

# U38



## Agglomerated cork blended with recycled PU based foam for high impact noise insulation in floating screed applications

### PRODUCT SPECIFICATION

"\_\_\_mm resilient acoustic underscreed made of agglomerated cork and recycled polyurethane foams (PU) with PU elastomer bonding agent for impact noise insulation of floating screeds, with a density of 274kg/m<sup>3</sup> and an impact noise reduction  $\Delta L_w$  of \_\_\_ dB."

### KEY FEATURES

- ▶ Impact noise reduction and thermal insulation properties
- ▶ High load capacity with low deflection
- ▶ Long-term resilience
- ▶ Negative carbon balance of -24.5kg CO<sub>2</sub>e/kg\* contributes to a lower carbon footprint
- ▶ Produced from recycled and natural materials
- ▶ Very light and flexible material, easy to handle

### THERMAL PROPERTIES

Thermal Conductivity (W/mK) 0,0546 <sup>①</sup>

<sup>①</sup> as per ISO 8301

### PHYSICAL AND MECHANICAL PROPERTIES

Specific Weight (Kg/m<sup>3</sup>) <sup>①</sup> 274

Tensile Strength (KPa) <sup>②</sup> 207

Cp level (mm) <sup>③</sup> 2 <sup>④</sup>

<sup>①</sup> ASTM F1315 <sup>②</sup> ASTM F152 <sup>③</sup> ISO 092/19 <sup>④</sup> For both thicknesses 12/6 and 17/8



### ACOUSTICAL RESULTS

Thickness (mm)	12/6	17/8
$\Delta L_w$ (dB) <sup>①</sup>	29	31
IIC (dB) <sup>②</sup>	61	63

<sup>①</sup> as per ISO 10140-3 and ISO 717-2

<sup>②</sup> ASTM E492-09; ASTM E989-18; ASTM E2235-04

### STANDARD DIMENSIONS

Thickness (mm)	12/6	17/8
Width (m) x Length (m)	1X11	1X8

Others sizes available upon request

### FIRE CLASSIFICATION

E/Efl <sup>①</sup>

<sup>①</sup> as per EN 13501-1 and ISO 11925

### TEMPERATURE

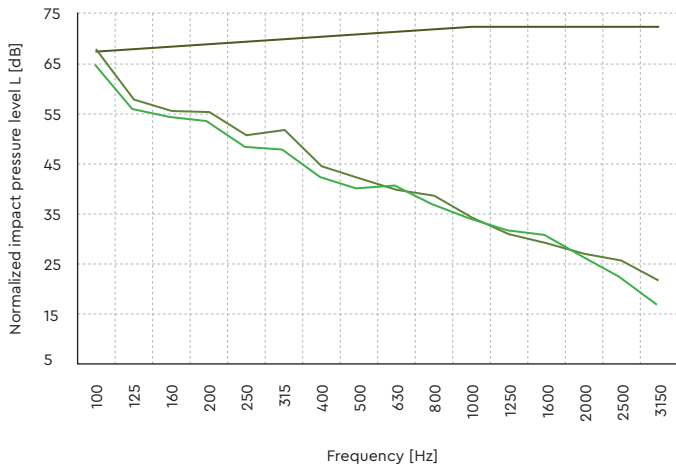
Range <sup>①</sup> -30 °C/ +30 °C (-22 °F to +86 °F)

<sup>①</sup> ASTM F147

\*The Life Cycle Assessment study of the Acousticork U38 underscreed was conducted by Itecons, in order to determine the environmental impact of the U38 [12/6] and U38 [17/8], underscreeds produced by Amorim Cork Composites. This study considered the following life cycle modules: Extraction and processing of raw materials (A1), Transport to the factory (A2), Production (A3) and End of life (C1-C4). The LCA study was conducted in accordance with international standards EN ISO 14040, EN ISO 14044 and EN 15804, as well as the requirements specified in the RCP (Rules for Product Categorisation) documents. The study also calculated the carbon balance of these products, using a methodology supplied by Amorim Cork Composites, which takes into account both the carbon sequestered by the cork oak forest and the GHG emissions from the production stage, calculated using the methodology of the EN 15804 standard.

## ACOUSTICAL RESULTS

Test procedure as per ISO 10140-1:2016; ISO 10140-3:2010; ISO 10140-3:2010/Amd.1:2015; ISO 10140-4:2010; ISO 717-2:2013



—  $L_{n,r,0}$  (dB) —  $L_{n,r}$  (dB) - 12/6mm —  $L_{n,r}$  (dB) - 17/8mm

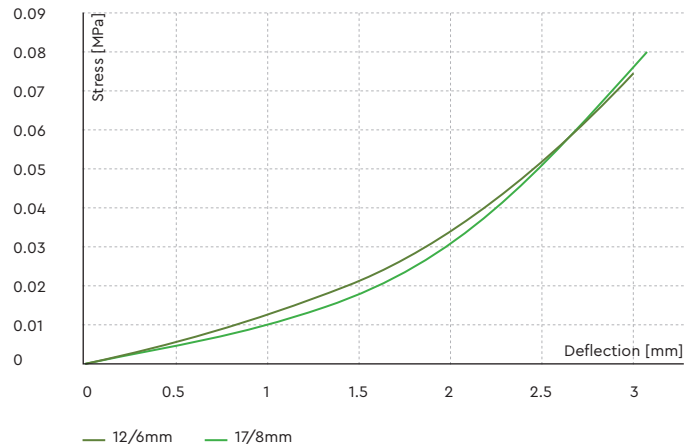
$L_{n,r}$  Normalized impact sound pressure level of the reference floor with the floor covering under test

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

Ref. Test Report	ACL 183/19
Thickness (mm)	12/6
$L_{n,r,w}$ ( $C_{i,r}$ ) (dB)	49 (4)
$\Delta L_w$ ( $C_{i,\Delta}$ ) (dB)	29 (-15)
Ref. Test Report	ACL 182/19
Thickness (mm)	17/8
$L_{n,r,w}$ ( $C_{i,r}$ ) (dB)	47 (4)
$\Delta L_w$ ( $C_{i,\Delta}$ ) (dB)	31 (-15)

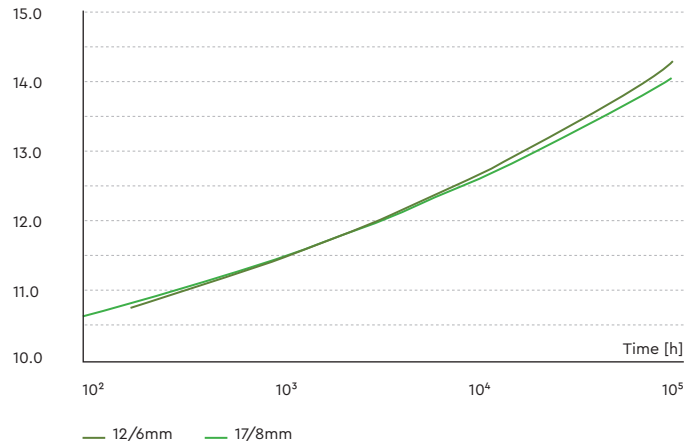
## PHYSICAL AND MECHANICAL PROPERTIES

### LOAD DEFLECTION

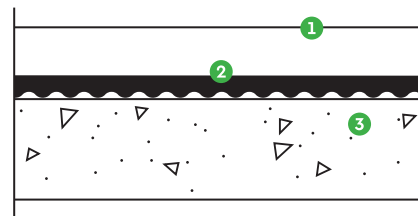


Note: Following ISO8013-1998 measured in Cantilever Test System

### CREEP DEFLECTION



### TEST APPARATUS ( $\Delta L_w$ )



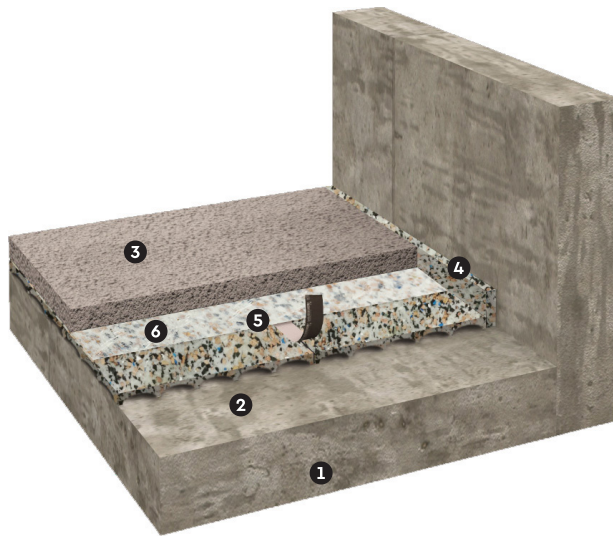
- 1 Concrete floating screed with 70mm thickness
- 2 Agglomerated resilient layer - U38
- 3 Reinforced concrete slab of thickness 140mm

### DYNAMIC STIFFNESS

Thickness (mm)	12/6	17/8
Dynamic Stiffness ( $MN/m^3$ ) <sup>ⓐ</sup>	14	12

<sup>ⓐ</sup> as per ISO 9052-1:1989; ISO 7626-5:1994

## INSTALLATION



- 1 Reinforced concrete slab
- 2 Agglomerated cork blended with recycled foam, with pre-attached PE foil – U38
- 3 Concrete floating screed
- 4 Perimeter insulation barrier
- 5 Adhesive tape
- 6 Pre-attached foil

### PB U38

Mini-rolls of perimeter barrier available upon request.



## GENERAL INSTALLATION INSTRUCTIONS

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 / Roommoisture 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 U38

Unpack the Acousticork U38 at least 24h before the installation and store it in the room where the installation will take place. Cut and trim the Acousticork U38 to the desired size to fit the installation. Apply directly over the subfloor with the dimpled side down. Always ensure that material is installed to fit the application avoiding the creation of waves in the material. Dimple side of the product should face down.

Place the Acousticork U38 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 U38 should cover the entire flooring area without gaps and with joints securely taped. Never mechanically fasten the Acousticork U38 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 U38 previously installed.

Always follow manufacturers recommended installation instructions.

For detailed installation instructions, please contact us.



## MATERIAL DATA SHEET U38

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).