

## ACUSTIDAN

Multi-layer membrane for thermal and acoustic insulation of cavity walls.



EPD S-P-04339

ACUSTIDAN is a multi-layer panel made of a high density bitumen based membrane and a porous textile layer. Acoustically it works as a low frequency sound insulation.

### Presentation

- Length (cm): 600
- Width (cm): 100
- Thickness (mm): 18
- Membrane thickness (mm): 2
- Total blanket thickness (mm): 16
- m<sup>2</sup> / package: 72
- Surface (m<sup>2</sup>): 6
- Product code: 610083

### Technical Data

Concept	Value	Standard
Density (kg/m <sup>3</sup> )	1	EN 845
Improvement to airborne noise on laminated gypsum board partition, ΔR (dBA)	100	-
Airborne sound insulation, RW (dBA)	48	EN 140-3, EN 717-1
Acoustic insulation in housing solution (dBA)	48	EN 717-1
Bituminous membrane thermal conductivity 10°C (w/m <sup>2</sup> K)	0.13	EN 12667, EN 12939

Concept	Value	Standard
Thermal conductivity of the insulation blanket 10 °C (W/mK)	0.040	-
Thermal conductivity of the membrane 10 °C (W/mK)	0.130	EN 12667 EN 12939
Thermal conductivity of cross-linked polyethylene (W / m K)	0.0405	EN 12667 EN 12939
Remainder deformation (24h compressed at 50%, 23°C) (%)	-0,285714285714286	-
Insulation blanket density (kg/m <sup>3</sup> )	50	EN 845
Membrane density (kg/m <sup>3</sup> )	1800 +/- 5%	EN 845
Crosslinked Polyethylene Density (kg/m <sup>3</sup> )	50 +/- 5%	EN 12667
Modulus of elasticity of cross-linked polyethylene (kPa)	18	-
Pérdida de inserción (bajantes) (dBA)	20	-
Reaction to fire	F	-
Reaction to fire according to its method of installation with exposed mineral wool (Euroclass)	F	-
Longitudinal tensile strength (kN/m)	> 470	EN 12311-1EN 12311-1EN 12311-1
Tranversal tensile strength (kN/m)	>480	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> )	25	EN 29053
Thermal Resistance (m <sup>2</sup> K/W)	0.55	-
Thermal resistance of the whole (m <sup>2</sup> K/W)	F	EN 12667 / EN 12939
Work temperature (°C)	0,55	-
Thickness tolerance (%)	5	EN 823
Tolerance Length and Width (%)	< 5	EN 822

## Environmental Information

Concept	Value	Standard
Volatile organic compounds (COV's) ( $\mu\text{g}/\text{m}^3$ )	< 100	ISO 16000-6:2006
Content of recycled raw material (%)	32	-
Post-consumer recycled content (%)	100	-
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)
DANOSA	TAB2000/05/2004	RA= 35 dBA
Laboratorio Gobierno Vasco*	B 0082-CT-95	RA= 47.6 dBA

## Scope

- Sound insulation of partition walls between different users in public or private residential buildings.
- Insulation of downspouts in commercial premises.
- Insulation within the airtight chambers of wall linings and floating ceilings for low, medium and high frequencies in low-noise commercial premises.
- Renovation of partition walls between different users in residential buildings.

## Advantages & Benefits

- Sound insulation for noisy premises with night-time  $\text{DnTA} > 65$  dBA.
- By increasing the mass of lightweight walls, a higher acoustic performance is achieved.
- High flexibility, allows for continuity of insulation in difficult junctions, such as corners.
- High tensile strength and nail-tear strength, can be installed mechanically.
- As a resonator membrane, it provides isolation at low frequencies.
- For downspouts, it prevents noise from entering the pipe.
- Low thickness with high acoustic performance.

## Instruction for Use

An installation of the ACUSTIDAN 16/4 shown in the following pictures:

## Indications and Important Recommendations

- The facade cladding in a building must end at the dividing wall between different users. See SPD 2.1
- The air chambers must be completely airtight.
- Partition walls must be plastered with at least 1 cm. See SPD 3.

- 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
- In order to improve the performance of the roofing system, it is possible to place a screed perpendicular to the joists every 40 cm prior to the installation of the product. The product is then fixed with a sheet metal screw and washer.
- For cutting, a MAKITA 4191 DW water-cooled low speed radial cutting machine or similar shall be used, with a MAKITA 85 - 6 asphalt cutting disc. ELYWOOD SAW BLADE 3-3 / 8 "x 15 mm.
- Impact sound insulation must be used. See "Sound Insulation Solutions Manual" sheets from AA01-AA04.
- It should be taken into account that this product is part of a Sound Insulation system, so the Danosa Building Solutions Catalogue, Sheets AA23, AA31 and AA51, should be taken into account. The Danosa "Implementation of Sound Insulation Details of Singular Points" (SPD), as well as the rest of the 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

- The product itself is not classified as hazardous and is not toxic to the environment.
- Store in covered and ventilated places that comply with current legislation regarding storage.
- Consult the product safety datasheet.
- The product may present a colour variation due to the mixture of fabrics, or the yellow colour may darken with the passage of time. This variation in appearance does not affect the acoustic conditions of the material.
- Stable at room temperature. Avoid being at temperatures above 80°C as that would alter the material's properties, accelerating its degradation.
- 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

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