

## SONODAN PLUS AUTOADHESIVE

High-performance multi-layer board for airborne low frequency acoustic insulation



**EPD**<sup>®</sup>



EPD S-P-04339

SONODAN PLUS Autoadhesive is a multilayer panel divided in two different layers. This differentiation allows the counterbalance during the installation, reducing the risk of lack of sealing: First layer: formed by cross-linked polyethylene and a high density bituminous sheet finished in a self-adhesive film with non-stick plastic. Second layer: formed by a high density bituminous sheet finished in self-adhesive film with non-stick plastic and an absorber panel of mineral wool. Acoustically, the SONODAN PLUS Autoadhesive is based on the vibration of a membrane resonator (insulation at low frequencies) on elastic material (anti-impact).

### Presentation

- Length (cm): 120
- Width (cm): 100
- Thickness (mm): 40
- Membrane thickness (mm): 2 + 2
- Polyethylene thickness (mm): 6
- Mineral wool thickness (mm): 30
- m<sup>2</sup> / package: 48
- Surface (m<sup>2</sup>): 1.2
- Product code: 610060

### Technical Data

Concept	Value	Standard
Mass per unit area (nominal) (kg/m <sup>2</sup> )	10	-
Insulation improvement at 125 Hz (between rigid elements) (dB)	63	EN 12667 EN 12939
Acoustic insulation in solution musical place (dBA)	65.5	-

Concept	Value	Standard
Acoustic insulation in housing solution (dBA)	63	EN 717-1
Thermal conductivity of the insulation blanket 10 °C (W/mK)	0.130	-
Thermal conductivity of the membrane 10 °C (W/mK)	0.130	EN 12667 EN 12939
Rock wool thermal conductivity (W/m K)	0.035	-
Insulation blanket density (kg/m <sup>3</sup> )	0.038	EN 845
Membrane density (kg/m <sup>3</sup> )	> 1600	EN 845
Crosslinked Polyethylene Density (kg/m <sup>3</sup> )	90 +/- 10	EN 845
Masa nominal de la membrana; las dos capas (kg/m <sup>2</sup> )	6	EN 1849-1
Masa nominal de las dos membranas (kg/m <sup>2</sup> )	6	-
Modulus of elasticity of cross-linked polyethylene (kPa)	2 + 2	-
Pérdida de inserción (bajantes) (dBA)	EN 12311-1	-
Reaction to fire	B s3 d0	EN 13501-1
Reaction to fire according to its method of installation with exposed mineral wool (Euroclass)	B s3 d0	-
Tranversal tensile strength (kN/m)	1.05	EN 12311-1EN 12311-1EN 12311-1
Resistance to tearing (nail shank) (N)	>370	EN 12310-1
Airflow resistance of the porous textile (KPa.s/m <sup>2</sup> )	-	EN 29053
Thermal Resistance (m <sup>2</sup> K/W)	1.05	-
Thermal resistance of the whole (m <sup>2</sup> K/W)	1.05	EN 12667 / EN 12939
Work temperature (°C)	-20/+70	-
Thickness tolerance (%)	< 5	EN 823
Tolerance Length and Width (%)	< 5	EN 822

## Environmental Information

Concept	Value	Standard
Manufactured in	Fontanar - Guadalajara (España)	-

## Standards and Certification

- The sound certifications are the result of tests in an approved laboratory.
- \*For any questions about information on the tests, please consult our Technical Department.

Laboratory	Test (EN 140-3) No	Result (EN 717-1)
L.G.A.I.	102.669	RA= 52.6 dBA
L.G.A.I.	94.004.366	RA= 54.4 dBA
LABEIN	B 130-134-H93	RA= 62.6 dBA
LABEIN	B 130-134-H94	RA= 65.4 dBA

The acoustic certifications are a consequence of several tests in homologated laboratories. It complies with the Technical Building Code requirements for premises used in machinery rooms according to the DANOSA's Sound Insulation Solutions Catalog, files AA-03; AA-24 y AA32.

## Scope

- Sound insulation of music venues in tertiary buildings or located on the ground floor of residential buildings.
- Sound insulation of machine rooms in residential buildings.
- Renovation of walls between different users.

## Advantages & Benefits

- Airborne sound insulation in music venues  $D_nT_A > 70$  dBA.
- By installing a second layer of plywood, watertight protection is ensured.
- As the membranes are self-adhesive, the second layer is easy to apply.
- High flexibility, allows for continuity of insulation in difficult encounters.
- Good reaction to low-frequency penetrative noises.
- Mineral wool attenuates medium and high frequencies.
- The membrane junction forms a resonator that attenuates low frequencies.
- Low thickness with high acoustic performance.
- Due to the dimensions of the panel, it is easier and faster to install on the ceiling.
- Due to its high level of tensile strength, it can be installed mechanically.

## Instruction for Use

### Preliminary operations:

Vertical and horizontal surfaces must be plastered with 1.5 cm of plaster. Before applying the product, it must be completely dry.

- If cementitious adhesive is used as a fixing method on both vertical and horizontal surfaces, plastering can be dispensed with.
- We could dispense with plastering as the cementitious adhesive layer acts as a regularising and sealing layer on the facing.
- If it is not possible to wait for the plaster to dry for reasons of speed of construction, we recommend using a direct plasterboard lining made of N15 board as a wall sealant.

The installations that go through the elements once they have been insulated will have a cavity wall prior to the insulation of the wall. **Laying of self-adhesive SONODAN PLUS:** On the pallet of SONODAN PLUS Self-adhesive, the first layer of SONODAN PLUS Self-adhesive is placed on top, which is the first to be installed. Underneath is the second layer, which will be installed once the first layer has been fixed. **1. On the wall:**

- The first layer of SONODAN PLUS Self-Adhesive is installed against the substrate, so that the grey polyethylene presses against the wall, leaving the membrane visible. There are two methods of fixing the first layer:

**A. Mechanical fixing** It is fixed with staples or Danosa Insulation fasteners (4 units per panel). Once the piece is placed square to the walls, one person will hold the upper part, while another person carries out the first two mechanical fastenings, after which one person is released and the other continues to apply the fastenings. A hammer drill and diamond drill bit is used to drill both the panel and the partition wall, then the dowel is inserted and the dowel is presented. Finally, the dowel is hammered into the material. **B.**

**Fixing with cementitious adhesive** A layer of cement is applied to the wall with an 8 mm notched trowel and a thin layer of adhesive is applied to the polyethylene. Press down with a hard rubber roller for fixing (Coverage approx. 8kg/m<sup>2</sup>).

- To begin with, choose a corner and lay the panel so that the largest dimension (1.2m) is at the top and fix it according to the chosen method.
- Half of the first layer of SONODAN PLUS Self-Adhesive is then placed on one wall and the other half on the adjoining wall, thus giving continuity to the membrane and facilitating the backing of the second layer.
- Continue laying panels of the first layer so that they are flush with the adjacent one.
- Remove the release film from the first layer of SONODAN PLUS Self-Adhesive once it has been fixed to the wall according to the chosen method.
- Lay the second layer so that the membranes meet and the rockwool is visible.
- To begin installing the second layer of SONODAN PLUS Self-Adhesive, start by removing the release film and placing the panel upside down against a corner so that the smallest dimension (1 m) is in height.
- Press the second layer against the first layer.

## 2. On the ceiling:

- The first layer of SONODAN PLUS Self-Adhesive is installed against the substrate so that the grey polyethylene is pressed against the slab and the membrane is visible. There are two methods of fixing the first layer:
- Mechanical fixing (as described on the wall).
- Adhesive fixing (as described on the wall).
- To begin with, a corner is selected by presenting the panel in such a way that the largest dimension (1.2 m) remains in width and it is fixed according to the chosen method.
- Half of the first layer of SONODAN PLUS Self-Adhesive is then placed on one wall and the other half on the ceiling, thus giving continuity to the membrane and facilitating the backing of the second layer.
- Continue laying panels of the first layer so that they are flush with the adjacent one.
- Remove the release film from the first layer of SONODAN PLUS Self-Adhesive once it has been fixed to the wall according to the chosen method.
- Lay the second layer of SONODAN PLUS Self-Adhesive so that the membranes meet and the rockwool is visible.
- To begin installing the second layer of SONODAN PLUS Self-Adhesive, start by removing the release film and placing the panel upside down against a corner, so that the smallest dimension (1 m) is in length.
- Then press the second layer against the first layer. For safety reasons, this second layer of SONODAN PLUS Self-Adhesive is fixed with Danosa Insulation Fixings, with a yield of 1 units per

panel.

Note: DPS: Sound Insulation Installation Manual. Details of Singular Points.

## Indications and Important Recommendations

- The facade cladding in a building must end at the dividing wall between different users. See SPD 2.1
- The roof can be additionally fastened to the ceiling by means of the damper hood.
- Drainage installations running through commercial premises must be insulated with ACUSTIDAN (see BAJ2 sheet) and protected with construction elements. Installation passages sealed with high density resilient materials. See SPD 1.2
- Partition walls must be plastered with at least 1 cm. See SPD 3.
- Never connect smoke vents to ventilation stacks.
- Do not perforate the floating roof with installations in commercial premises solution. Create technical sockets for electrical panels that are located in walls. See SDP 2.3 and SPD 4.4
- Partition walls should not be anchored to structural elements (except for roofs in dwellings) such as pillars and facades. In order to maintain the stability of the system, the tiling element must be bonded to the internal floating partition walls.
- It is not possible to perforate the floating roof with installations in the proposed solution in commercial premises. See SPD 4.4 and files TEF3 and TEF4
- Impact sound insulation must be used. See DANOSA Solutions Manual sheets SUF1 to SUF5.
- It should be taken into account that this product is part of a Sound Insulation system, so the Danosa Building Solutions Catalogue DIV4, TRA3, TEF3 and TEF4 sheets should be taken into account. Implementation of Sound Insulation. "Details of Singular Points" (SPD), as well as the rest of Danosa documentation.
- In the case of central heating or water intake installations, decoupling by means of a cross-linked polyethylene shell. See SPD 1.2
- If a battery-powered drilling machine is used (never with a mains power cable), the drill bit can be soaked in water to prevent the drill bit from becoming embedded in the asphalt.

## Handling, storage and preservation

- Store in covered and ventilated places that comply with current legislation regarding storage.
- Consult the product safety datasheet.
- The product itself is not classified as hazardous and is not toxic to the environment.
- In application and, especially in closed places or during the performance of an operation involving dust production, the appropriate measures must be taken using P1-type masks, protective glasses and gloves. Wear loose clothing with closed cuffs.
- Stable at room temperature. Avoid being at temperatures above 70°C as that would alter the material's properties, accelerating its degradation.
- The rock fibres in this product are exempted from the carcinogenic classification of substances in terms of Note Q of Directive 97/69/EC.
- No personal protection is required during transportation and handling. During application, appropriate measures must be taken with regard to the handling of machinery (mechanical fixing) or the application of adhesives via solvents.
- Preferably transport on complete and packed pallets in order to avoid possible alterations to the product during transport.
- In all cases, the Occupational Safety and Hygiene standards, as well as the standards of good construction practice, must be taken into account.
- For further information, please contact our Technical Department.

## Notice

- The information contained in this document and any other advice provided, are given in good faith, based on DANOSA's current knowledge and experience when products are properly stored, handled and applied, in normal situations and in accordance with the recommendations of DANOSA. The information applies only to the application (s) and the product (s) to which reference is expressly made. In case of changes in the parameters of the application, or in case of a different application, consult the DANOSA Technical Service before using the DANOSA products. The information contained herein does not exonerate the responsibility of the building agents to test the products for the application and intended use, as well as their correct application in accordance with current legal regulations. The product images used in our communications are indicative and may differ slightly in color and aesthetic appearance in relation to the final product. Orders are accepted in accordance with the terms of our current General Sales Conditions. DANOSA reserves the right to modify, without prior notice, the data reflected in this documentation. Website: **www.danosa.com** E-mail: **info@danosa.com** Telephone: **+34 949 88 82 10**