SILENCE IS SONIC

SONIC PANEL and SONIC ROLL

Floor deck sound absorption and waterproofing system

IN COMPLIANCE WITH D.P.C.M. 5-12-1997 ONACOUSTIC INSULATION REQUISITED AND DECREE LAW No. 311 DATED 29-12-2006 ON THERMAL INSULATION

POLYGLASS® Q

MAPEI GROUP

Adds value!

SONIC

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POLYGLASS MAPEI GROUP

COMPANY PROFILE

POLYGLASS SPIRIT HAS DEEP ROOTS

Part of the concrete work of the three brothers dedicated to the production of roofing ever since the end of the '60s was transformed into an initially rudimentary production based on the unlikely blending of different substances, bitumen and polymers. This soon led to industrial production and the start of an expansion that brought Polyglass to open a productive unit in the USA in the '80s. The company's international dimension developed alongside its scientific research and the desire to offer newer and newer solutions that were more and more efficient and easier to use. Fibre glass came to be used as a support, non-woven polyester fabric came to match traditional membranes applied by flaming and then the latest-generation adhesives arrives to eliminate smoke, noise and risk during laying. Self-adhesive membrane technology is the proud result of technological progress in harmony with environmental protection and healthier work conditions. Over thirty-five years have passed from the company's birth in 1969; many changes have been made, but the spirit remains the same.

Founded in 1969 as **Polyglass S.p.A.**, known as **Polyglass Europa S.p.A**. since 2006, the company is now one of the leading European producers of modified bitumen waterproofing membranes. Polyglass also produces thermal insulation and sound absorption panels that can be pre-bonded to advanced systems for the recovery of asbestos concrete roofing.

Polyglass Europa S.p.A. - Offices

Polyglass Europa S.p.A. is the leading Italian producer in the world and exports its products and technologies to over 40 different nations covering more than 2% of the world's market. The domestic market accounts for 70% of the company's total sales, which covers 12% of the nation's need.

Polyglass Europa S.p.A. has always pursued a policy of delocalization and now has two productive units in Italian territory.

Polyglass Europa S.p.A. - Productive unit

The main productive unit is in Ponte di Piave in the Province of Treviso where the company's headquarters is also located. Polyglass is also present in the United Kingdom with Polyglass Great Britain, a company that distributes the entire range of products, and in Romania with Polyglass Romania, the consociate that serves the Eastern European markets. In the United States, Polyglass is present with Polyglass USA Inc. and as many as 3 productive units in Pennsylvania, Nevada, and Florida.

Polyglass USA Inc. - Fernley, Nevada

Polyglass USA Inc. - Hazleton, Pennsylvania

Polyglass USA Inc. - Winter Haven, Florida

2. NOISE IS ANNOYING

Noise is a signal of disturbance for the information transmitted in a system.
Like sound, noise is composed of sound pressure waves and produced by countless natural and artificial sources.
An excess of high-intensity sound is defined as acoustic pollution with consequent damage to the natural and urban environment. Acoustic pollution can also be produced inside the building itself and whenever the noise of the systems or people is transmitted from one home or office to another, in this way reducing both comfort and privacy.

Acoustic pollution is opposed in the home or any closed area through the use of special materials with construction that dampen and reduce noise.
Noise is measured in decibels (dB) that express the sensation of disturbance to humans. The higher the dB, the greater the disturbance, even if disturbance does not increase proportionally with dB value.

RECOVERING LIVING COMFORT: DPCM 5.12.97

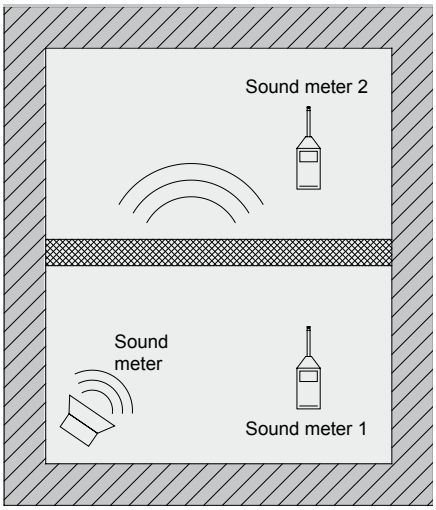
DPCM 5-12-1997, "Determining passive acoustic requisites in buildings" is the decree that defines the minimum performance in terms of noise insulation that buildings must provide. Floor decks, in particular, must ensure adequate insulation against the aerial noise transmitted from one building to another and the footstep noise generated inside buildings themselves.

Insulation against aerial noise is determined by the parameter **R'$_w$**, which corresponds to the index of apparent sound insulation power. In addition to its load bearing function, the floor deck must be capable of "eliminating" a certain quantity of decibels". The higher the **R'$_w$** value is, the better the insulation performance offered by the deck is. The parameter **R'$_w$**, is measured on site by positioning a noise source in one of the areas and then taking measurements in both the transmitting and receiving areas.

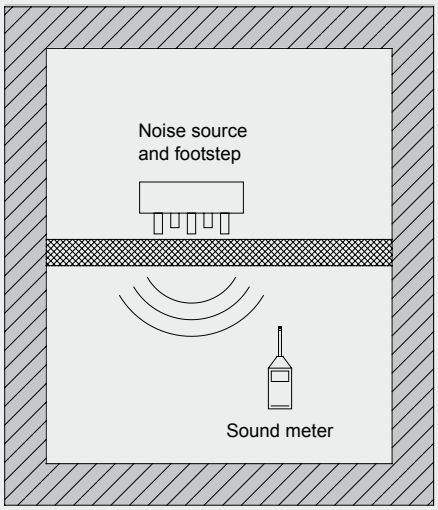
Footstep noise insulation is defined by the parameter **L'$_{n,w}$**, which corresponds to the footstep noise index. The **L'$_{n,w}$** value is measured by positioning a footstep noise generator on the floor deck to be examined and then measuring the noise level in the room subjected to disturbance.

For this reason, the lower the measured noise level is (**L'$_{n,w}$**), the better the deck's performance in terms of sound absorption will be.
Instructions for measurement procedure are provided in technical Standard UNI EN ISO 140-7.

The table provides the values specified by DPCM 5.12.97 as the requisites for residential unit; for **R'$_w$** (the floor deck's aerial noise insulation capacity), the minimum values are indicated, whereas for **L'$_{n,w}$** the minimum values are indicated, whereas for



AERIAL NOISE (R'$_w$) MEASUREMENT REFERENCE TABLE



FOR THE MEASUREMENT OF FOOTSTEP NOISE (L'$_{n'w}$)

Requisites for residential units as per DPCM 5.12.97

CLASSES OF BUILDING	R'$_w$ (minimum values)	L'$_{n,w}$ (maximum values)
Buildings qualified for use as hospitals, clinics, convalescent homes, and similar structures	55	58
Buildings qualified for residential use, and as hotels, boarding houses, and similar activities	**50**	**63**
Buildings qualified for use as educational institutions at all levels and similar structures	50	58
Buildings qualified for use as offices, recreational or worship activities, commercial or similar activities	50	55

DECREE LAW NO. 311 DATED 29.12.06 (THERMAL INSULATION)

In addition to providing acoustic insulation, the dividing elements between one residential unit and another must also respect the minimum thermal insulation values. Any given element's insulation capacity is known as its heat transmittance (U) and is expressed in Watts per Kelvin square meter (W/m^2 K). The lower this value is, the greater the element's thermal insulation capacity is.

Decree Law 311 dated 29.12.06 provides that for all categories of building to be constructed in Climate zones C, D, E, and F, with the exception of industrial buildings. the transmittance value (U) of the elements that separate adjacent buildings or properties must be less than or equal to 0,8 W/m^2K, for both vertical partition walls and horizontal floors (floor decks).

The same limit must also be respected for all solid vertical, horizontal, and inclined structures used to seal areas not equipped with heating systems from the outside.

THE SOLUTION: the floating floor

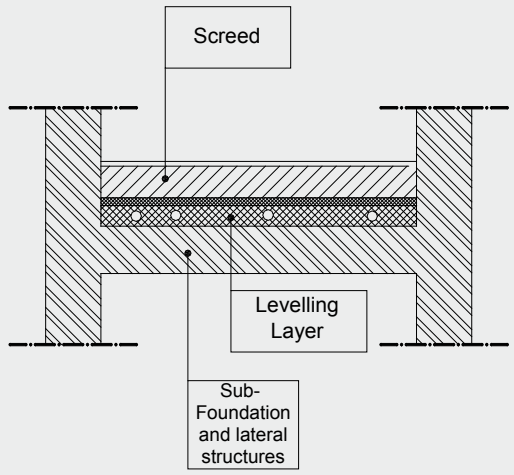
Whether they are constructed in concrete and masonry or in composite slabs, floor decks are horizontal dividing elements that must meet certain acoustic and thermal insulation requisites. After the insertion of raceways and/or ducting for electric and hydraulic systems, these decks are usually covered with low-density, lightweight screed (400 ÷ 700 kg/m^3) for example, as filler for a perfectly flat layer. A screed with greater consistency (1800 – 1900 kg/m^3) is then cast to a minimum thickness of 4 cm on which to lay the finishing layer in ceramic, wood, any other material chosen by the owner.

A dividing element composed in this way rarely responds to the minimum acoustic and thermal insulation requisites.

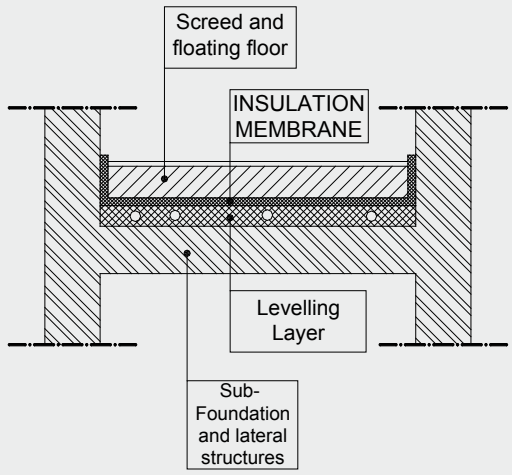
In order to meet the requisites specified by law, the ideal solution consists in laying beneath the finishing floor an insulation material that completely separates it from both lateral structures and the sub-foundation.

These "floating floors" absorb the vibrations generated by footsteps and increase insulation against the aerial noise produced by the bearing beck below. The insulation material can also contribute to the greater thermal insulation of the floor.

An efficient insulation system should also be easy to lay, modular depending on the type of floor deck, walkable at the worksite and strong enough to resist puncture through impact before it is covered by the floor, easily horizontally connectable and at the edges in order to prevent the formation of thermal and acoustic bridges, and have the right balance between deformability and rigidity.



LAYERS OF A FLOOR DECK WITH SCREED



LAYERS OF A FLOOR DECK WITH FLOATING FLO

SONIC ROLL ABD SONIC PANEL

POLYGLASS, with a long experience in the formulation and production of waterproofing sheet, bonded insulation systems, and self-adhesive membranes, has now developed a modular system for acoustic and thermal insulation: the SONIC Line.
The SONIC Line permits the easy and reliable laying of floating floors that are perfectly insulated from the support surface. The unique characteristics of the system's component materials ensure compliance with the law in terms of both acoustic and thermal insulation. The SONIC system is composed of four different products:

SONIC ROLL is an elastomeric plastomeric bituminous polymer sheet bonded to green non-woven fabric with an additional layer in polyester fibre (6.5 mm) that comes in 1 x 10 m long rolls for a total thickness of 8.0 mm (before bonding).

SONIC PANEL is an elastomeric plastomeric bituminous polymer membrane bonded to a non-woven fabric and an additional layer of polyester fibre(10.0 mm) that comes in easy to lay 1 x 1 m panels with for a total thickness of 13.0 mm (before bonding).

SONIC TAPE is silver colored tape ideal for the perfect sealing of overlapping or adjacent sheets of SONIC ROLL and SONIC PANEL. The silver colour distinguishes the areas that have been sealed from those that have not. SONIC TAPE comes in 75 mm wide 10 m long rolls.

SONIC BAND is an elastomeric plastomeric bituminous polymer sheet bonded to green non-woven fabric with an additional layer in polyester fibre (6.5 mm) specifically formulated for the acoustic insulation of floors from the vertical brick walls at their sides that can also be folded back over its length to join SONIC PANEL and SONIC ROLL floor sections to the walls for the elimination of acoustic bridges.
SONIC BAND comes in 20 cm wide 10 m long rolls.

SONIC ROLL E SONIC PANEL

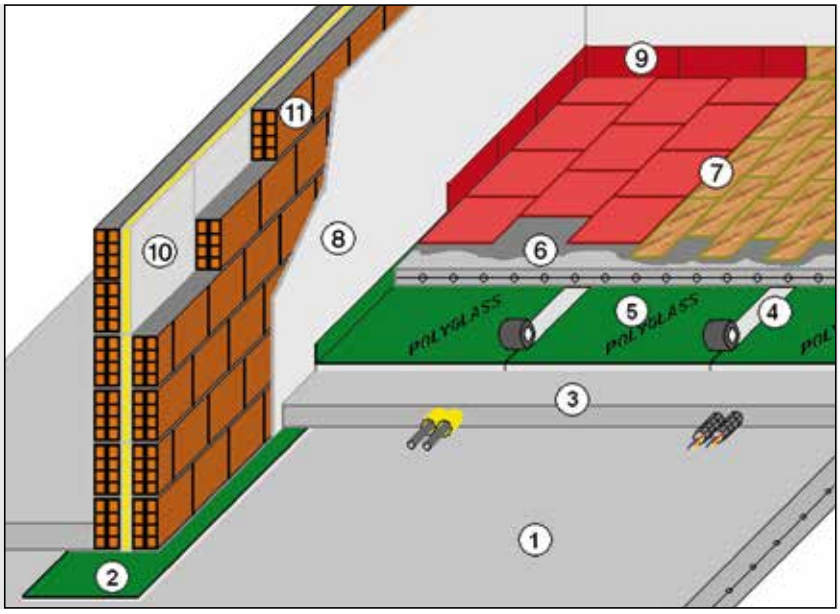
SONIC TAPE

SONIC BAND

THE SONIC SOLUTION: examples of laying

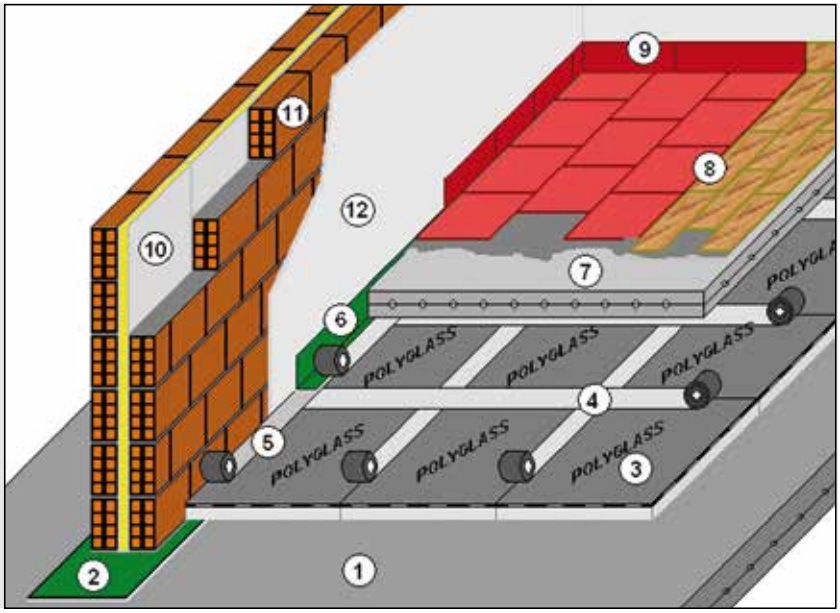
Example of SONIC ROLL laying

1) Deck
2) Sonic Band
3) Lightened brick
4) Sonic Tape
5) Sonic Roll
6) Floating floor
7) Ceramic tile, stone or glued wood top layer
8) Indoor plaster
9) Skirting
10) Acoustic insulation panel
11) Indoor partition wall



Example of SONIC PANEL laying

1) Deck
2) Sonic Band
3) Sonic Panel
4) Sonic Tape
5) Bi-adhesive tape
6) Sonic Band
7) Floating floor
8) Ceramic tile, stone or glued wood top layer
9) Skirting
10) Acoustic insulation panel
11) Indoor partition wall
12) Indoor plaster



Measurements made after laying with SONIC ROLL and SONIC PANEL

Product	Format and packaging	Thickness	Dynamic rigidity		Results achieved with deck (*) insulated with SONIC system		
			Apparent dynamic rigidity (S't)	Dynamic rigidity useful for calculation (S')	Level of footstep noise	Decrease in foot-step noise $\Delta L'_{n,w}$ (*)	Heat transmittance (U) (*)
SONIC ROLL	Rolls da 10 x 1 m	8,0 mm	15 MN/m³	47 MN/m³	57,5 dB	22,8 dB	
SONIC PANEL	Panels da 1 x 1 m	13,0 mm	11 MN/m³	22 MN/m³	52,6 dB	27,7 dB	0,75 W/m²K

(*) Calculated for brick-concrete deck (20 + 4 cm), plastered to ceiling (1,0 cm), lightened brick (600 kg/m³ - 7 cm), floating floor (4,0 cm).

THE SONIC SOLUTION: advantages

SONIC SYSTEM ADVANTAGES

- **Easy to lay** – permits the laying of a continuous layer of insulation without acoustic bridges (the absence of differentiated borders makes it easy to check the perfect alignment of the rolls and/or panels, and in the case of SONIC ROLL permits laying to be performed with overlapping of just a few centimeters – particularly advisable because it ensures greater insulation continuity). Furthermore, when adequately folded back over its length along the perimeters of the room, SONIC ROLL membrane permits the quick and easy laying of a short section that goes up he walls that will function both as insulant and compactable band for the floating floor to be laid subsequently.

- **Excellent resistance to worksite footstep and impact damage** – prior to the laying of the floating floor, the membrane's elevated strength prevents worker's footsteps and/or the accidental dropping of tools from breaking its continuity. Just one single cut and/or damage to the membrane can compromise the entire sealing operation its insulation characteristics.

- **Waterproof seal** – SONIC System membranes are waterproof and therefore provide an extra level of sealing of the floor against accumulations of rainwater and/or leakage of water, such as from electrical appliances, for example.

- **Turnkey system**
  the SONIC system is complete with all the accessories required for efficient thermal/acoustic insulation:

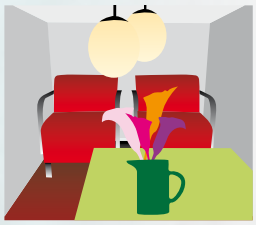
  SONIC BAND
  SONIC TAPE

  The silver colour of SONIC TAPE contrasts sharply with the dark color of the membrane in order to permit a quick visual check of where joints and/or overlapping areas have been sealed or not.

SONIC PANEL ADVANTAGES

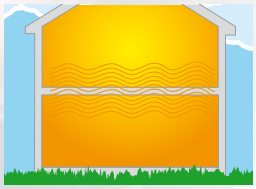
In addition to the characteristics shared by all the other SONIC System products, superior insulation capacity and 1 x 1 meter format make SONIC PANEL particularly effective in special areas such as:
:

- **Small rooms in which the unrolling and cutting of the membrane may be difficult and slow to perform.** Thanks to its handy 1 x 1 m "tile" format, SONIC PANEL can be quickly and easily laid with a limited number of cuts for perfect adaptation to the size of the room.



- **Floor decks with low acoustic insulation capacity.** SONIC PANEL has a higher thickness of polyester fiber (10 mm) that gives it a lower dynamic rigidity value (S'= 22 MN/m^3) and consequently higher sound absorption power (ΔL_w=27,7 dB).

- **Floor decks with low thermal insulation capacity.** Thanks to the higher thickness of its polyester fiber (10 mm), SONIC PANEL can change the heat transmittance value (U), of a floor deck/sub-foundation such as the one used in the example (see Table 9) to W/m^{2}K 1,02that is not in compliance regulations according to Decree Law 311dated 29.12.06 to a value of W/m^{2}K 0,75and therefore in compliance with the regulations in force.



FUNDAMENTAL MEASUREMENTS

1) **Dynamic rigidity (S' e S't)** – defines a material's capacity for elastic deformation when subjected to dynamic stress. When combined with the presence of a floating floor, this capacity permits the absorption of the vibrations transmitted by the floor's top layer for the reduction of noise. Dynamic rigidity is expressed in MN/m^3 and the lower this value is, the greater the sound absorption capacity is. It is equally important however that this value never drops to levels that might compromise the thickness of insulation material under load and create resonance in the system. **S't** indicates the material's apparent dynamic rigidity, while **S'** measures the material's dynamic rigidity in the absence of the gas (usually air) that it contains when subjected to a load of 200 Kg/m^2 for 21 days as specified by UNI EN 29052-1: 1993. This is the value to use when making forecast calculation of **$L'_{n,w}$** and reflects the characteristics of the material subjected to static and/or dynamic pressure.

2) **Decrease in footstep noise** ($\Delta L'_{n,w}$) - indicates the capacity of the sound absorption material to eliminate the rough floor deck's footstep noise. This value is expressed in decibe (dB) and closely correlated to**S'.**

HOW TO DESIGN A COMPLETE INSULATION SYSTEM: the forecast calculation of $L'_{n,w}$

Il DPCM 5-12-1997, defines the passive acoustic insulation requisites for buildings and the values to be obtained once the materials have been laid. In order to design insulation systems that can pass even the strictest tests on site, a forecasting calculation can be made using the simplified model proposed in Technical Report UNIT R 11175 using the following formula:

$$L'_{n,w} = L_{nweq} - \Delta L_w + K$$

where:

$L'_{n,w,eq}$ (dB) is the level of footstep noise coming from the bearing floor deck without the floating floor layer.

ΔL_w (dB) indicates the decrease in footstep noise produced by the floating floor when the insulation system is used.

K (dB) is the correction to be made for the presence of lateral noise transmission. This value, which can Be obtained from the table provided in UNI TR 11175, depends on the weight per area value of the bearing floor deck and the vertical wall weight per area value.

The two tables below show the L'n,w results with the variation of the weight of a floor deck made of 100 Kg/m², brick when SONIC ROLL or SONIC PANEL are adopted.
The K parameter was assigned a precautionary value considering the most restrictive values provided in Technical Report UNIT R 11175.
<u>This forecasting calculation is intended only as a guide to the selection of material.</u>

Floor deck with Sonic Roll and floating floor

Floor deck cu m' (kg/m²)	UNI TR 11175 ratio $L'_{n,w,eq}$ = 164 - 35 log(m') (dB)	Floor cu m' (kg/m²)	s' (SONIC ROLL) (MN/m³)	f_0 (Hz)	ΔL_w (dB)	K (dB)	$L'_{n,w}$ (dB)
300	77,30	100	47	109,7	22,8	3	57,5
320	76,32	100	47	109,7	22,8	3	56,6
340	75,40	100	47	109,7	22,8	3	55,6
360	74,53	100	47	109,7	22,8	4	55,8
380	73,71	100	47	109,7	22,8	4	54,9
400	72,93	100	47	109,7	22,8	4	54,2
420	72,19	100	47	109,7	22,8	4	53,4

Floor deck with Sonic Panel and floating floor

Floor deck cu m' (kg/m²)	UNI TR 11175 ratio $L'_{n,w,eq}$ = 164 - 35 log(m') (dB)	Floor cu m' (kg/m²)	s' (SONIC ROLL) (MN/m³)	f_0 (Hz)	ΔL_w (dB)	K (dB)	$L'_{n,w}$ (dB)
300	77,30	100	22	75,0	27,7	3	52,6
320	76,32	100	22	75,0	27,7	3	51,6
340	75,40	100	22	75,0	27,7	3	50,7
360	74,53	100	22	75,0	27,7	4	50,8
380	73,71	100	22	75,0	27,7	4	50,0
400	72,93	100	22	75,0	27,7	4	49,2
420	72,19	100	22	75,0	27,7	4	48,5

HOW TO DESIGN AN INSULATION SYSTEM: calculating thermal insulation

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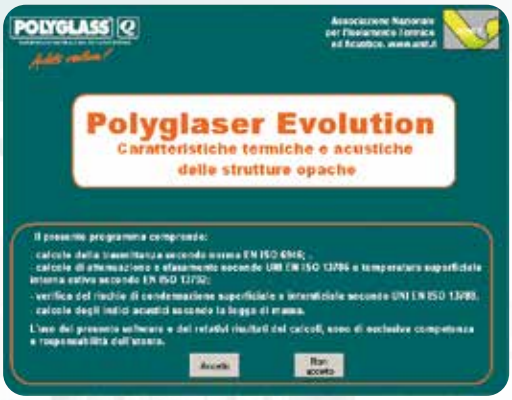
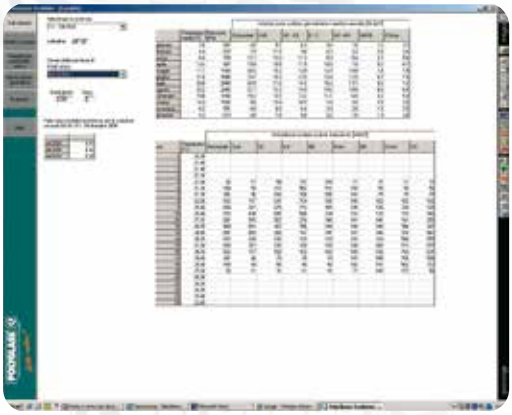




Heat transmittance (U), which must be lower than 0,8 W/m²K, for a partition element of a habitation located in Climate zones C, D, E, and F, can be calculated analytically by first summing the thermal resistance of all the materials composing its layers and then adding the thermal resistance values of the surface. Various software programs are available to aid calculation, which must in any case always be checked and certified by a qualified technician.
Those interested in receiving our POLYGLASER EVOLUTION software are invited to contact our sales team force or send a written request from the "Contacts" section of our website **www.polyglass.com**

Sonic system thermal insulation characteristics

Product	Thickness	Heat transmittance (λ)	Thermal resistance (R)
SONIC ROLL	0,0065 m	0.045 W/mK	0,145 m²K/W
SONIC PANEL	0,01 m	0.032 W/mK	0,313 m²K/W

7.

HOW TO DESIGN AN INSULATION SYSTEM: calculating thermal insulation

Below, we provide two examples of calculation for a floor deck without thermal and acoustic insulation; in the first case, the heat transmittance value (U) is 1,02 W/m²K, and therefore not in compliance requisites; in the second case, the same floor deck has been provided with thermal and acoustic insulation using SONIC PANEL to acquire a new heat transmittance value of (U) of 0,75 W/m²K that complies with the standards in force (<0,8 W/m²K).

Floor deck without thermal-acoustic insulation

	Material	Thickness (m)	Density (kg/m³)	Conductivity (W/mK)	Weight per area (kg/m²)	Resistance (m²K/W)
	Internal upper surface					0,1
1	Ceramic tile	0,01	2000	1	20	0,01
2	Concrete floor	0,05	2000	1,4	100	0,036
3	Lightened brick	0,07	600	0,18	42	0,389
4	Brick concrete deck 20+4	0,24			330	0,33
5	Plaster	0,01	1400	0,7		0,014
	Internal lower surface					0,1
					R TOT (m²K/W)	**0,98**
Total thickness (m)		0,38			**U TOT (W/m²K)**	**1,02**

Floor deck insulated with SONIC PANEL

	Material	Thickness (m)	Density (kg/m³	Conductivity (W/mK)	Weight per area (kg/m²)	Resistance (m²K/W)
	Internal upper surface					0,1
1	Ceramic tile	0,01	2000	1	20	0,01
2	Concrete floor	0,04	2000	1,4	80	0,029
3	SONIC PANEL	0,01		0,032		0,313
4	Lightened brick	0,07	600	0,16	42	0,438
5	Brick concrete deck 20+4	0,24			330	0,33
6	Plaster	0,01	1400	0,7		0,014
	Internal lower surface					0,1
					R TOT (m²K/W)	**1,33**
Total thickness (m)		0,38			**U TOT (W/m²K)**	**0,75**

Note: for safety reasons, the most restrictive surface thermal resistance values have been considered (c.f. UNI EN ISO 6946 par. 5).

8. LAYING THE SONIC SYSTEM

Correct laying and scrupulous respect of procedure are essential elements for the success of both thermal and acoustic insulation.

The operation of the "floating floor" system is conceptually very simple: an elastic material capable of absorbing all the vibration generated by footsteps above is inserted between the edges of the floor and all the structures around it. The correct on-site laying of the system has a few critical points, however. In particular, the insulating material "tray" must be infiltration-proof. The floor must never be permitted to come into contact with lateral structures or make the rigid contact known as acoustic/thermal bridges that can make the entire vibration insulation effort in vain.

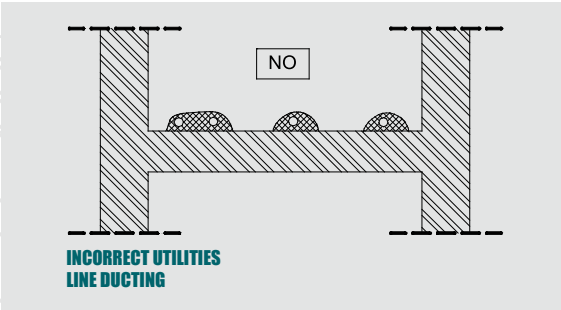
Merely laying an element of separation such as polyethylene film, for example, might not be sufficient to guarantee the water-tightness of the system, especially if this element has been laid dry on the sound absorption part and the overlapping shave not been adequately sealed.

The SONIC System has been developed to reduce on-site laying problems to a minimum. Polyglass waterproofing product experience has led to the development of a complete range of products that can be easily laid and is resistant to common causes of damage at the worksite.

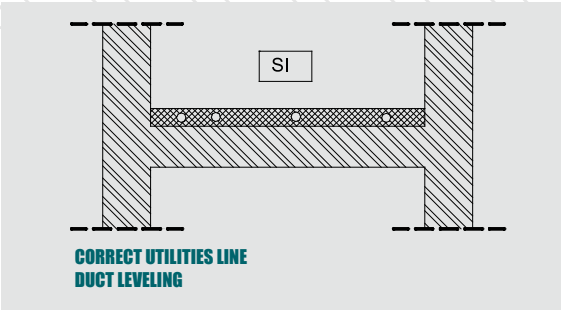
The operations required to lay the SONIC System are as follows:

1 CHECKING THE SUB-FOUNDATION

a) Make sure that the support surface is level and free of all roughness. Any utilities lines crossing the surface must be leveled. If lightweight screed has been used to cover utilities lines, make sure that it has been cast well-mixed. Uneven concentrations of material can lead to the formation of cracks that compromise the acoustic insulation laid.



INCORRECT UTILITIES LINE DUCTING



CORRECT UTILITIES LINE DUCT LEVELING

b) Any excess material that compromises the perfect levelness of the floor must be removed.

c) All detritus must be removed prior to laying.

LAYING THE SONIC SYSTEM

2 LAYING SONIC PANEL

a) Lay SONIC PANEL with the fibrous part facing down, making sure that alignment is perfect.

b) Attach the bi-adhesive tape all along the perimeter of the SONIC PANEL panels.

LAYING THE SONIC SYSTEM

2 LAYING SONIC PANEL

c) Cut a strip of SONIC BAND of the desired length and then fold it for adaptation to the edge of the room.

d) Tear off the top part of the bi-adhesive tape and then glue the strip of SONIC BAND onto the SONIC PANEL precisely and continuously.

e) Cut the SONIC BAND near the corners for the perfect bonding of the two strips.

f) Seal the corners by overlapping two strips in order to ensure that no parts of the sub-foundation remain uncovered.

LAYING THE SONIC SYSTEM

2 LAYING SONIC PANEL

g) After checking the perfect alignment of the SONIC PANEL panels, carefully seal all joints using SONIC TAPE.

h) Cut and apply SONIC TAPE in the corners in order to cover and unit all the overlapping points with SONIC BAND.

i) At the end of the job, the silver-colored SONIC TAPE must be visible over all the SONIC ROLL overlapping areas and joints, and no points in which passage to the sub-foundation can be made; this creates a sort of "tray" that is suited to receive and contain the typical fluid screed leveling layer.

LAYING THE SONIC SYSTEM

3 LAYING SONIC ROLL

a) Open the roll of SONIC ROLL and begin laying it for the length of the room with the fibrous (light colored) part facing down.

b) Fold the SONIC ROLL back and a few centimeters above the height of the finished floor (floating floor + ceramic tile or wood top layer).

c) Cut a few centimeters of SONIC ROLL from its border in order to permit correct positioning in the corners.

LAYING THE SONIC SYSTEM

3 LAYING SONIC ROLL

d) Repeat the SONIC ROLL longitudinal folding operation on the other side (when the roll is positioned in contact with the borders) and position it perfectly along the room's perimeter.

e) Proceed in the same way with the other rolls, making sure to overlap one layer with another by at least a few centimeters (in order for the work to be performed perfectly, no empty spaces must be left between one roll and the next).

f) The sheet of SONIC ROLL must also be folded over raised door thresholds; openings must be wrapped in SONIC ROLL up to and over the point in which the floating floor's horizontal joint is inserted.

LAYING THE SONIC SYSTEM

3 LAYING SONIC ROLL

g) After checking the perfect overlapping of the SONIC ROLL, close and seal all overlapping areas using silver-colored SONIC TAPE.

h) The same operation must be repeated in the corners in order to cover and join all the SONIC ROLL overlapping areas.

i) At the end of the job, the silver-colored SONIC TAPE must be visible over all the SONIC ROLL overlapping areas and joints, and no points in which passage to the sub-foundation can be made; this creates a sort of "tray" that is suited to receive and contain the typical fluid screed leveling layer.

LAYING THE SONIC SYSTEM

4 FINISHING THE SKIRTING

a) Once the floor's top finishing layer has been laid, cut off all excess parts of SONIC BAND or SONIC ROLL.

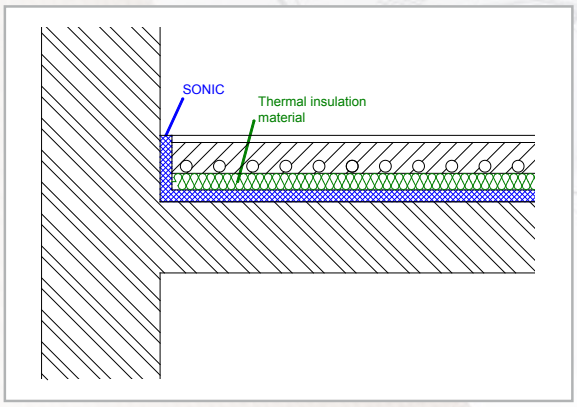
b) Position the skirting foreseen, making sure to separate it from the floor by a few millimeters.

c) Close the space between the skirting and the floor using the appropriate elastic sealant.

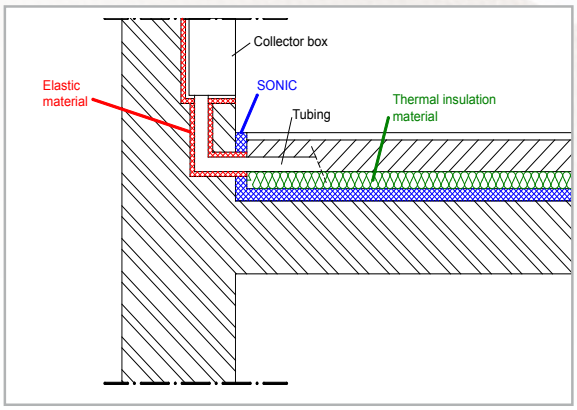
5 RADIATING FLOORS

Once it has been laid, the SONIC System must not be interrupted or punctured by the passage of any technological system in order to guarantee the separation of the floating floor from adjacent elements and perfect acoustic insulation.

Whenever floor heating systems (radiating floors) are used, we recommend laying the SONIC System beneath the layer of thermal insulation material. The SONIC ROLL and SONIC BAND vertical border of the can replace the compactable polyethylene band usually used around the room's perimeter for the subsequent laying of the lightweight screed leveling layer.



SONIC POSITIONING FOR RADIATING FLOORS

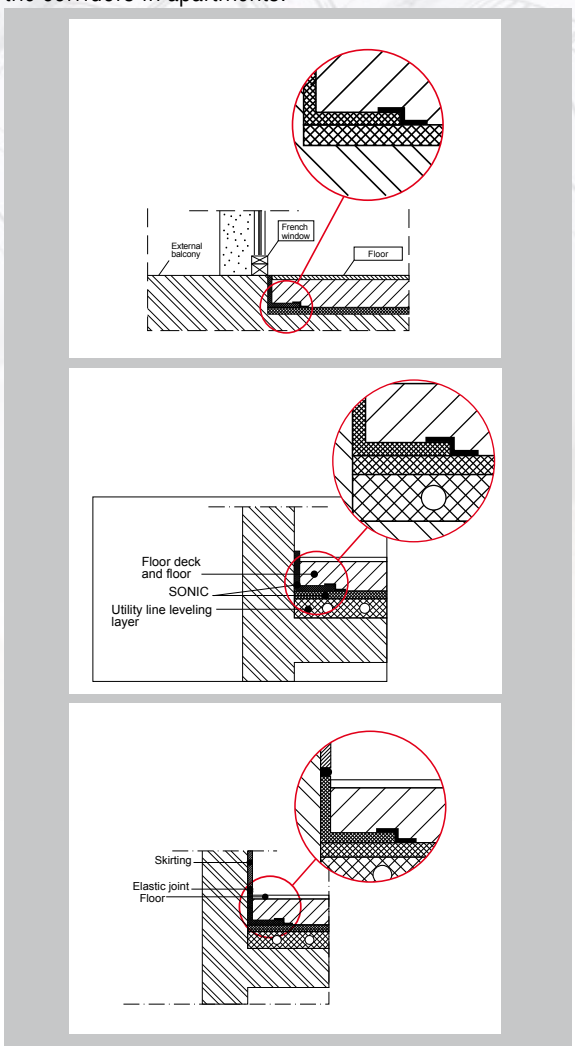


CORRECT POSITIONING OF COLLECTOR BOXES

The continuity of separation between the floating floor and the outer walls must be guaranteed in this case as well, and therefore in order to prevent the transmission of vibration, proceed as follows:

- Separate the boxes that contain the collectors of the walls behind by covering them with a layer of elastic material and fastening them to the wall with rubber expansion screws.
- Cover all heating pipes with sheathes in elastic material whenever they must pass through the wall's folded layer of SONIC BAND or SONIC ROLL.
- Connect the upward climbing pipes and ducts with the walls behind using rubber collars (not stiff collars) or by facing them with elastic material.

We recommend positioning these collector boxes near the corridors in apartments.



9. ON-SITE TESTING AND CERTIFICATION

The Polyglass Research & Technical Assistance Center is engaged in continuous innovation and the improvement of the solutions proposed. Numerous certificates have been issued for the SONIC System by qualified external laboratories for testing and the documentation of its performance characteristics. These results were compared with data obtained from testing at various worksites.

Those interested in obtaining greater detail and/or receiving copies of on-site test certificates can directly request the same by calling 0422/7547 or from the "Contacts" section of our website **www.polyglass.com**

DYNAMIC RIGIDITY TEST (S') - Photo by Istituto Giordano

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