perimeter of the entire floor MUST be installed prior to the Acousticork T61.

Install by overlapping (minimum 100mm) the PE foil, and use an adequate tape to adhere/fix it, if necessary. After completion, PE foil should cover the entire concrete area without gaps. Never mechanically fasten the PE foil barrier with screws, nails or staples as this will severely diminish the performance of the insulation barrier.

**Installation Instruction for Acousticork T61**
Unpack the Acousticork T61 at least 24h before the installation and store it in the room where the installation will take place. Cut the T61 to desired length and install directly over the entire floor pulled 30mm up the walls with crown of the rolled materials up, removing all trapped air.

An independent perimeter insulation barrier can be installed around the entire perimeter of the room with width equal to that of the floor build up.

Both solutions are valid, the most important is to avoid lateral propagation of impact noise. The barrier must also be applied in the perimeter of pipes, ducts or any other component protruding from the floor. Spot adhere the strips to the wall using acrylic glue or a bead of silicone sealant.

After completion, the T61 should cover the entire flooring area without gaps and with joints butted tight and preferably taped.

---

**General Installation Instructions**

**Final Flooring**
Always follow manufacturers recommended installation instructions.

**Recommended Adhesives:**
Wood floor to Acousticork: Water-Based Emulsion/Polyurethane Glue; Vinyl and linoleum to Acousticork: Water-Based Emulsion/Synthetic Resin Glue; Ceramic to Acousticork: Flexible Cement Glue; Acoustork to slab/screed: Water-Based Emulsion/Acrylic Adhesives;

**Application Process**

**NON GLUED FLOORS**


**GLUED FLOORS**

1. Perimeter barrier application; 2. Underlay application (glued); 3. Final floor application (glued); 4. Perimeter insulation barrier cut.

**Important Notes**
Never mechanically fasten the Acousticork T61 to the flooring floor as this will severely diminish its acoustical value.

For detailed installation instructions, please contact us.
Material Description & Properties

Agglomerated cork and recycled rubber underlay for impact noise and thermal insulation.

PRODUCT SPECIFICATION

“___mm resilient acoustic underlay made of agglomerated cork and recycled SBR (Stirene Butadiene Rubber) with PU (polyurethane) elastomer bonding agent for impact noise insulation for different types of flooring, with a density of 650kg/m³ and an impact noise reduction ΔLw of___dB”

KEY FEATURES

- Homogenous material produced from cork and recycled rubber granules with the same size (0.5-1mm).
- High durability and long term resilience
- High performance with reduced thickness
- Low residual indentation and free of migration of plasticizes

THERMAL PROPERTIES

Thermal Conductivity: 0.08 W/mK (1)

ISO 8301

PHYSICAL AND MECHANICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Weight (1)</td>
<td>600 - 700 Kg/m³</td>
</tr>
<tr>
<td>Tensile Strength (1)</td>
<td>&gt; 800 KPa</td>
</tr>
<tr>
<td>Compression at 0.7MPa (1)</td>
<td>15%</td>
</tr>
<tr>
<td>Recovery after 0.7MPa (1)</td>
<td>&gt; 75%</td>
</tr>
</tbody>
</table>

ISO 7322

ACOUSTICAL RESULTS

<table>
<thead>
<tr>
<th>Flooring</th>
<th>Laminate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness (mm)</td>
<td>3</td>
</tr>
<tr>
<td>ΔLw (dB) (1)</td>
<td>19</td>
</tr>
<tr>
<td>IIC (dB) (2)</td>
<td>47</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flooring</th>
<th>Glued Down Wood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness (mm)</td>
<td>3</td>
</tr>
<tr>
<td>ΔLw (dB) (1)</td>
<td>16</td>
</tr>
<tr>
<td>IIC (dB) (2)</td>
<td>50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flooring</th>
<th>Ceramic (or Natural Stone)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness (mm)</td>
<td>3</td>
</tr>
<tr>
<td>ΔLw (dB) (1)</td>
<td>4.5</td>
</tr>
<tr>
<td>IIC (dB) (2)</td>
<td>52</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flooring</th>
<th>Resilient (LVT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness (mm)</td>
<td>3</td>
</tr>
<tr>
<td>ΔLw (dB) (1)</td>
<td>19</td>
</tr>
<tr>
<td>IIC (dB) (2)</td>
<td>51</td>
</tr>
</tbody>
</table>

(1)ISO 10140-3 and ISO 717-2 • (2)ASTM E492-09 & ASTM E989-06

STANDARD DIMENSIONS

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>3</th>
<th>4.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width (m) x Length (m)</td>
<td>1x15</td>
<td>1x15</td>
</tr>
</tbody>
</table>

Others sizes available upon request

CASTOR CHAIR RESISTANCE

Pass (1)

EN425-2002
ACOUSTICAL RESULTS


<table>
<thead>
<tr>
<th>Ref. Test Report</th>
<th>Thickness</th>
<th>Flooring</th>
<th>L_{n,r,w} (C_{l,r})</th>
<th>ΔL_w (C_{l,r})</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACU 337/11</td>
<td>3 mm</td>
<td>Laminate</td>
<td>59 (2) dB</td>
<td>19 (-13) dB</td>
</tr>
<tr>
<td>ACL 127/15</td>
<td>3 mm</td>
<td>GDW</td>
<td>62 (0) dB</td>
<td>16 (-11) dB</td>
</tr>
<tr>
<td>ACL 203/14</td>
<td>3 mm</td>
<td>Ceramic</td>
<td>62 (-1) dB</td>
<td>16 (-10) dB</td>
</tr>
<tr>
<td>ACL 072/17</td>
<td>4.5mm</td>
<td>Ceramic</td>
<td>60 (-1) dB</td>
<td>18 (-10) dB</td>
</tr>
<tr>
<td>ACL 199/14</td>
<td>3 mm</td>
<td>LVT</td>
<td>59 (0) dB</td>
<td>19 (-11) dB</td>
</tr>
</tbody>
</table>

Normalized impact sound pressure level L [dB] and IIC rating determined according ASTM E492-09 and ASTM E989-06 standards.

ACOUSTICAL RESULTS


<table>
<thead>
<tr>
<th>Thickness</th>
<th>Flooring</th>
<th>IIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 mm</td>
<td>Laminate</td>
<td>47  dB</td>
</tr>
<tr>
<td>3 mm</td>
<td>GDW</td>
<td>50  dB</td>
</tr>
<tr>
<td>3 mm</td>
<td>Ceramic</td>
<td>51  dB</td>
</tr>
<tr>
<td>4.5mm</td>
<td>Ceramic</td>
<td>52  dB</td>
</tr>
<tr>
<td>3 mm</td>
<td>LVT</td>
<td>51  dB</td>
</tr>
</tbody>
</table>

TEST APPARATUS (ΔL_w & IIC)

01. Floor covering composed by glued down wood, non glued laminate floor or ceramic or natural stone tiles
02. Agglomerated cork and recycled rubber resilient layer - T66
03. Reinforced concrete slab of thickness 140mm
LOAD DEFLECTION

CREEP DEFLECTION @ 0.0045MPA (% OF START HEIGHT)

INSTALLATION

GLUED FLOORS

NON GLUED FLOORS

PHYSICAL AND MECHANICAL PROPERTIES

Note: Following ISO8013-1998 measured in Cantilever Test System

01. Reinforced concrete slab
02. Adhesive
03. Agglomerated cork and recycled rubber resilient layer - T66
04. Floor covering composed by glued down wood, ceramic or nature stone
05. Perimeter insulation barrier
06. Vapor barrier
07. Floor covering composed by non glued laminate floor
The following installation instructions are recommended by Amorim Cork Composites, but are not intended as a definitive project specification. They are presented in an attempt to be used with recommended installation procedures of the flooring manufacturers.

**Room Conditions**
Temperature > 10ºC / Room moisture content < 75%.

**Subfloor**
All subfloor work should be structurally sound, clear and level. The moisture content of the subfloor should not be more than 2.5% (CM) by weight measured on concrete subfloors.

**Vapor Insulation Barrier (only for Non Glued Floors)**
PE (Polyethylene) vapor insulation barrier covering the entire flooring area, minimum 50mm wide vertically around the perimeter of the entire floor MUST be installed prior to the Acousticork T66.

Install by overlapping (minimum 100mm) the PE foil, and use an adequate tape to adhere/fix it, if necessary. After completion, PE foil should cover the entire concrete area without gaps. Never mechanically fasten the PE foil barrier with screws, nails or staples as this will severely diminish the performance of the insulation barrier.

**Installation Instruction for Acousticork T66**
Unpack the Acousticork T66 at least 24h before the installation and store it in the room where the installation will take place. Cut the T66 to desired length and install directly over the entire floor pulled 30mm up the walls with crown of the rolled materials up, removing all trapped air.

An independent perimeter insulation barrier can be installed around the entire perimeter of the room with width equal to that of the floor build up.

Both solutions are valid, the most important is to avoid lateral propagation of impact noise. The barrier must also be applied in the perimeter of pipes, ducts or any other component protruding from the floor. Spot adhere the strips to the wall using acrylic glue or a bead of silicone sealant.

After completion, the T66 should cover the entire flooring area without gaps and with joints butted tight and preferably taped.

**Final Flooring**
Always follow manufacturers recommended installation instructions.

**Recommended Adhesives:**
Wood floor to Acousticork: Water-Based Emulsion/Polyurethane Glue;
Vinyl and linoleum to Acousticork: Water-Based Emulsion/Synthetic Resin Glue;
Ceramic to Acousticork: Flexible Cement Glue;
Acousticork to slab/screed: Water-Based Emulsion/Acrylic Adhesives;

**Application Process**

**NON GLUED FLOORS**
1. Vapor insulation barrier application;
2. Perimeter barrier application;
3. Underlay application;
4. Tape application in joints between rolls;
5. Final floor application;
6. Perimeter insulation barrier cut.

**GLUED FLOORS**
1. Perimeter barrier application;
2. Underlay application (glued);
3. Final floor application (glued);
4. Perimeter insulation barrier cut.

**Important Notes**
Never mechanically fasten the Acousticork T66 to the flooring floor as this will severely diminish its acoustical value.

For detailed installation instructions, please contact us.
Material Description & Properties

Agglomerated recycled rubber underlay for impact noise and thermal insulation.

PRODUCT SPECIFICATION

*4 mm resilient acoustic underlay made of agglomerated recycled SBR (Stirene Butadiene Rubber) with PU (polyurethane) elastomer bonding agent for impact noise insulation for glued down wood, with a density of 700kg/m³ and an impact noise reduction ΔLw of 20dB.*

KEY FEATURES

- Produced from post consumer recycled rubber
- High durability and long term resilience
- High performance with reduced thickness

THERMAL PROPERTIES

Thermal Conductivity: 0.140 W/mK

ISO 8301

PHYSICAL AND MECHANICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Weight (1)</td>
<td>650 - 750 Kg/m³</td>
</tr>
<tr>
<td>Tensile Strength (2)</td>
<td>&gt; 350 KPa</td>
</tr>
<tr>
<td>Compressibility at 0.7MPa (3)</td>
<td>20%</td>
</tr>
<tr>
<td>Recovery after 0.7MPa (3)</td>
<td>&gt; 80%</td>
</tr>
</tbody>
</table>

(1) ASTM F1315 • (2) ASTM F152 • (3) ASTM F36

ACOUSTICAL RESULTS

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flooring</td>
<td>Glued Down Wood</td>
</tr>
<tr>
<td>Thickness (mm)</td>
<td>4</td>
</tr>
<tr>
<td>ΔLw (dB) (1)</td>
<td>20</td>
</tr>
<tr>
<td>IIC (dB) (1)</td>
<td>49</td>
</tr>
</tbody>
</table>

(1) ISO 10140-3 and ISO 717-2 • (2) ASTM E492-09 & ASTM E989-06

STANDARD DIMENSIONS

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness (mm)</td>
<td>4</td>
</tr>
<tr>
<td>Width (m) x Length (m)</td>
<td>1x15</td>
</tr>
</tbody>
</table>

Others sizes available upon request
**ACOUSTICAL RESULTS**


---

**Ref. Test Report**

ACU 128/10

**Thickness**

4 mm

**Flooring**

Glued Down Wood

**IIC (C)**

49 dB

---

**TEST APPARATUS (ΔLw & IIC)**

1. Floor covering composed by glued down wood
2. Agglomerated recycled rubber resilient layer - T22
3. Reinforced concrete slab of thickness 140mm
LOAD DEFLECTION

CREEP DEFLECTION @ 0.0045MPa (% OF START HEIGHT)

INSTALLATION

GLUED FLOORS

Note: Following ISO8013-1998 measured in Cantilever Test System
The following installation instructions are recommended by Amorim Cork Composites, but are not intended as a definitive project specification. They are presented in an attempt to be used with recommended installation procedures of the flooring manufacturers.

**Room Conditions**
Temperature > 10°C / Room moisture content < 75%.

**Subfloor**
All subfloor work should be structurally sound, clear and level. The moisture content of the subfloor should not be more than 2.5% (CM) by weight measured on concrete subfloors.

**Installation Instruction for Acousticork T22**
Unpack the Acousticork T22 at least 24h before the installation and store it in the room where the installation will take place. Cut the T22 to desired length and install directly over the entire floor pulled 30mm up the walls with crown of the rolled materials up, removing all trapped air.

An independent perimeter insulation barrier can be installed around the entire perimeter of the room with width equal to that of the floor build up.

Both solutions are valid, the most important is to avoid lateral propagation of impact noise. The barrier must also be applied in the perimeter of pipes, ducts or any other component protruding from the floor. Spot adhere the strips to the wall using acrylic glue or a bead of silicone sealant.

After completion, the T22 should cover the entire flooring area without gaps and with joints butted tight and preferably taped.

**Final Flooring**
Always follow manufacturers recommended installation instructions.

**Recommended Adhesives**
Wood floor to Acousticork: Water-Based Emulsion/Polyurethane Glue
Acousticork to slab/screed: Water-Based Emulsion/ Acrylic Adhesives.

**Application Process**

**GLUED FLOORS**
1. Perimeter barrier application; 2. Underlay application (glued); 3. Final floor application (glued); 4. Perimeter insulation barrier cut.

**Important Notes**
Never mechanically fasten the Acousticork T22 to the flooring floor as this will severally diminish its acoustical value.

For detailed installation instructions, please contact us.
ACOUSTICORK

SILENCE, COMFORT AND DURABILITY

02

Underscreed
Underscreed

**Acousticork** ensures high impact noise insulation in flooring screed applications.

Cork brings static stiffness (and higher load capacity) to the underscreed mat, without a negative impact on its dynamic stiffness. A cork-based underscreed guarantees the performance durability of the system equipped with this mat.


Test Apparatus: 140mm concrete slab + underscreed + 70mm screed.

<table>
<thead>
<tr>
<th>ΔLw (dB) (1)</th>
<th>IIC (dB) (2)</th>
<th>Product</th>
<th>Thickness (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>49</td>
<td>U22</td>
<td>4</td>
</tr>
<tr>
<td>23</td>
<td>51</td>
<td>U22</td>
<td>5</td>
</tr>
<tr>
<td>23</td>
<td>52</td>
<td>U85</td>
<td>6/3</td>
</tr>
<tr>
<td>24</td>
<td>54</td>
<td>U34</td>
<td>8/4</td>
</tr>
<tr>
<td>25</td>
<td>52</td>
<td>U85</td>
<td>8/4</td>
</tr>
<tr>
<td>27</td>
<td>52</td>
<td>U85</td>
<td>10/5</td>
</tr>
<tr>
<td>29</td>
<td>49</td>
<td>U34</td>
<td>17/8</td>
</tr>
</tbody>
</table>


Normalized impact sound pressure level and IIC rating determined according ASTM E492-09 and ASTM E989-06 standards. Test Apparatus: 140mm concrete slab + underscreed + 70mm screed.

<table>
<thead>
<tr>
<th>ΔLw (dB) (1)</th>
<th>IIC (dB) (2)</th>
<th>Product</th>
<th>Thickness (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>47</td>
<td>U32</td>
<td>4</td>
</tr>
<tr>
<td>20</td>
<td>48</td>
<td>U32</td>
<td>6/3</td>
</tr>
<tr>
<td>21</td>
<td>42</td>
<td>U32</td>
<td>8/4</td>
</tr>
<tr>
<td>22</td>
<td>47</td>
<td>U32</td>
<td>10/5</td>
</tr>
</tbody>
</table>

The **green solution** for your projects. Cork is natural, reusable and recyclable.

The perfect solution to strike a balance between energy efficiency, acoustic and thermal comfort, affordability and sustainability.

### Test procedure according ISO 9052-1 and ISO 7626-5 standards.

<table>
<thead>
<tr>
<th>ΔLw (dB) (3)</th>
<th>IIC (dB) (2)</th>
<th>Product</th>
<th>Thickness (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>47</td>
<td>U32</td>
<td>4</td>
</tr>
<tr>
<td>20</td>
<td>48</td>
<td>U32</td>
<td>6/3</td>
</tr>
<tr>
<td>21</td>
<td>42</td>
<td>U32</td>
<td>8/4</td>
</tr>
<tr>
<td>22</td>
<td>47</td>
<td>U32</td>
<td>10/5</td>
</tr>
</tbody>
</table>

---


(3) Test procedure according ISO 9052-1 and ISO 7626-5 standards.
Material Description & Properties

Agglomerated cork resilient layer for impact noise insulation of floating screed.

**Product Specification**

“___mm resilient acoustic underscreed made of agglomerated cork with PU (polyurethane) elastomer bonding agent for impact noise insulation of floating screeds, with a density of 185kg/m³ and an impact noise reduction of ___dB.”

**Key Features**

- Impact noise reduction and thermal insulation properties
- Very easy to handle and long term resilience
- Natural and sustainable product
- Low creep

**Thermal Properties**

Thermal Conductivity: 0.04 W/mK (1)

(1) ISO 8301

**Physical and Mechanical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Weight (q)</td>
<td>150 - 220 Kg/m³</td>
</tr>
<tr>
<td>Tensile Strength (2)</td>
<td>&gt; 200 KPa</td>
</tr>
<tr>
<td>Recovery after 0.7MPa (3)</td>
<td>&gt; 70%</td>
</tr>
<tr>
<td>Dynamic Stiffness (4)</td>
<td>*</td>
</tr>
</tbody>
</table>

(2) ASTM F1315 • (2) ASTM F152 • (3) ASTM F36 • (4) ISO 9051-1 & ISO 7626-5

* Test being performed

**Acoustical Results**

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>ΔLw (dB) (1)</th>
<th>IIC (dB) (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>19</td>
<td>47</td>
</tr>
<tr>
<td>6/3</td>
<td>20</td>
<td>48</td>
</tr>
<tr>
<td>8/4</td>
<td>21</td>
<td>42</td>
</tr>
<tr>
<td>10/5</td>
<td>22</td>
<td>47</td>
</tr>
</tbody>
</table>

(1) ISO 10140-3 and ISO 717-2 • (2) ASTM E492-09 & ASTM E989-06

**Standard Dimensions**

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>Width (m) x Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1x15</td>
</tr>
<tr>
<td>6/3</td>
<td>1x20</td>
</tr>
<tr>
<td>8/4</td>
<td>1x15</td>
</tr>
<tr>
<td>10/5</td>
<td>1x10</td>
</tr>
</tbody>
</table>

Others sizes available upon request
ACOUSTICAL RESULTS


L_{n,r}\ - Normalized impact sound pressure level of the reference floor with the floor covering under test;

L_{n,r,0}\ - Normalized impact sound pressure level of the Lab reference floor;

\Delta L_{w}\ - Impact sound pressure level reduction index of the covering under test, on a normalized floor;

<table>
<thead>
<tr>
<th>Ref. Test Report</th>
<th>Thickness</th>
<th>IIC_{c}</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACL104/15</td>
<td>4 mm</td>
<td>47 dB</td>
</tr>
<tr>
<td>ACL042/14</td>
<td>6/3 mm</td>
<td>48 dB</td>
</tr>
<tr>
<td>ACL042/14</td>
<td>8/4 mm</td>
<td>42 dB</td>
</tr>
<tr>
<td>ACL042/14</td>
<td>10/5 mm</td>
<td>47 dB</td>
</tr>
</tbody>
</table>

TEST APPARATUS (\Delta L_{w} & IIC)

- 01. Concrete floating screed with 70mm thickness
- 02. Agglomerated cork resilient layer with one face dimpled - U32 Profile
- 03. Reinforced concrete slab of thickness 140mm

- 01. Concrete floating screed with 70mm thickness
- 02. Agglomerated cork resilient layer - U32
- 03. Reinforced concrete slab of thickness 140mm
PHYSICAL AND MECHANICAL PROPERTIES

LOAD DEFLECTION

![Graph showing Load Deflection](image1)

CREEP DEFLECTION @ 0.0045MPA (% OF START HEIGHT)

![Graph showing Creep Deflection](image2)

DYNAMIC STIFFNESS

Test procedure according ISO 9052-1 and ISO 7626-5 standards.

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>4</th>
<th>6/3</th>
<th>8/4</th>
<th>10/5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic Stiffness (MN/m²)</td>
<td>*</td>
<td>107</td>
<td>86</td>
<td>*</td>
</tr>
</tbody>
</table>

* Test being performed

Note: Following ISO8013-1998 measured in Cantilever Test System

INSTALLATION

01. Reinforced concrete slab
02. Vapor barrier
03. Agglomerated cork resilient layer with one face dimpled - U32 Profile
04. Concrete floating screed
05. Perimeter insulation barrier
06. Adhesive tape
07. Agglomerated cork resilient layer - U32
The following installation instructions are recommended by Amorim Cork Composites, but are not intended as a definitive project specification. They are presented in an attempt to be used with recommended installation procedures of the flooring manufacturers and screed.

**Room Conditions**
Temperature > -5°C / Room moisture content < 75%.

**Subfloor**
All subfloor work should be structurally sound, clear and level. The moisture content of the subfloor should not be more than 2.5% (CM) by weight measured on concrete subfloors.

**Perimeter Insulation Barrier**
Install a perimeter insulation barrier vertically around the entire perimeter of the room with width equal to that of the floor build up. This is highly recommended in order to avoid lateral propagation of impact noise. The barrier must also be applied in the perimeter of pipes, ducts or any other component protruding from the floor. Spot adhere the strips to the wall using acrylic glue or a bead of silicone sealant.

---

**Installation Instruction for Acousticork U32**
Unpack the Acousticork U32 at least 24h before the installation and store it in the room where the installation will take place. Cut and trim the Acousticork U32 to the desired size to fit the installation. Apply directly over the subfloor. Always ensure that material is installed to fit the application avoiding the creation of waves in the material. In case of profile material, dimple side must face down.

Place the Acousticork U32 directly against the insulation perimeter barrier already installed. Proceed to cover the entire floor making sure that the joints are butted tight and use an adequate tape to fix it. After completion, the Acousticork U32 should cover the entire flooring area without gaps and with joints securely taped. An waterproof membrane (ex. Polyethylene foil) minimum 0.2mm covering the entire flooring area MUST be installed prior to the screed. Install it, minimum 150mm wide vertically and overlapping it, minimum 100mm. After completion, the insulation vapour barrier should cover the entire Acousticork U32 area without gaps. Never mechanically fasten the Acousticork U32 and/or the PE foil barrier with screws, nails or staples as this will severely diminish the performance of the insulation barrier.

**Screed and Final Flooring**
Cast a suitable screed over the loose laid PE foil previously installed over the product.

Always follow manufacturers recommended installation instructions.

For detailed installation instructions, please contact us.

---

Mini-rolls of perimeter barrier (PB U32) available upon request.
**Material Description & Properties**

Agglomerated recycled rubber resilient layer for impact noise insulation of floating screed.

**PRODUCT SPECIFICATION**

“___mm resilient acoustic underscreed made of agglomerated recycled SBR (styrene butadiene rubber) with PU (polyurethane) elastomer bonding agent for impact noise insulation on floating screed with a density of 700Kg/m³ and an impact noise reduction ΔLw of___dB.”

**KEY FEATURES**

- Impact noise reduction and thermal insulation properties
- Very easy to handle and long term resilience
- Produced from post consumer recycled rubber

**THERMAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Conductivity</td>
<td>0.140 W/mK</td>
</tr>
<tr>
<td></td>
<td>(1) ISO 8301</td>
</tr>
</tbody>
</table>

**PHYSICAL AND MECHANICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Weight</td>
<td>650 - 750 Kg/m³</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>&gt; 350 KPa</td>
</tr>
<tr>
<td>Recovery after 0.7MPa</td>
<td>&gt; 80%</td>
</tr>
<tr>
<td>Dynamic Stiffness</td>
<td>71 MN/m³</td>
</tr>
<tr>
<td></td>
<td>(1) ASTM F1315 • (2) ASTM F152 • (3) ASTM F36 • (4) ISO 9051-1 &amp; ISO 7626-5</td>
</tr>
</tbody>
</table>

**ACOUSTICAL RESULTS**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness (mm)</td>
<td>4</td>
</tr>
<tr>
<td>ΔLw (dB)</td>
<td>22</td>
</tr>
<tr>
<td>IIC (dB)</td>
<td>50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness (mm)</td>
<td>5</td>
</tr>
<tr>
<td>ΔLw (dB)</td>
<td>23</td>
</tr>
<tr>
<td>IIC (dB)</td>
<td>51</td>
</tr>
</tbody>
</table>

**STANDARD DIMENSIONS**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness (mm)</td>
<td>4</td>
</tr>
<tr>
<td>Width (m) x Length (m)</td>
<td>1x15</td>
</tr>
<tr>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>1x10</td>
</tr>
</tbody>
</table>

Others sizes available upon request
ACOUSTICAL RESULTS


Normalized impact sound pressure level and IIC rating determined according ASTM E492-09 and ASTM E989-06 standards.

<table>
<thead>
<tr>
<th>Ref. Test Report</th>
<th>Thickness</th>
<th>IIC_c</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACL 102/15</td>
<td>4 mm</td>
<td>50 dB</td>
</tr>
<tr>
<td>ACL 035/17</td>
<td>5 mm</td>
<td>51 dB</td>
</tr>
</tbody>
</table>

**TEST APPARATUS (ΔL_w & IIC)**

- 01. Concrete floating screed with 70mm thickness
- 02. Agglomerated recycled rubber resilient layer - U22
- 03. Reinforced concrete slab of thickness 140mm

Normalized impact sound pressure level of the reference floor with the floor covering under test; $L_{n,r}$ - Normalized impact sound pressure level of the Lab reference floor; $\Delta L_w$ - Impact sound pressure level reduction index of the covering under test, on a normalized floor; $IIC_c$ - Normalized impact sound pressure level of the reference floor with the floor covering under test.
LOAD DEFLECTION

CREEP DEFLECTION @ 0.0045MPA (% OF START HEIGHT)

DYNAMIC STIFFNESS

Test procedure according ISO 9052-1 and ISO 7626-5 standards.

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic Stiffness (MN/m³)</td>
<td>71</td>
<td>71</td>
</tr>
</tbody>
</table>
The following installation instructions are recommended by Amorim Cork Composites, but are not intended as a definitive project specification. They are presented in an attempt to be used with recommended installation procedures of the flooring manufacturers and screed.

**Room Conditions**
Temperature > -5°C / Room moisture content < 75%.

**Subfloor**
All subfloor work should be structurally sound, clear and level. The moisture content of the subfloor should not be more than 2.5% (CM) by weight measured on concrete subfloors.

**Perimeter Insulation Barrier**
Install a perimeter insulation barrier vertically around the entire perimeter of the room with width equal to that of the floor build up. This is highly recommended in order to avoid lateral propagation of impact noise. The barrier must also be applied in the perimeter of pipes, ducts or any other component protruding from the floor. Spot adhere the strips to the wall using acrylic glue or a bead of silicone sealant.

**Installation Instruction for Acousticork U22**
Unpack the Acousticork U22 at least 24h before the installation and store it in the room where the installation will take place. Cut and trim the Acousticork U22 to the desired size to fit the installation. Apply directly over the subfloor. Always ensure that material is installed to fit the application avoiding the creation of waves in the material. In case of profile material, dimple side must face down.

Place the Acousticork U22 directly against the insulation perimeter barrier already installed. Proceed to cover the entire floor making sure that the joints are butted tight and use an adequate tape to fix it. After completion, the Acousticork U22 should cover the entire flooring area without gaps and with joints securely taped. An waterproof membrane (ex. Polyethylene foil) minimum 0.2mm covering the entire flooring area MUST be installed prior to the screed. Install it, minimum 150mm wide vertically and overlapping it, minimum 100mm. After completion, the insulation vapour barrier should cover the entire Acousticork U22 area without gaps. Never mechanically fasten the Acousticork U22 and/or the PE foil barrier with screws, nails or staples as this will severely diminish the performance of the insulation barrier.

**Screed and Final Flooring**
Cast a suitable screed over the loose laid PE foil previously installed over the product.

Always follow manufacturers recommended installation instructions.

For detailed installation instructions, please contact us.
Material Description & Properties

Agglomerated cork with recycled polyurethane resilient layer for impact noise insulation of floating screed.

KEY FEATURES

- Impact noise reduction and thermal insulation properties
- Very easy to handle and long term resilience
- Produced from recycled and natural material
- Very light and flexible material

THERMAL PROPERTIES

Thermal Conductivity: 0.055 W/mK 
ISO 8301

PHYSICAL AND MECHANICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Weight (1)</td>
<td>240 - 380 Kg/m³</td>
</tr>
<tr>
<td>Dynamic Stiffness (2)</td>
<td>28 MN/m³</td>
</tr>
<tr>
<td>Tensile Strength (3)</td>
<td>&gt; 150 KPa</td>
</tr>
<tr>
<td>Recovery after 0.7MPa (4)</td>
<td>&gt; 75%</td>
</tr>
</tbody>
</table>

(1) ASTM F1315 • (2) ISO 9052-1 & ISO 7626-5 • (3) ASTM F152 • (4) ASTM F36

ACOUSTICAL RESULTS

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>ΔLw (dB) (1)</th>
<th>IIC (dB) (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/3</td>
<td>23</td>
<td>52</td>
</tr>
<tr>
<td>8/4</td>
<td>25</td>
<td>52</td>
</tr>
<tr>
<td>10/5</td>
<td>27</td>
<td>52</td>
</tr>
</tbody>
</table>

(1) ISO 10140-3 and ISO 717-2 • (2) ASTM E492-09 & ASTM E989-06

STANDARD DIMENSIONS

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>6/3</th>
<th>8/4</th>
<th>10/5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width (m) x Length (m)</td>
<td>1x20</td>
<td>1x15</td>
<td>1x15</td>
</tr>
</tbody>
</table>

Others sizes available upon request
ACOUSTICAL RESULTS


Ref. Test Report ACL171/15
Thickness 6/3 mm
\( L_{\text{n,r},w}(C_l,r_1) \) 55 (1) dB
\( \Delta L_w(C_l,\Delta) \) 23 (-12) dB

Ref. Test Report ACL122/15
Thickness 8/4 mm
\( L_{\text{n,r},w}(C_l,r_1) \) 53 (2) dB
\( \Delta L_w(C_l,\Delta) \) 25 (-13) dB

Ref. Test Report ACL121/15
Thickness 10/5 mm
\( L_{\text{n,r},w}(C_l,r_1) \) 51 (3) dB
\( \Delta L_w(C_l,\Delta) \) 27 (-14) dB

TEST APPARATUS (\( \Delta L_w \) & IIC)

01. Concrete floating screed with 70mm thickness
02. Agglomerated cork and PU resilient layer with one face dimpled - U85
03. Reinforced concrete slab of thickness 140mm

Normalized impact sound pressure level and IIC rating determined according ASTM E492-09 and ASTM E989-06 standards.
**LOAD DEFLECTION**

**CREEP DEFLECTION @ 0.0045MPA (% OF START HEIGHT)**

**DYNAMIC STIFFNESS**

Test procedure according ISO 9052-1 and ISO7626-5 standards.

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>6/3</th>
<th>8/4</th>
<th>10/5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic Stiffness (MN/m²)</td>
<td>42</td>
<td>33</td>
<td>28</td>
</tr>
</tbody>
</table>

**INSTALLATION**

- Reinforced concrete slab
- Vapor barrier
- Agglomerated cork and PU resilient layer with one face dimpled - U85
- Concrete floating screed
- Perimeter insulation barrier
- Adhesive tape

Note: Following ISO8013-1998 measured in Cantilever Test System.
The following installation instructions are recommended by Amorim Cork Composites, but are not intended as a definitive project specification. They are presented in an attempt to be used with recommended installation procedures of the flooring manufacturers and screed.

**Room Conditions**
Temperature > -5°C / Room moisture content < 75%.

**Subfloor**
All subfloor work should be structurally sound, clear and level. The moisture content of the subfloor should not be more than 2.5% (CM) by weight measured on concrete subfloors.

**Perimeter Insulation Barrier**
Install a perimeter insulation barrier vertically around the entire perimeter of the room with width equal to that of the floor build up. This is highly recommended in order to avoid lateral propagation of impact noise. The barrier must also be applied in the perimeter of pipes, ducts or any other component protruding from the floor. Spot adhere the strips to the wall using acrylic glue or a bead of silicone sealant.

**Installation Instruction for Acousticork U85**
Unpack the Acousticork U85 at least 24h before the installation and store it in the room where the installation will take place. Cut and trim the Acousticork U85 to the desired size to fit the installation. Apply directly over the subfloor. Always ensure that material is installed to fit the application avoiding the creation of waves in the material. In case of profile material, dimple side must face down.

Place the Acousticork U85 directly against the insulation perimeter barrier already installed. Proceed to cover the entire floor making sure that the joints are butted tight and use an adequate tape to fix it. After completion, the Acousticork U85 should cover the entire flooring area without gaps and with joints securely taped. An waterproof membrane (ex. Polyethylene foil) minimum 0.2mm covering the entire flooring area MUST be installed prior to the screed. Install it, minimum 150mm wide vertically and overlapping it, minimum 100mm. After completion, the insulation vapour barrier should cover the entire Acousticork U85 area without gaps. Never mechanically fasten the Acousticork U85 and/or the PE foil barrier with screws, nails or staples as this will severely diminish the performance of the insulation barrier.

**Screed and Final Flooring**
Cast a suitable screed over the loose laid PE foil previously installed over the product.

Always follow manufacturers recommended installation instructions.

For detailed installation instructions, please contact us.

www.amorimcorkcomposites.com

The data provided in this Material Data Sheet represents typical values. This information is not intended to be used as a purchasing specification and does not imply suitability for use in a specific application. Failure to select the proper product may result in either equipments damage or personal injury. Please contact Amorim Cork Composites regarding specific application recommendations. Amorim Cork Composites expressly disclaims all warranties, including any implied warranties or merchantability or of fitness for a particular purpose. Amorim Cork Composites is not liable for any indirect special, incidental, consequential, or punitive damages as a result of using the information listed in this MDS. Any of its material specification sheets, its products or any future use or re-use of them by any person or entity. For contractual purposes, please request our Product Specifications Sheet (PDA).
**ACOUSTICORK**

**U34**
Material Data Sheet

---

**Material Description & Properties**
Agglomerated recycled rubber resilient layer for impact noise insulation of floating screed.

---

**PRODUCT SPECIFICATION**

"___mm resilient acoustic underscreed made of agglomerated recycled SBR (Stirene Butadiene Rubber) with PU (polyurethane) elastomer bonding agent for impact noise insulation of floating screeds, with a density of 550kg/m³ and an impact noise reduction $\Delta L_{w}$ of ___dB."

---

**KEY FEATURES**
- Impact noise reduction and thermal insulation properties
- Very easy to handle and long term resilience
- Produced from post consumer recycled rubber
- Very flexible

---

**THERMAL PROPERTIES**
Thermal Conductivity: 0.140 W/mK \(^{(1)}\)
ISO 8301

---

**PHYSICAL AND MECHANICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Weight (^{(1)})</td>
<td>550 Kg/m³</td>
</tr>
<tr>
<td>Tensile Strength (^{(2)})</td>
<td>&gt; 250 KPa</td>
</tr>
<tr>
<td>Recovery after 0.7MPa (^{(3)})</td>
<td>&gt; 80%</td>
</tr>
<tr>
<td>Dynamic Stiffness (^{(4)})</td>
<td>16 MN/m³</td>
</tr>
</tbody>
</table>

\(^{(1)}\) ASTM F1315 • \(^{(2)}\) ASTM F152 • \(^{(3)}\) ASTM F36 • \(^{(4)}\) ISO 9051-1 & ISO 7626-5

---

**ACOUSTICAL RESULTS**

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>$\Delta L_{w}$ (dB) (^{(1)})</th>
<th>IIC (dB) (^{(2)})</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/4</td>
<td>24</td>
<td>54</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>$\Delta L_{w}$ (dB) (^{(1)})</th>
<th>IIC (dB) (^{(2)})</th>
</tr>
</thead>
<tbody>
<tr>
<td>17/8</td>
<td>29</td>
<td>49</td>
</tr>
</tbody>
</table>

\(^{(1)}\) ISO 10140-3 and ISO 717-2 • \(^{(2)}\) ASTM E492-09 & ASTM E989-06

---

**STANDARD DIMENSIONS**

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>Width (m) x Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/4</td>
<td>1x15</td>
</tr>
<tr>
<td>17/8</td>
<td>1x9</td>
</tr>
</tbody>
</table>

Others sizes available upon request

---

35
ACOUSTICAL RESULTS


<table>
<thead>
<tr>
<th>Ref. Test Report</th>
<th>Thickness</th>
<th>IIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACU 118/09</td>
<td>8/4 mm</td>
<td>48 dB</td>
</tr>
<tr>
<td>ACL 009/15</td>
<td>17/8 mm</td>
<td>55 dB</td>
</tr>
</tbody>
</table>

**Normalized Impact Pressure Level**

$L_{n,r}$ - Normalized impact sound pressure level of the reference floor with the floor covering under test;

$L_{n,r,0}$ - Normalized impact sound pressure level of the Lab reference floor;

$\Delta L_{w}$ - Impact sound pressure level reduction index of the covering under test, on a normalized floor;

<table>
<thead>
<tr>
<th>Ref. Test Report</th>
<th>Thickness</th>
<th>IIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACU 118/09</td>
<td>8/4 mm</td>
<td>48 dB</td>
</tr>
<tr>
<td>ACL 009/15</td>
<td>17/8 mm</td>
<td>55 dB</td>
</tr>
</tbody>
</table>

**TEST APPARATUS (\(\Delta L_{w}\) & IIC)**

01. Concrete floating screed with 70mm thickness

02. Agglomerated recycled rubber resilient layer with one face dimpled - U34 Profile

03. Reinforced concrete slab of thickness 140mm
**PHYSICAL AND MECHANICAL PROPERTIES**

### LOAD DEFLECTION

![Graph showing load deflection with stress and deflection axes.](image)

- **Graph Title:** Load Deflection
- **Axes:**
  - Stress (MPa) vs. Deflection (mm)
  - Two lines represent different thicknesses: 8/4 mm and 17/8 mm
- **Legend:**
  - 8/4 mm
  - 17/8 mm

### CREEP DEFLECTION @ 0.0045MPA (% OF START HEIGHT)

![Graph showing creep deflection over time.](image)

- **Graph Title:** Creep Deflection
- **Axes:**
  - Stress (MPa) vs. Deflection (%)
  - Time (h) vs. Profile
  - 8/4 mm line
  - 17/8 mm line
- **Legend:**
  - 8/4 mm
  - 17/8 mm

- **Note:** Following ISO 8013-1998 measured in Cantilever Test System

### DYNAMIC STIFFNESS

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>Dynamic Stiffness (MN/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/4 mm</td>
<td>26</td>
</tr>
<tr>
<td>17/8 mm</td>
<td>16</td>
</tr>
</tbody>
</table>

- **Test Procedure:** According to ISO 9052-1 and ISO 7626-5 standards.

---

**INSTALLATION**

- **Image of installation process**
- **Steps:**
  - Reinforced concrete slab (01)
  - Vapor barrier (02)
  - Agglomerated recycled rubber resilient layer with one face dimpled - U34 Profile (03)
  - Concrete floating screed (04)
  - Perimeter insulation barrier (05)
  - Adhesive tape (06)

---

**Note:** Following ISO 8013-1998 measured in Cantilever Test System
The following installation instructions are recommended by Amorim Cork Composites, but are not intended as a definitive project specification. They are presented in an attempt to be used with recommended installation procedures of the flooring manufacturers and screed.

**Room Conditions**
Temperature > -5°C / Room moisture content < 75%.

**Subfloor**
All subfloor work should be structurally sound, clear and level. The moisture content of the subfloor should not be more than 2.5% (CM) by weight measured on concrete subfloors.

**Perimeter Insulation Barrier**
Install a perimeter insulation barrier vertically around the entire perimeter of the room with width equal to that of the floor build up. This is highly recommended in order to avoid lateral propagation of impact noise. The barrier must also be applied in the perimeter of pipes, ducts or any other component protruding from the floor. Spot adhere the strips to the wall using acrylic glue or a bead of silicone sealant.

**Screed and Final Flooring**
Cast a suitable screed over the loose laid PE foil previously installed over the product.

**Installation Instruction for Acousticork U34**
Unpack the Acousticork U34 at least 24h before the installation and store it in the room where the installation will take place. Cut and trim the Acousticork U34 to the desired size to fit the installation. Apply directly over the subfloor. Always ensure that material is installed to fit the application avoiding the creation of waves in the material. In case of profile material, dimple side must face down.

Place the Acousticork U34 directly against the insulation perimeter barrier already installed. Proceed to cover the entire floor making sure that the joints are butted tight and use an adequate tape to fix it. After completion, the Acousticork U34 should cover the entire flooring area without gaps and with joints securely taped. An waterproof membrane (ex. Polyethylene foil) minimum 0.2mm covering the entire flooring area MUST be installed prior to the screed. Install it, minimum 150mm wide vertically and overlapping it, minimum 100mm. After completion, the insulation vapour barrier should cover the entire Acousticork U34 area without gaps. Never mechanically fasten the Acousticork U34 and/or the PE foil barrier with screws, nails or staples as this will severely diminish the performance of the insulation barrier.

**For detailed installation instructions, please contact us.**

---

**The data provided in this Material Data Sheet represents typical values. This information is not intended to be used as a purchasing specification and does not imply suitability for use in a specific application. Failure to select the proper product may result in either equipments damage or personal injury. Please contact Amorim Cork Composites regarding specific application recommendations. Amorim Cork Composites expressly disclaims all warranties, including any implied warranties or merchantability or of fitness for a particular purpose. Amorim Cork Composites is not liable for any indirect special, incidental, consequential, or punitive damages as a result of using the information listed in this MDS. Any of its material specification sheets, its products or any future use or re-use of them by any person or entity. For contractual purposes, please request our Product Specifications Sheet (PDA).**

www.amorimcorkcomposites.com
SILENCE, COMFORT AND DURABILITY

Wall Bearing

03
Wall Bearing

**Acousticork** prevents low frequency propagation on the wall/floor interface. It also increases the lifetime of the building, avoiding the appearance of cracks due to decoupling of elements.

**MS-R0**
Cork and Recycled Rubber

**MS-R1**
Recycled Rubber

**MS-R2**
Cork Recycled Polyurethane

Load range (MPa)

- **MAXIMUM** at <50% Deflection
- **OPTIMUM** at <25% Deflection

Materials available with different backings, such as double-sided tape, aluminium or polyester film.
MS-RO - a Wall Bearing material - is part of the Amorim Cork Composites range and it represents an excellent solution for acoustical and vibration issues.

MS-R0 is manufactured from recycled rubber and granulate cork and it has been developed to effectively interrupt the transmission of footstep noise vertically through the masonry. If wall bearings are used consistently throughout a building, and other sound transmission vectors are eliminated, this can significantly improve the quality of living conditions. The product is suitable for acoustic insulation in loadbearing.

LOAD RANGE
• WORKLOAD 0,3 - 1,4* MPa (43,5 - 203* psi)
• MAXIMUM LOAD 8 MPa (1160 psi)**

E-MODULE
• STATIC (1) 3,6-9 MPa (522,14 - 1305 psi)
• DYNAMIC (2) 6,5-28,0 MPa (942,75 - 4061,06 psi)

(1) DIN 53513 (ADAPTED) - TANGENTIAL MODULUS
(2) DIN 53513 (ADAPTED) - DEPENDING ON LOAD AND FREQUENCY
* AT 25% DEFLECTION
** AT <50% DEFLECTION

Compression Set (%) (1) <15
Tensile Strength (MPa) (2) >0,6 (>87psi)
Elongation at break (%) (2) >15
Density (kg/m³) (3) 600 (40lb/ft³)
Shore Hardness (Shore A) (4) 60-70
Natural Frequency (Hz) for 10mm thickness 21,5*
Natural Frequency (Hz) for 5mm thickness 26,5*

(1) DIN 53572 - MEASURED 30MIN AFTER DECOMPRESSION WITH 50% DEFORMATION / 23ºC AFTER 72H
(2) DIN 53571
(3) ASTM D2097
(4) ASTM D 2240
*AT 1,4MP STRESS

ADVANTAGES
• High resistance to compression
• Low dynamic stiffness
• Resistance to contact with liquids
• Sustainable and recyclable
Before the MS-R0 wall bearing is installed, check the floor for surface irregularities. If it is uneven (with projections, surface roughness or similar), apply a smooth mortar layer;

After the surface layer has been allowed to dry, lay the wall bearing. Make sure that it projects by approx. 15mm on the side on which the wall is to be plastered;

Sections of wall bearing are butt-jointed together, and the joint secured with adhesive tape for concrete.

The data provided in this Material Data Sheet represents typical values. This information is not intended to be used as a purchasing specification and does not imply suitability for use in a specific application. Failure to select the proper product may result in either equipments damage or personal injury. Please contact Amorim Cork Composites regarding specific application recommendations. Amorim Cork Composites expressly disclaims all warranties, including any implied warranties or merchantability or of fitness for a particular purpose. Amorim Cork Composites is not liable for any indirect special, incidental, consequential, or punitive damages as a result of using the information listed in this MDS. Any of its material specification sheets, its products or any future use or re-use of them by any person or entity. For contractual purposes, please request our Product Specifications Sheet (PDA).
MS-R1 - a Wall Bearing material - is part of the Amorim Cork Composites range and it represents an excellent solution for acoustical and vibration issues.

MS-R1 is manufactured from recycled rubber granulate and it has been developed to effectively interrupt the transmission of footstep noise vertically through the masonry. If wall bearings are used consistently throughout a building, and other sound transmission vectors are eliminated, this can significantly improve the quality of living conditions. The product is suitable for acoustic insulation in loadbearing and non-load-bearing walls.

LOAD RANGE

- **WORKLOAD** 0,2 - 0,8* MPa (29 - 116* psi)
- **MAXIMUM LOAD** 8 MPa (1160 psi)**

**E-MODULE**

- **STATIC** (1) 3,00-8,00 MPa (435-1160 psi)
- **DYNAMIC** (2) 5,50-18,0 MPa (798 - 2610 psi)

(1) DIN 53513 (ADAPTED) - TANGENTIAL MODULUS
(2) DIN 53513 (ADAPTED) - DEPENDING ON LOAD AND FREQUENCY
* AT 25% DEFLECTION
** AT <50% DEFLECTION

**Compression Set (%)** (1) 4,3
**Tensile Strength (MPa)** (2) > 0,5 (73 psi)
**Elongation at break (%)** (1) > 75
**Density (kg/m³)** (3) 750 (47lb/ft³)
**Shore Hardness (Shore A)** (4) 35-45
**Flammability** (5) *B2

**Natural Frequency (Hz)** 20**

(1) DIN 53572 - MEASURED 30MIN AFTER DECOMPRESSION WITH 50% DEFORMATION / 23ºC AFTER 72H
(2) DIN 53571
(3) ASTM D297
(4) ASTM D2240
(5) DIN 4102
* B2 = NORMAL FLAMMABLE
**AT 0,8MPa STRESS (10MM THICKNESS)

**ADVANTAGES**

- High resistance to compression
- Low dynamic stiffness
- Resistance to contact with liquids
- Sustainable and recyclable
**INSTALLATION**

Before the MS-R1 wall bearing is installed, check the floor for surface irregularities. If it is uneven (with projections, surface roughness or similar), apply a smooth mortar layer;

After the surface layer has been allowed to dry, lay the wall bearing. Make sure that it projects by approx. 15mm on the side on which the wall is to be plastered;

Sections of wall bearing are butt-jointed together, and the joint secured with adhesive tape for concrete.
**MS-R2 - a Wall Bearing material - is part of the Amorim Cork Composites range and it represents an excellent solution for acoustical and vibration issues.**

MS-R2 is manufactured from cork and recycled polyurethane granulate and it has been developed to effectively interrupt the transmission of footstep noise vertically through the masonry. If wall bearings are used consistently throughout a building, and other sound transmission vectors are eliminated, this can significantly improve the quality of living conditions. The product is suitable for acoustic insulation in non-load-bearing walls.

**LOAD RANGE**

- **WORKLOAD**: 0,1 - 0,43* MPa (14,5 - 62,43* psi)
- **MAXIMUM LOAD**: 1,25 MPa (181,3 psi)**

**E-MODULE**

- **STATIC** (1) 1,38-2,30MPa (200,15 - 333,59 psi)
- **DYNAMIC** (2) 3,8-13,0 MPa (551,14 - 1885,49 psi)

(1) DIN 53513 (ADAPTED) - TANGENTIAL MODULUS
(2) DIN 53513 (ADAPTED) - DEPENDING ON LOAD AND FREQUENCY
* AT 25% DEFLECTION
** AT <50% DEFLECTION

**Compression Set (%)** (1) 50%

**Tensile Strength (MPa)** (2) >0,1 (>14,5psi)

**Elongation at break (%)** (3) 46%

**Density (kg/m³)** (3) 250 (15,6lb/ft³)

**Shore Hardness (Shore A)** (4) 30-40

**Natural Frequency (Hz) for 10mm thickness** 25**

**Natural Frequency (Hz) for 5mm thickness** 31**

(1) DIN 53572 - MEASURED 30MIN AFTER DECOMPRESSION WITH 50% DEFORMATION / 23ºC AFTER 70H
(2) DIN 53571
(3) ASTM D297
(4) ASTM D 2240
**AT 0,43MPa STRESS**

**ADVANTAGES**

- High resistance to compression
- Low dynamic stiffness
- Resistance to contact with liquids
- Sustainable and recyclable
Before the MS-R2 wall bearing is installed, check the floor for surface irregularities. If it is uneven (with projections, surface roughness or similar), apply a smooth mortar layer;

After the surface layer has been allowed to dry, lay the wall bearing. Make sure that it projects by approx. 15mm on the side on which the wall is to be plastered;

Sections of wall bearing are butt-jointed together, and the joint secured with adhesive tape for concrete.

The data provided in this Material Data Sheet represents typical values. This information is not intended to be used as a purchasing specification and does not imply suitability for use in a specific application. Failure to select the proper product may result in either equipments damage or personal injury. Please contact Amorim Cork Composites regarding specific application recommendations. Amorim Cork Composites expressly disclaims all warranties, including any implied warranties or merchantability or of fitness for a particular purpose. Amorim Cork Composites is not liable for any indirect special, incidental, consequential, or punitive damages as a result of using the information listed in this MDS. Any of its material specification sheets, its products or any future use or re-use of them by any person or entity. For contractual purposes, please request our Product Specifications Sheet (PDA).

www.amorimcorkcomposites.com
The data provided in this brochure refers to typical figures. This information is not intended to be used as a purchasing specification and does not imply suitability for use in any specific application. Failure to select the proper product may result in either product damage or personal injury. Please contact Amorim Cork Composites regarding recommendations for specific applications. Amorim Cork Composites expressly disclaims all warranties, including any implied warranties of merchantability or of fitness for any particular purpose. Amorim Cork Composites shall not be liable for any indirect, special, incidental, consequential or punitive damages as a result of using the information listed in this brochure, any of its material specification sheets, its products or any future use or re-use of them by any person or entity. For contractual purposes, please request our Product Specifications Sheet (PDS).