

TOPSILENTEco

SELF-BEARING THERMAL-ACOUSTIC INSULATION PANELS WITH POLYESTER FIBRE BASE, NON-TOXIC, HEAT-SEALED, FREE FROM GLUES, PRE-COUPLED WITH A HIGH DENSITY SOUND-RESISTANT FOIL, AIRTIGHT AND RESISTANT TO VAPOUR, FOR INSULATING DOUBLE BRICK WALLS



GRANTS LEED CREDITS

CHARACTERISTICS		ENVIRONMENTAL		
ACOUSTIC INSULATION	THERMAL INSULATION	ECO GREEN	RECYCLABLE	SAFE WASTE

1 PROBLEM

Many of the thermal insulation products used to fill-in the air spaces of walls do not insulate against noise, are permeable to air and vapour, are small in size and therefore laying is necessarily bound to the simultaneous building of the false-wall.

2 SOLUTION

TOPSILENTEco is a pre-coupled panel obtained by joining a polyester fibre insulation product with a high density sound-resistant foil with high resistance to air and water vapour that acts as both acoustic and thermal insulation.

With regard to acoustic insulation, the fibre of the composite material dissipates the sound energy that crosses the air space of the double wall, while the airtight foil seals the pores in the wall so that the internal face of the air space does not need to be plastered. With regard to thermal insulation, the fibre is also an excellent thermal insulator. Its efficiency is maintained over time by the foil, which is always to be turned over towards the inside of the compartment to be insulated. This foil, in the insulation of external perimeter walls, does indeed act as a vapour barrier and keeps the thermal insulation obtained by the fibres dry and unaltered.

TOPSILENTEco is a thermal-acoustic insulation product whose fibrous part consists of non-toxic polyester wool obtained from recycled PET soft drink and mineral water bottles. The fibre thus obtained is to be considered as a dually ecological material because it frees the environment of high volumes of waste and because the product obtained through a glue-free thermal process does not irritate the skin and does not sting. The production cycle of the fibres of **TOPSILENTEco**, seeing as it is a recycling process, also

has very low environmental impact and low consumption of energy compared to that of other insulation materials that derive from raw virgin materials. The fibres of **TOPSILENTEco** do not irritate the skin of workers while cutting the panels and this is why the panels are not packed in plastic sacks.

APPLICATION FIELDS

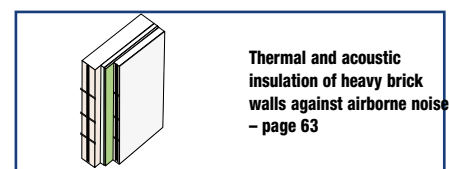
TOPSILENTEco is suitable for the thermal-acoustic insulation of air spaces in external perimeter walls and internal dividing walls between different dwellings. The coupling of the insulation material and the foil reduces application times and makes laying easier. The advantages of the coupling of the insulation material and the foil are further enhanced by the special configuration of the panels combined with the large sizes in which they are produced (100x142 cm, 100x285 cm). The supply dimensions make them convenient to use in association with plasterboard walls and false-walls just as a preventative insulation of the wall to be treated, on which the metal frame will then be installed to which the plasterboard panels are screwed.

METHOD OF USE

Laying is simple and quick and can be done by just one operator without having to simultaneously erect the false-wall and without having to use special tools.

TOPSILENTEco is glued to the wall with the face covered with the foil facing the operator. Simply apply a strip of approximately 15 cm of GIPSOLL glue on the fibrous face on the top end to hold the 100x142 panel in place, whereas another strip will be required in the middle to hold the 100x285 cm panels. It takes just a few minutes; the panel on which the adhesive is applied is put in place and lightly pressed against the wall using a painter's roller; it holds straight away and the operator can carry on fitting the next panel, finally, to ensure greater resistance to air and water vapour, the joining lines of the panels

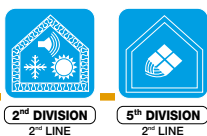
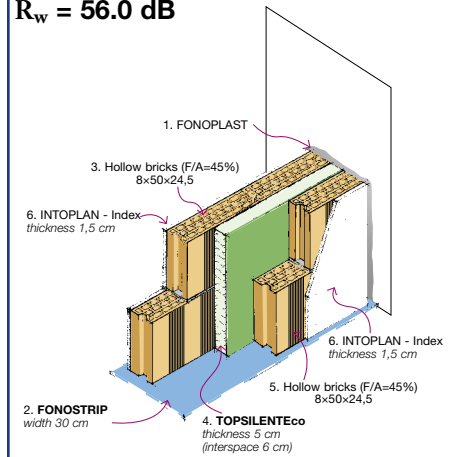
are sealed with the adhesive SIGILTAPPE. The glue is prepared by mixing the GIPSCOLL powder with water (it takes 600 g per strip), until a thick paste is obtained, which will be applied using a trowel or toothed spatula. Its consistency and adhesiveness should be such to hold the panel on the wall immediately, even when still wet, without having to wait for it to set and without having to use supports. The false-wall that will be built subsequently will be kept slightly detached from the insulation to prevent the elastic reaction of the insulation layer from deforming it or knocking it down in the setting phase of the mortar. If the material needs to be cut, first cut the foil with a Stanley knife and then cut the polyester wool with a long-bladed Stanley knife or an alternative saw with smooth blade. Do not use toothed-bladed saws.



Double insulated wall (brick with pores) - thickness 8+8 cm

Certification "ITC-CNR" n. 4166/RP/06

SOUNDPROOFING POWER
R_w = 56.0 dB



TOPSILENTEco

Product: TOPSILENTEco

Type		40	50	60
Thickness		42.5 mm	52.5 mm	62.5 mm
Mass per unit area		3.3 kg/m ²	3.5 kg/m ²	3.7 kg/m ²
Dimension		1.00x1.42 m 1.00x2.85 m	1.00x1.42 m 1.00x2.85 m	1.00x1.42 m 1.00x2.85 m
Thermal resistance R	EN 12667	1.09 m ² K/W	1.36 m ² K/W	1.63 m ² K/W
Dynamic stiffness	UNI EN 29052/1		s' < 30 MN/m ³	
Resistivity to air flow α			3.90 KPas/m ²	
Fire reaction classification	EN 13501-1		Euroclass E (*)	
Certification		  		
Constituting element: TOPSILENTBitex phonoresilient foil				
Thickness			approx. 2.5 mm	
Mass per unit area			2.5 kg/m ²	
Dynamic stiffness	UNI EN 29052/1		s' < 2 MN/m ³	
Aqueous vapour diffusion coefficient			μ 100 000	
Thermal conductivity λ			0.17 W/mK	
Specific heat.			1.30 KJ/kgK	
Constituting element: polyester fibre panel				
Thickness			40 ÷ 60 mm	
Density.	UNI 9947		30 kg/m ³	
Thermal conductivity λ			0.037 W/mK	
Specific heat.			1.20 KJ/kgK	
Aqueous vapour diffusion coefficient			μ =1	

(*) Certificate LAPI n. 596.0DC0050/10.

1. Mix the powder glue GIPSCOLL with water.



2. Spread with a spatula on the wool of TOPSILENTEco.



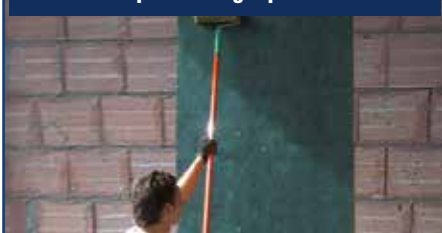
3. Apply two strips per panel (GIPSCOLL consumption: approx. 600 g per strip)



4. Place the panel on the wall.



5. Press the panel using a painter's roller.



6. Laying is complete.



• THE TECHNICAL SPECIFICATIONS MAY BE VIEWED AND DOWNLOADED ON THE RELEVANT PRODUCT DATA SHEET AT www.indexspa.it •

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