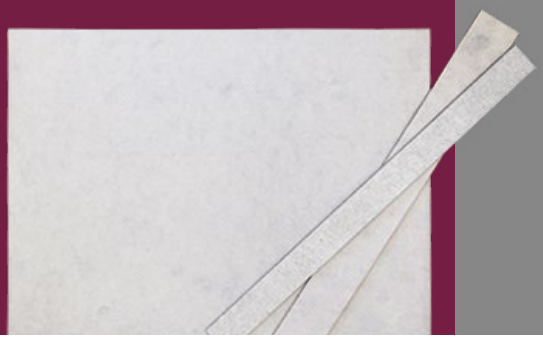
# ACOUSTIBOARD

## SOUNDPROOFING



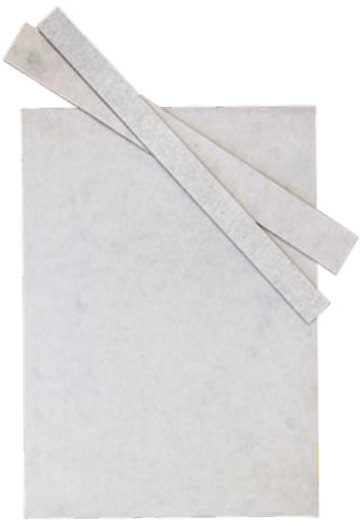
SOUNDPROOFING

### ACOUSTIC FLOOR PANELS

The ACOUSTIBOARD panel is a revolutionary product that eliminates the need for the 38 mm (1 ½ in) concrete covering that is usually poured over wood structures, while also providing excellent acoustic performance. This means that installation is easier, quicker and cheaper. At only 8 mm (3/8 in) thick, ACOUSTIBOARD is easy to install on other types of structures as well, as it generally needs only to be laid in place.


# ACOUSTIBOARD

ACOUSTIC FLOOR PANELS



## BENEFITS

- Suitable for new construction projects or renovations
- Fast and easy to install
- No special tools required
- Can be used with all types of structures

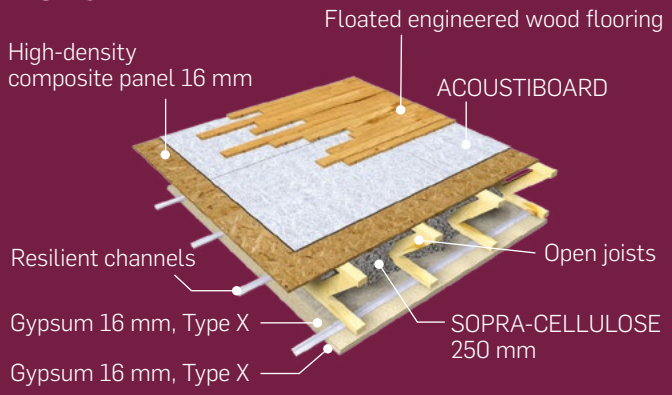
## PRODUCT CHARACTERISTICS

| ACOUSTIBOARD | |
|---|---|
| THICKNESS | 8 mm (3/8 in) |
| DIMENSIONS | 0.91 m x 1.22 m (36 in x 48 in) |
| WEIGHT | 9 kg/m² (1.7 lb/ft²) |
| SURFACE | Polyester |
| UNDERFACE | Rubber granules |
| THERMAL RESISTANCE (R VALUE) | 0.50 |

# FLOOR SOUNDPROOFING SYSTEM

## WOOD STRUCTURES WITHOUT CONCRETE

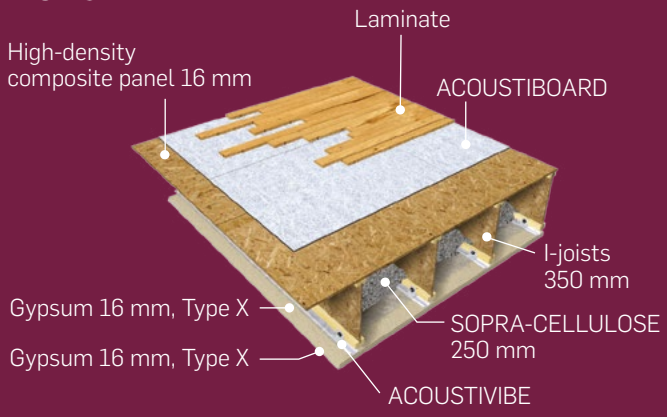
### ACB01




#### PROPERTIES

| | | |
|---|---|---|
| FIELD TESTS | ASTC 54-58 | AIIC 52-55 |
| LABORATORY TESTS | STC 58 | IIC 53 |

### ACB02

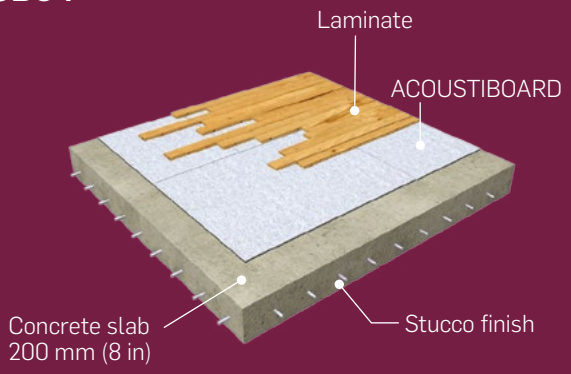



#### PROPERTIES

| | | |
|---|---|---|
| FIELD TESTS | ASTC 54-58 | AIIC 58-61 |
| LABORATORY TESTS | STC 61 | IIC 64 |

## STRUCTURAL SLAB

### ACB04



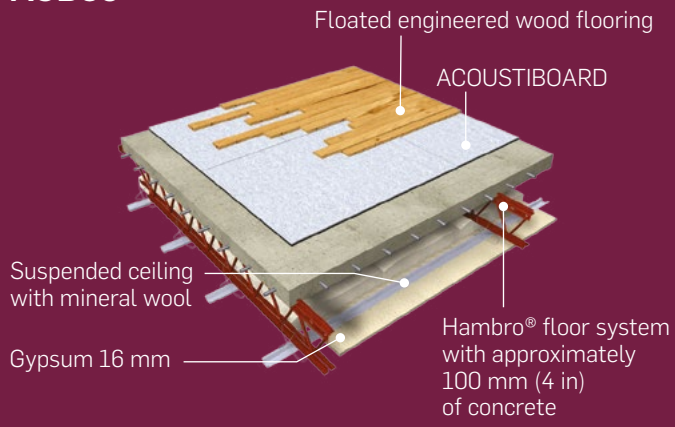

#### PROPERTIES

| | | |
|---|---|---|
| FIELD TESTS* | ASTC - | AIIC 62-65 |
| LABORATORY TESTS | STC - | IIC - |

* Note: Test performed on site on a floor sample of 0.6 m × 0.9 m (2 ft × 3 ft)

## HAMBRO® FLOOR SYSTEM

### ACB05




#### PROPERTIES

| | | |
|---|---|---|
| FIELD TESTS* | ASTC 57-60 | AIIC 63-66 |
| LABORATORY TESTS | STC - | IIC - |

* Note: Test performed on site on a floor sample of 0.6 m × 0.9 m (2 ft × 3 ft).
Hambro® is a product of Canam.

## PERFORMANCE COMPARISON WITH AND WITHOUT ACOUSTIBOARD

| Assembly **WITHOUT** ACOUSTIBOARD | Assembly **WITH** ACOUSTIBOARD |
|---|---|
| • OSB panel 19 mm<br>• I-joists 30 cm<br>• Cellulose 30 cm<br>• Resilient channels<br>• Gypsum 16 mm, Type X<br>• Gypsum 16 mm, Type X | • Engineered hardwood 15 mm<br>• ACOUSTIBOARD<br>• OSB panel 19 mm<br>• I-joists 30 cm<br>• Cellulose 30 cm<br>• Resilient channels<br>• Gypsum 16 mm, Type X<br>• Gypsum 16 mm, Type X |
| STC = 56; IIC = 47 | STC = 58; IIC = 53 |

ASTC : Apparent Sound Transmission Class
Tests in compliance with the ASTM E336 and ASTM E413 methods

AIIC : Apparent Impact Insulation Class
Tests in compliance with the ASTM E1007 and ASTM E989 methods

*The results are presented for information purposes only and may vary. They are based on the average of results obtained. Equivalent performance cannot be guaranteed by SOPREMA.

## ROBINSON TESTS

The Robinson Floor Test measures the mechanical resistance of a ceramic tile assembly.

It indicates the number of cycles completed before the ceramic tile or joints break. The maximum number of cycles is 14. Each cycle is categorized as a service level based on the performance of the assembly. Note that cycle 4 is for residential use.

### ASSEMBLY #1

- Ceramic tiles 13 in x 13 in, grade 4 and grout with sand (3 mm or 1/8 in joints)
- Cement-glue
- Two layers of plywood 12 mm (½ in) glued together with carpenter's glue and then screwed through the ACOUSTIBOARD to the deck with #8 x 2 ½ in floor screws every 150 mm (6 in) in both directions*.
- ACOUSTIBOARD
- Plywood 16 mm (5/8 in) glued and screwed to joists every 150 mm (6 in)
- 16 in c/c wood joists

**Results: Cycle 7; Light commercial**
(office space, reception areas, kitchens, bathrooms)

* As an alternative, the 2 plywoods assembly could be glued on the Acoustiboard with performant adhesive and the Acoustiboard glued to the plywood 16 mm (5/8 in) as well.

### ASSEMBLY #2

- Ceramic tiles 12 in x 12 in, grade 5 and grout with sand (3 mm or 1/8 in joints)
- Cement-glue
- Cement board 12 mm (½ in) glued to ACOUSTIBOARD
- ACOUSTIBOARD glued to concrete with SikaBond-T35
- Concrete slab 50 mm (2 in)

**Results: Cycle 13; Heavy service**
(shopping malls, stores, commercial kitchens, work areas, laboratories, auto showrooms and service areas, shipping/receiving, exterior decks)

### ASSEMBLY #3

- 12 x12 x 5/16 in ceramic tile and grout with sand (3/16 in joints)
- Hydroment Ditra-Set mixed with water
- Ditra Membrane
- Hydroment Ditra-Set mixed with water
- ACOUSTIBOARD glued to the wood deck *
- 3/4 in high density OSB panel screwed and glued to joists
- 19.2 in c/c wood joists

**Results: Cycle 7; Light commercial**
(office space, reception areas, kitchens, bathrooms)

* Please consult the table of adhesives.

## FIRE TESTS

CAN/ULC S101-7 and UL263 :
Standard for Fire Tests of Building Construction and Materials

Results: Over 60 minutes

DETAILS OF THE ASSEMBLY:
(The test is valid no matter what is added above the OSB panel)

- ACOUSTIBOARD (optional)
- OSB 16 mm (5/8 in) screwed and glued
- Open or wood I-joists 9 ½ in or deeper, or 2 in x 10 in wood beams; maximum 24 in c/c
- Cellulose or fiberglass insulation or no insulation at all
- Polyethylene film (for cellulose only)
- ACOUSTIVIBE System
- Gypsum board 16 mm type X
- Gypsum board 16 mm type X

## V.O.C. RELEASE

Using Headspace Gas Chromatography–Mass Spectrometry (HS-GC-MS).

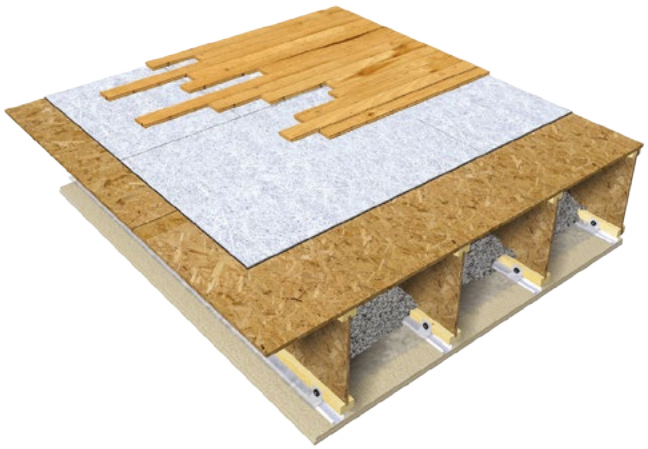
Results: 0% Volatile Organic Compounds detected

## SURFACE PREPARATION

### WOOD

Make sure the surface is free from any debris, such as nails, screws or any other construction rubbish that may damage the product once the floor finish is applied on the product.

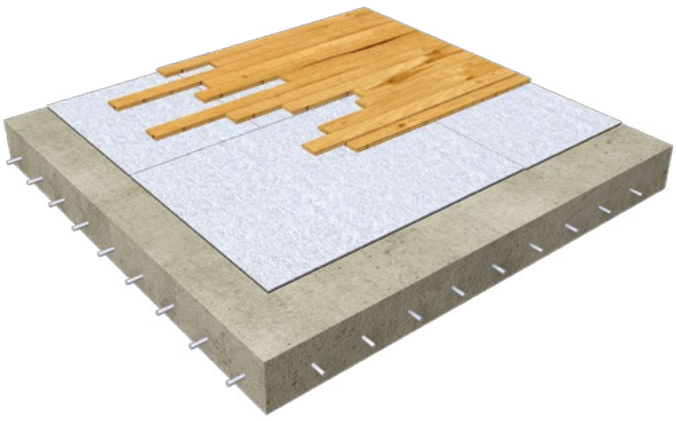
Generally, a good cleaning is enough to prepare the surface. Also make sure that there are no gaps between the two floor support panels. If necessary, fill those gaps with acoustic sealant.



### CONCRETE

The same preparation as for the wood deck should be performed, but since this product is a vapour barrier, you must also make sure that the concrete deck does not have a moisture rate so high that the product traps the moisture in the concrete.

A maximum moisture content of 3 lb/1,000 $ft^2$/24 h (1.46 kg/93 $m^2$/24 h) is recommended. This reading can also be taken with a calcium chloride test.



## INSTALLATION METHOD

ACOUSTIBOARD panels must always be installed so as to offset the joints and with the rubber granules facing the decking. A 1/8-inch space must be left at the perimeter between the ACOUSTIBOARD panels and the walls, then filled with acoustic sealant. We recommend using ACOUSTIBOARD strips underneath the sill plates of the non-load bearing walls to ensure the acoustic continuity of the floor. The ACOUSTIBOARD panels must then be installed against the strips in place.

### LAMINATE AND ENGINEERED WOOD

- When ACOUSTIBOARD is used as underlayment for floating wood flooring, fix mechanically, if necessary only, the four corners and the centre using staples or large-head nails to ensure that the panel is flat; otherwise simply lay out the ACOUSTIBOARD.
- The finished wood flooring is placed on top of the panels.
- A minimum thickness of 10 mm is recommended.
- Engineered wood could also be glued to the ACOUSTIBOARD panels using high-performance adhesives. In this case, the ACOUSTIBOARD must also be glued to the deck (see the list of recommended adhesives).

### NAILED HARDWOOD FLOORING

- One panel of high-density OSB 5/8 inch thick, not tongue and groove, is placed over the ACOUSTIBOARD panel, and the hardwood flooring is then nailed to this panel without the nails reaching the structure. It is recommended that a space of approximately 1/8 inch be left between the OSB panels to prevent the floor from squeaking.
- Also, at the transition of hardwood flooring and ceramic tiles, glue down the ACOUSTIBOARD on the subfloor and the OSB panels on the ACOUSTIBOARD at least 15 cm (6 in) wide to prevent vertical movement of the hardwood flooring and avoid squeaking between the hardwood flooring and the ceramic tiles.

### CERAMIC TILES

- Two plywood panels ½ inch thick are glued and screwed together above the ACOUSTIBOARD panels. Moreover, this assembly must be adequately fixed to the deck through the ACOUSTIBOARD to ensure mechanical stability under the ceramic tiles.
- Because ceramic surfaces are generally not very big, this will not significantly impact the soundproofing of the floor as a whole.
- Another option is to use a ½ inch thick cement panel in place of the two layers of plywood. In this case, the cement board panel joints must be coated with cement-glue and set before installing the ceramic tiles.
- To avoid altering the acoustic performance, the ACOUSTIBOARD can also be glued to the deck before gluing the two layers of plywood or the layer of cement board to the ACOUSTIBOARD.

IMPORTANT NOTE: ALWAYS STORE ACOUSTIBOARD PANELS IN A DRY PLACE PRIOR TO INSTALLATION.

## WARRANTY

SOPREMA soundproofing products are guaranteed against all manufacturing defects and to be suitable for all stated uses. SOPREMA's liability under this guarantee is limited to replacing or refunding the purchase price of SOPREMA soundproofing products found to be defective.

If you have any questions about this product or its installation, please contact your SOPREMA representative.