



SOUNDPROOFING

ROOFS

WALLS

FLOORS

# TECSOUND

## ACOUSTIC INSULATION

SYNTHETIC SOUNDPROOFING SYSTEMS





# TECSOUND®

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When designing a roof, we intuitively take into consideration the logical needs of waterproofing and thermal insulation, but we very often forget about soundproofing requirements. Once the project is finalized, it is very complicated to solve a problem that results from a lack of acoustic insulation. That's why it is crucial to include some soundproofing materials from the very beginning of the project!

TECSOUND® is a high-density, highly viscoelastic synthetic soundproofing membrane that offers excellent levels of acoustic insulation in traditional constructions, while hardly affecting the system's thickness. It is highly flexible and easily extendable, which means it can be adapted to any shape or surface and fit easily with complicated joints and layouts.

## BENEFITS

- Insulation throughout the whole frequency range
- Fire classification: Euroclass, B, s2, d0.
- Low thickness
- Does not absorb water and acts as a vapor barrier
- Easy and quick application
- Cold pliability -20 °C.
- Compatible with any kind of thermal insulation material



## ADVANCED TECHNOLOGY

TECSOUND®'s high viscoelasticity makes it a barrier to sound, greatly reducing the level of noise transmitted by air, rainfall and vibrations. Combined with absorbent materials, such as mineral wool, it creates a mass spring effect which forces sound to travel through materials of various density, thus reducing energy levels and ensuring superior soundproofing.

Thanks to its high density, TECSOUND® allows architects and builders to add mass to traditional building design by taking up almost no additional space. Indeed, TECSOUND® can reach high indexes of insulation with minimum thickness.

***... Because silence should not steal space!***

## APPLICATIONS

TECSOUND® covers a wide range of applications for acoustic insulation for construction sector as well as industrial sector.

### CONSTRUCTION SECTOR

- Acoustic insulation in vertical walls made of gypsum plasterboards or fiber plasterboards, as well as ceramic bricks, concrete blocks, etc.
- Acoustic insulation for ceilings and flooring.
- Acoustic insulation for impact noise and vibrations in parquet, wooden and floating floors as well as under mortar screed.
- Acoustic insulation for airborne, rain, hail and wind noise in metal and timbered roofs.
- Acoustic insulation for drainpipes and vents.

### INDUSTRIAL SECTOR

- Acoustic insulation for vibrations of steel or aluminum metal plates for enclosures of engines, compressors, air conditioning units, etc.
- Soundproofing of gutter pipes.
- Dampening vibrations in cars, buses, tractors, etc.
- Acoustic insulation for prefabricated panels and moveable partition walls.
- Acoustic insulation for doors, shutter boxes, etc.
- Acoustic insulation for airborne, rain, hail and wind noise in metal and timbered roofs

# INNOVATION

## PRODUCT RANGE

### TECSOUND®



TECSOUND® is a viscoelastic, high-density, polymer-based, highly adaptable membrane providing good levels of soundproofing in various construction elements without increasing thickness. TECSOUND® can also act as a vapor barrier.

PRODUCT	WEIGHT	THICKNESS	DIMENSIONS
TECSOUND® 35	3.5 kg/m <sup>2</sup>	1.75 mm	8 m x 1.22 m
TECSOUND® 50	5 kg/m <sup>2</sup>	2.5 mm	6 m x 1.22 m
TECSOUND® 70	7 kg/m <sup>2</sup>	3.5 mm	5 m x 1.22 m
TECSOUND® 100	10 kg/m <sup>2</sup>	5 mm	4 m x 1.20 m

### TECSOUND® SY



TECSOUND® SY is the self-adhesive version of TECSOUND® membrane. Once the removable film is peeled off, it can be applied straight onto most surfaces, but especially designed for application on gypsum plasterboards.

PRODUCT	WEIGHT	THICKNESS	DIMENSIONS
TECSOUND® SY 35	3.5 kg/m <sup>2</sup>	1.75 mm	8.05 m x 1.22 m
TECSOUND® SY 50	5 kg/m <sup>2</sup>	2.5 mm	6.05 m x 1.22 m
TECSOUND® SY 70	7 kg/m <sup>2</sup>	3.5 mm	5.05 m x 1.22 m
TECSOUND® SY 100	10 kg/m <sup>2</sup>	5 mm	4 m x 1.20 m

### TECSOUND® BAND



TECSOUND® S Band is a synthetic tape composed of TECSOUND® membrane with a self-adhesive layer enabling it to be applied straight onto metals structures subject to vibrations.

PRODUCT	WEIGHT	THICKNESS	DIMENSIONS
TECSOUND® S50 BAND 50	5 kg/m <sup>2</sup>	2.5 mm	6 m x 0.05 m

### TECSOUND® FT



TECSOUND® FT is a soundproofing complex composed of Tecsound synthetic membrane bonded to a porous felt mat, both formed in such a way to offer excellent acoustic insulation in different building elements: walls, ceilings, roofs, etc.

PRODUCT	WEIGHT	THICKNESS	DIMENSIONS
TECSOUND® FT 40	4.1 kg/m <sup>2</sup>	12 mm	6 x 1.20 m
TECSOUND® FT 55	5.6 kg/m <sup>2</sup>	12.5 mm	5.50 m x 1.20 m
TECSOUND® FT 75	7.6 kg/m <sup>2</sup>	14 mm	5.50 m x 1.20 m

### TECSOUND® 2FT



TECSOUND® 2FT is a soundproofing complex composed of TECSOUND® synthetic membrane sandwiched between two porous felt mats, both formed in such a way to offer excellent acoustic insulation in different building elements: walls, ceilings, roofs, etc.

PRODUCT	WEIGHT	THICKNESS	DIMENSIONS
TECSOUND® 2 FT 80	8.2 kg/m <sup>2</sup>	24 mm	5.50 m x 1.20 m

### TECSOUND® FT55 AL



TECSOUND® FT55 AL is a soundproofing complex composed of TECSOUND® synthetic membrane bonded to a porous felt mat and faced with reinforced aluminium foil on its upper side for protection or finishing purpose. It is formed in such a way to offer a good acoustic insulation for pipes and conduits.

PRODUCT	WEIGHT	THICKNESS	DIMENSIONS
TECSOUND® FT 55 AL	5.5 kg/m <sup>2</sup>	12.5 mm	5.50 m x 1.20 m

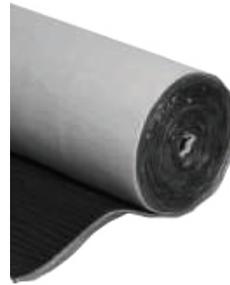
## TECSOUND® TUBE



TECSOUND® TUBE is a soundproofing complex composed of TECSOUND synthetic membrane bonded to a high tenacity non-woven polyester mat. TECSOUND® TUBE is specially designed for soundproofing of ducts in buildings. The combined effect of the absorbing element and of the visco-elastic high density membrane increases the acoustic properties.

PRODUCT	WEIGHT	THICKNESS	DIMENSIONS
TECSOUND® TUBE	3.75 kg/m <sup>2</sup>	4.75 mm	8 m x 0.4 m

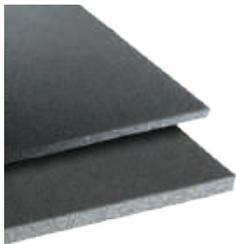
## TEXFON



TEXFON is an impact noise insulation layer for floors, composed of a high tenacity, polyester-based non-woven felt laminated to a bituminous protection. It offers an impact noise insulation of  $\Delta LW$  22 dB.

PRODUCT	THICKNESS	DIMENSIONS
TEXFON	3.4 mm	20 m x 1 m

## TEXSIMPACT



TEXSIMPACT is a high-performance, cross-linked, polyethylene, closed-cell membrane for impact noise reduction in floors. It is available in 5 and 10 mm thickness providing a high level of compressive strength and excellent soundproofing characteristics.

PRODUCT	THICKNESS	DIMENSIONS
TEXIMPACT 5	5 mm	50 m x 2 m
TEXIMPACT 10	10 mm	50 m x 2 m

## COMPLEMENTARY PRODUCTS



### TEXSIMPACT disconnection bands

TEXSIMPACT disconnection bands are bands made of cross-linked polyethylene foam to be placed under partition walls to break the acoustic bridge between walls and floors.

### TEXFON disconnection bands

TEXFON disconnection bands are self-adhesive, closed-cell polyethylene foam disconnection tapes used to prevent the transmission of impact noise between floating floors and vertical surfaces and structural elements.



### Fasteners

Fasteners for fixation of TECSOUND® FT and TECSOUND® 2FT.



## SOLUTIONS FOR METAL ROOFS

Acoustic insulation from rainfall and other weather noises is a priority in lightweight roofs such as metal decking and wooden pitched roofs. Indeed, noise generated by weathering impact has negative influence on the normal development of the activities inside the buildings. This is especially true in those cases that require a high level of acoustic comfort like schools, auditoriums, congress halls, or fairgrounds.

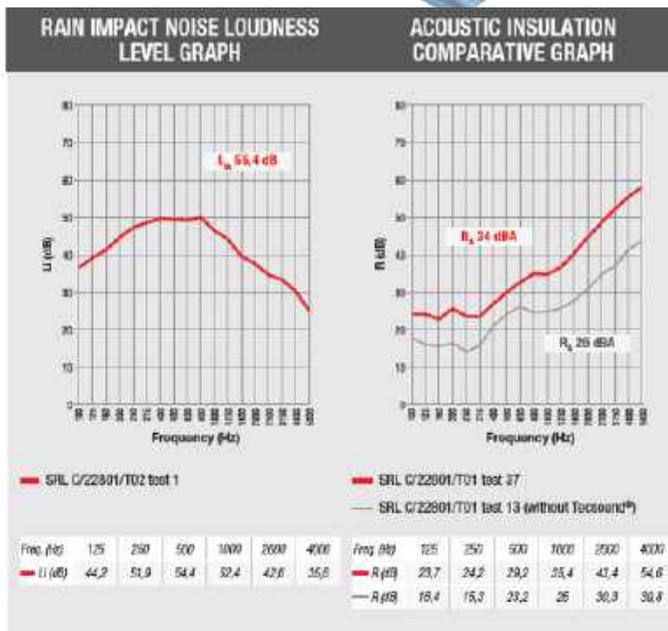
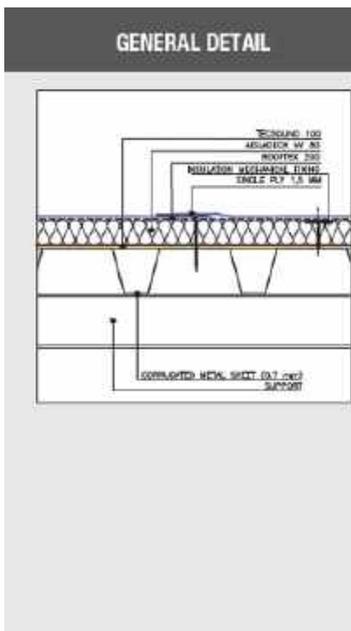
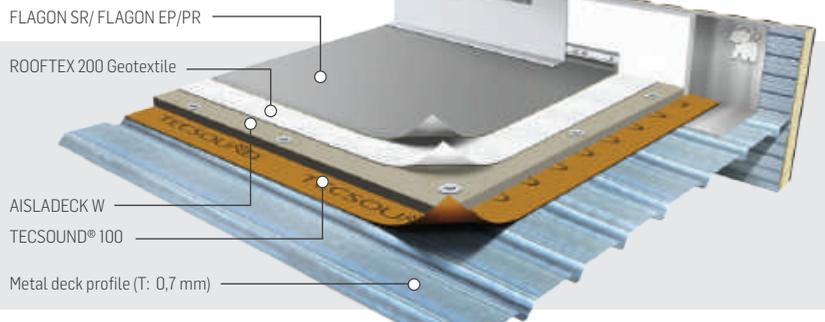
In order to increase insulation performance of the roofing systems, it is necessary to propose a layout incorporating various materials able to reduce noise transmission through the different layers that generate vibration of metallic support.

### REFERENCE JOBS:

#### IKEA TEMPE, SYDNEY (AUSTRALIA)

$R_A$  34 dBA –  $L_{IA}$  55 dB

Soundproofing and thermal insulation system including TECSOUND® 100 and PIR boards with PVC/TPO single-ply waterproofing finish. This system is suitable for department stores, malls, large warehouses, or industrial units.



## PORTAVENTURA CONVENTION CENTRE (SPAIN)

$R_A$  38 dBA

Soundproofing and thermal insulation system including TECSOUND® 100 and PIR boards with two-ply bituminous waterproofing finish.

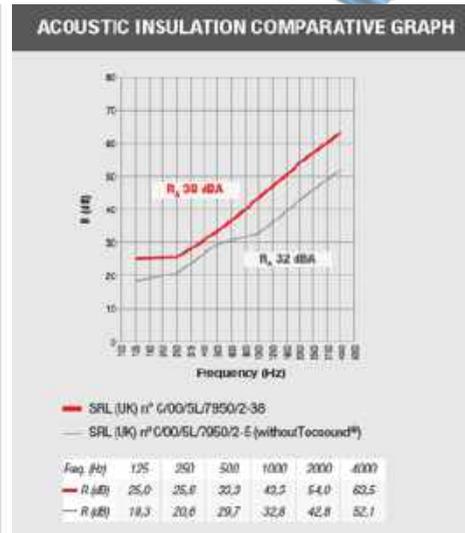
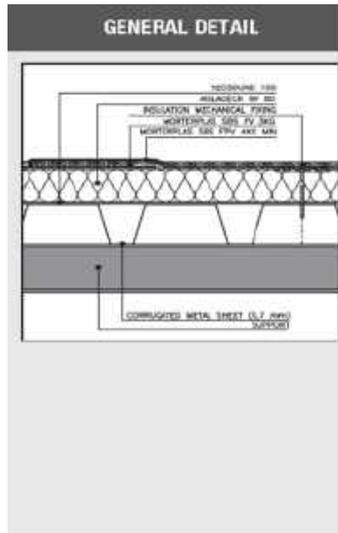
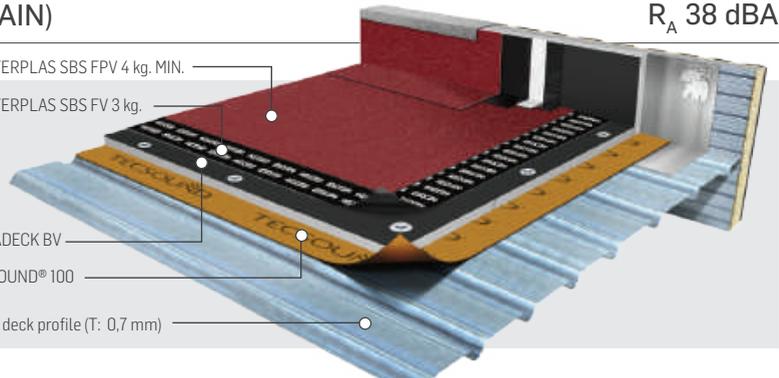
MORTERPLAS SBS FPV 4 kg. MIN.

MORTERPLAS SBS FV 3 kg.

AISLADECK BV

TECSOUND® 100

Metal deck profile (T: 0.7 mm)



## O2 ARENA, LONDON (UK)

$R_A$  43 dBA –  $L_{IA}$  44 dB

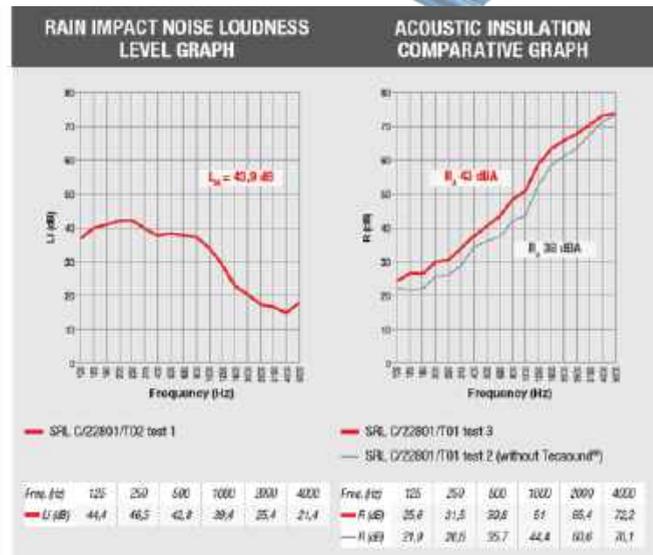
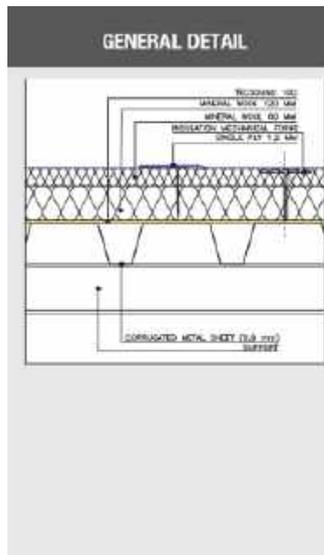
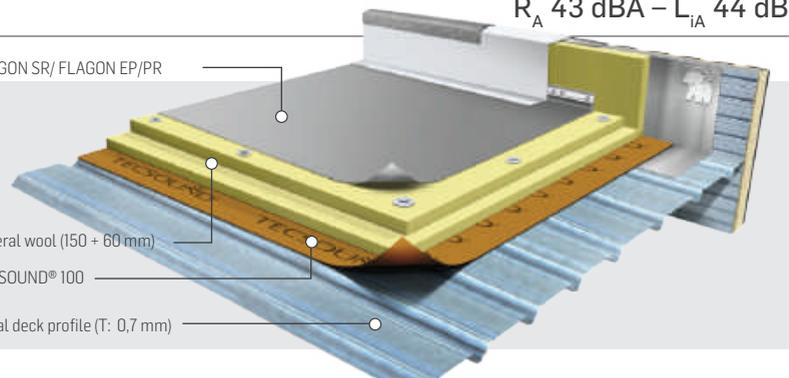
Soundproofing and thermal insulation system including TECSOUND® 100 and mineral wool with PVC/TPO single-ply waterproofing finish.

FLAGON SR/ FLAGON EP/PR

Mineral wool (150 + 60 mm)

TECSOUND® 100

Metal deck profile (T: 0.7 mm)



## MALAGA AIRPORT EXPANSION (SPAIN)

$R_A$  43 dBA

Soundproofing and thermal insulation system including TECSOUND® 100 and mineral wool with two-ply bituminous waterproofing finish.

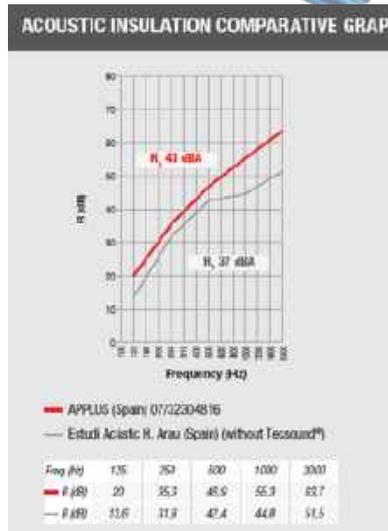
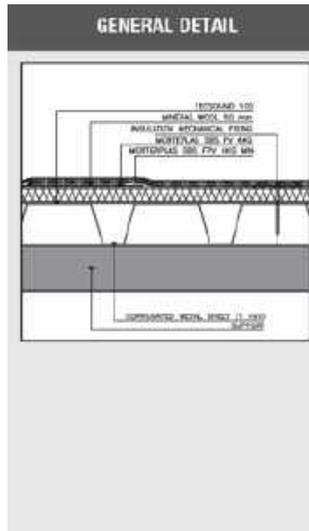
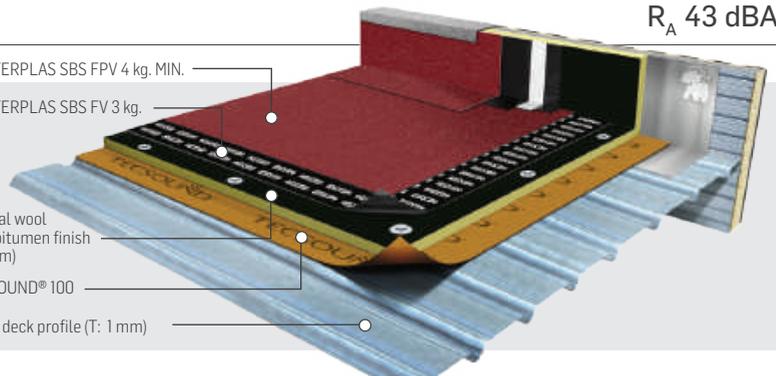
MORTERPLAS SBS FPV 4 kg. MIN.

MORTERPLAS SBS FV 3 kg.

Mineral wool with bitumen finish (50 mm)

TECSOUND® 100

Metal deck profile (T: 1 mm)



## TORINO PALASPORT OLIMPICO (ITALY)

$R_A$  44 dBA –  $L_{IA}$  40 dB

Soundproofing and thermal insulation sandwich-like system including TECSOUND® 50 positioned between two layers of mineral wool with PVC/TPO single-ply waterproofing finish. This system is suitable for schools, libraries or public office buildings.

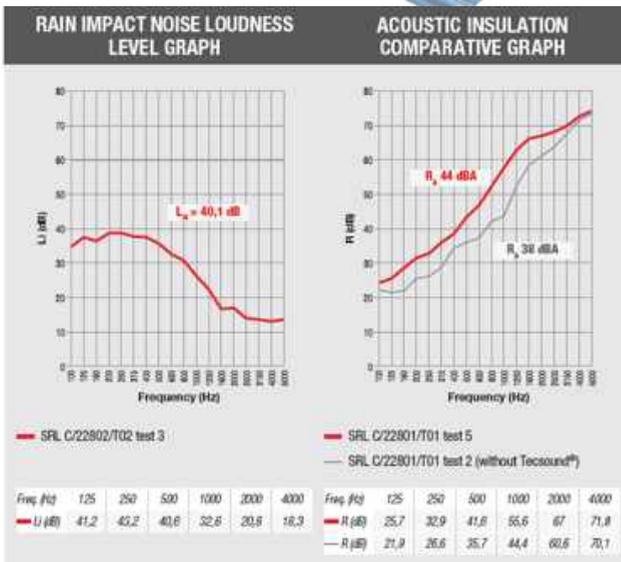
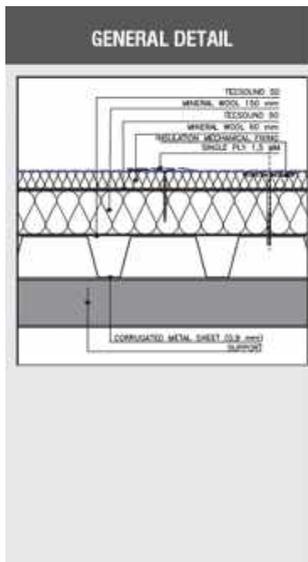
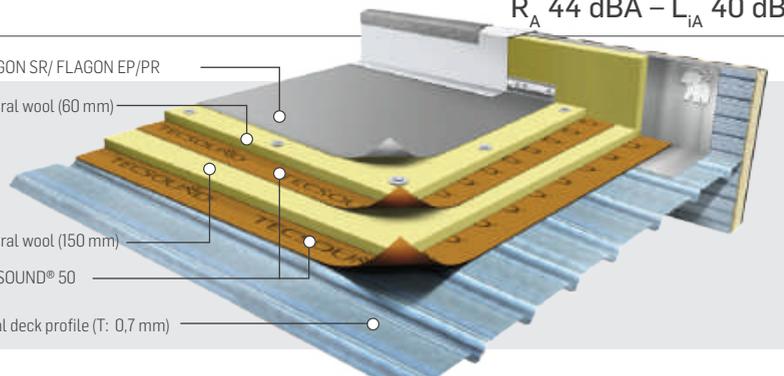
FLAGON SR/ FLAGON EP/PR

Mineral wool (60 mm)

Mineral wool (150 mm)

TECSOUND® 50

Metal deck profile (T: 0.7 mm)



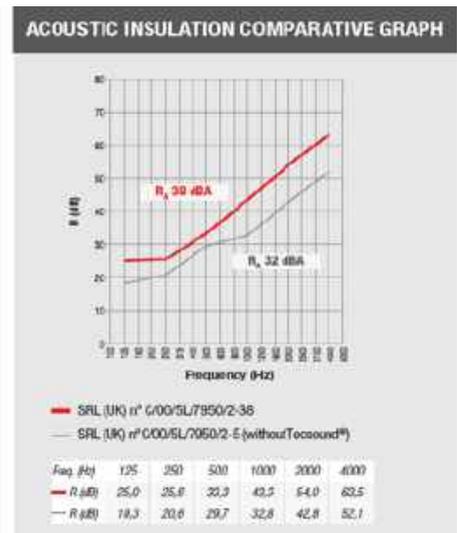
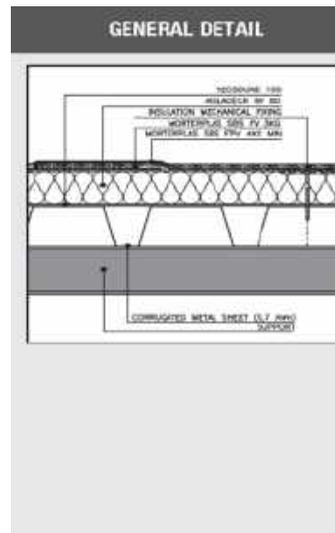
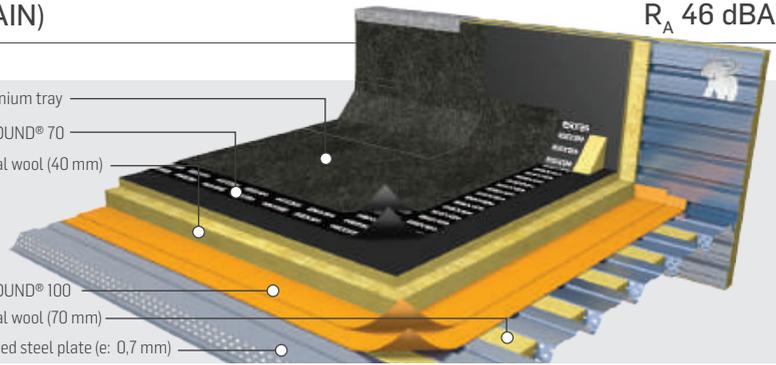
## FORNELLS DE LA SELVA SPORTS HALL (SPAIN)

$R_A$  46 dBA

Fully bonded soundproofing and thermal insulation including TECSOUND® 100 and mineral wool with a two-layer bituminous waterproofing system.

Bituminous membranes can be torched on directly onto the mineral wool so that the whole system is completely bonded. This system offers a high level of insulation from airborne rain noise along with sound absorption. This system is suitable for malls, sports and event halls, and any roofs in which, for aesthetic purposes, mechanical fastening cannot be used.

- Aluminium tray
- TECSOUND® 70
- Mineral wool (40 mm)
- TECSOUND® 100
- Mineral wool (70 mm)
- Punched steel plate (e: 0,7 mm)



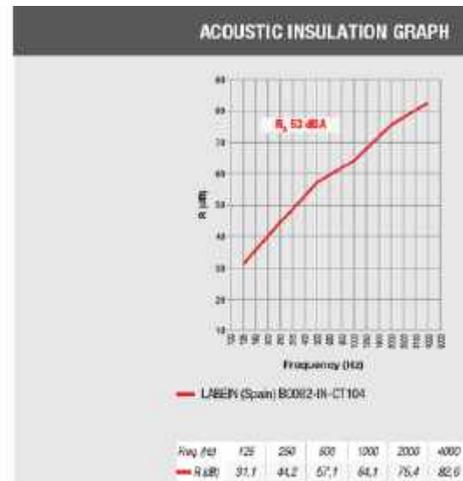
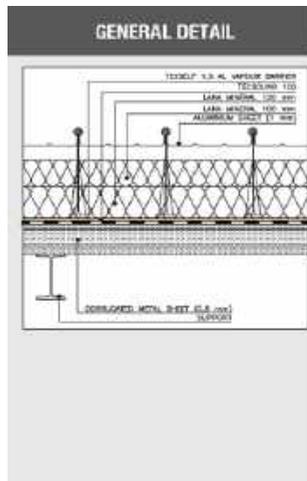
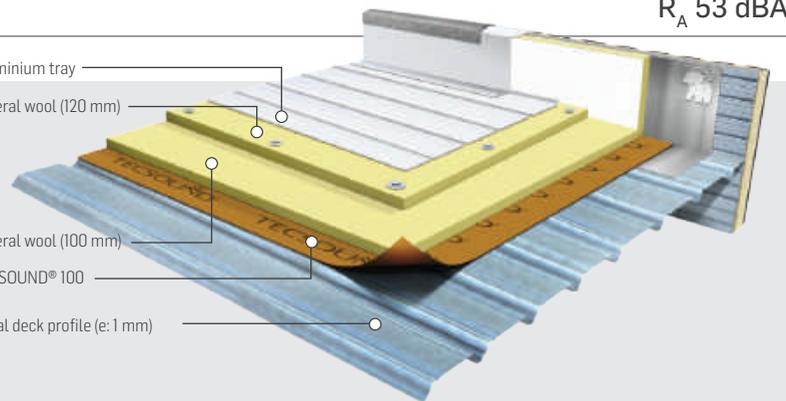
## T1 BARCELONA AIRPORT (SPAIN)

$R_A$  53 dBA

Soundproofing and thermal insulation system including TECSOUND® 100 and mineral wool with an aluminum tray as a finishing layer. This system offers a high level of insulation from airborne noise and vibration reduction.

The aluminum tray gives an aesthetic and durable waterproofing finish. This system is especially suitable for airport terminals, train stations, and sports and event halls.

- Aluminium tray
- Mineral wool (120 mm)
- Mineral wool (100 mm)
- TECSOUND® 100
- Metal deck profile (e: 1 mm)

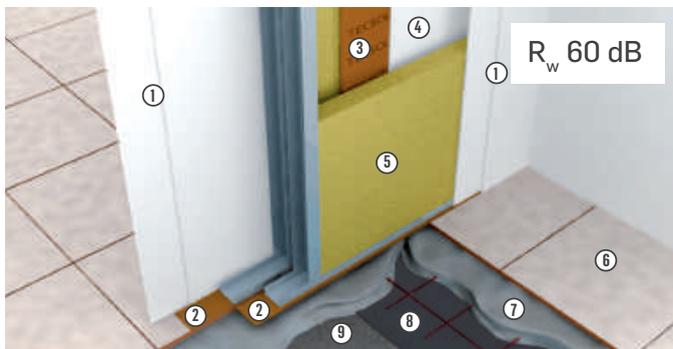
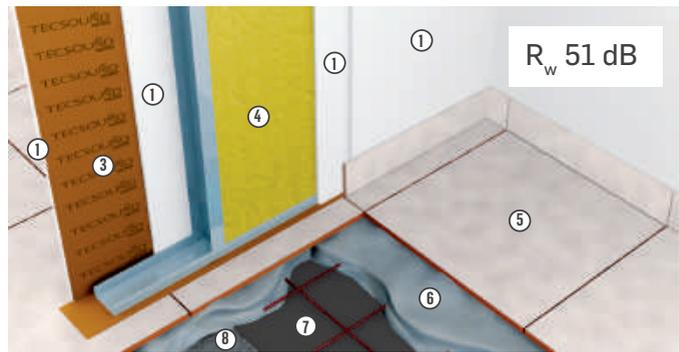


## SOLUTIONS FOR WALLS

### INTERIOR PARTITIONS

#### Gypsum plasterboard support

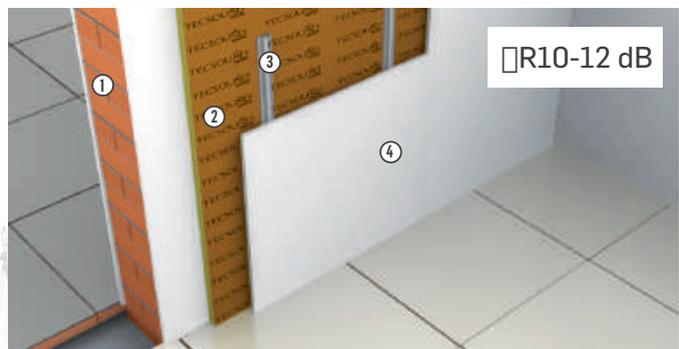
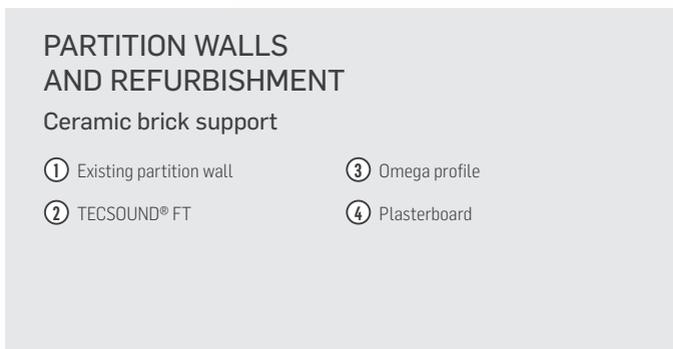
- |   |                            |
|---|----------------------------|
| ① 13 mm gypsum plasterboard   | ⑤ Flooring                 |
| ② TECSOUND® BAND 50   | ⑥ Reinforced mortar screed |
| ③ TECSOUND® SY 70   | ⑦ TEXSIMPACT 5 mm          |
| ④ Mineral wool<br>(thickness: 50 mm; density: 15kg/m <sup>3</sup> ) | ⑧ Support                  |



### VERTICAL PARTITIONS AND PARTITION WALLS

#### Gypsum plasterboard support

- |                             |   |
|-----------------------------|---|
| ① 13 mm gypsum plasterboard | ⑤ Mineral wool<br>(thickness: 40 mm; density: 30kg/m <sup>3</sup> ) |
| ② TECSOUND® BAND 50         | ⑥ Flooring  |
| ③ TECSOUND® SY 70           | ⑦ Reinforced mortar screed  |
| ④ 13 mm gypsum plasterboard | ⑧ TEXSIMPACT 5 mm   |
|                             | ⑨ Support   |



### PARTITION WALLS AND REFURBISHMENT

#### Ceramic brick support

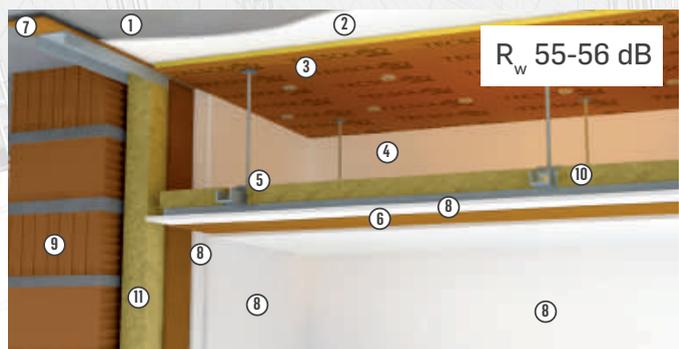
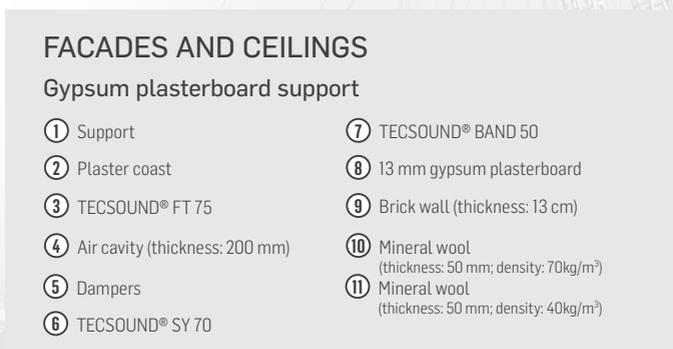
- |                           |                 |
|---------------------------|-----------------|
| ① Existing partition wall | ③ Omega profile |
| ② TECSOUND® FT            | ④ Plasterboard  |



### PARTITIONS WALLS

#### Ceramic brick support

- |                                    |                            |
|------------------------------------|----------------------------|
| ① Plaster coat (thickness: 1,5 cm) | ⑤ Reinforced mortar screed |
| ② Brick wall (thickness: 7 cm)     | ⑥ TEXSIMPACT 5 mm          |
| ③ TECSOUND® 2FT                    | ⑦ Support                  |
| ④ Flooring                         |                            |



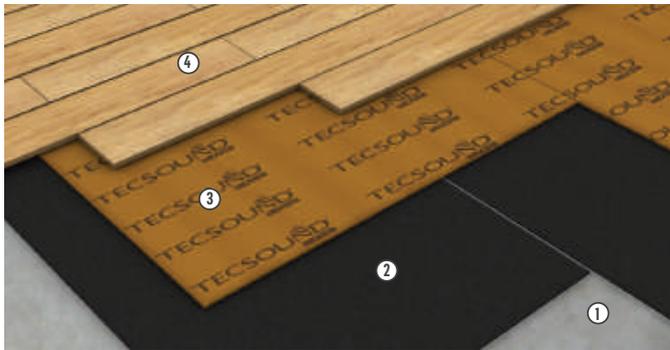
### FACADES AND CEILINGS

#### Gypsum plasterboard support

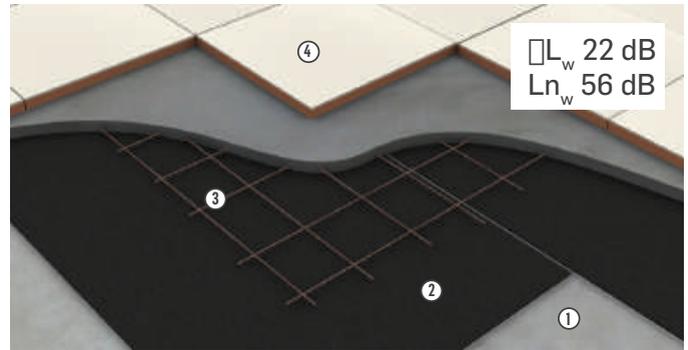
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|----------------------------------|---|
| ① Support                        | ⑦ TECSOUND® BAND 50   |
| ② Plaster coat                   | ⑧ 13 mm gypsum plasterboard   |
| ③ TECSOUND® FT 75                | ⑨ Brick wall (thickness: 13 cm)                                     |
| ④ Air cavity (thickness: 200 mm) | ⑩ Mineral wool<br>(thickness: 50 mm; density: 70kg/m <sup>3</sup> ) |
| ⑤ Dampers                        | ⑪ Mineral wool<br>(thickness: 50 mm; density: 40kg/m <sup>3</sup> ) |
| ⑥ TECSOUND® SY 70                |   |

## SOLUTIONS FOR FLOORS

### Concrete support

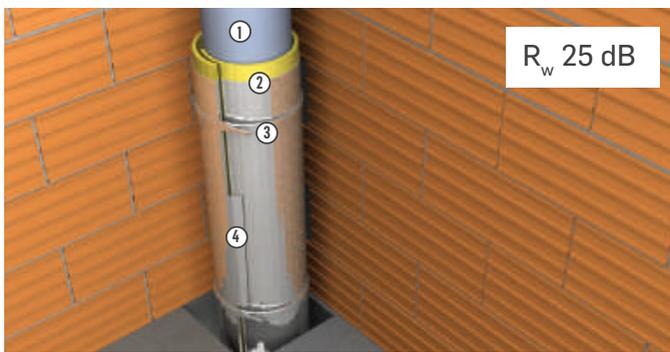


- ① Support
- ② TEXFON
- ③ TECOSOUND® 70
- ④ Parquet

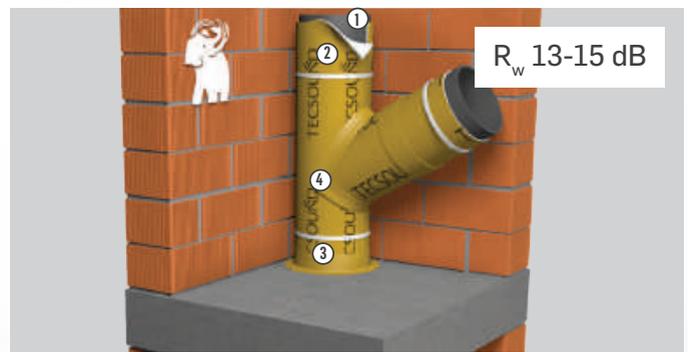


- ① Support
- ② TEXFON
- ③ Reinforced mortar screed
- ④ Parquet

## SOLUTIONS FOR DRAINPIPES AND VENTS



- ① Drainpipe
- ② TECOSOUND® FT 55 AL
- ③ Plastic flange
- ④ Aluminium tape



- ① Drainpipe
- ② TECOSOUND® TUBE
- ③ Plastic flange
- ④ TECOSOUND® S50 BAND 50



The acoustic insulation level obtained will always depend on the building system employed. For this reason, a few building solutions are presented in this brochure with TECOSOUND® products of different types and using different applications, with the corresponding airborne noise insulation index  $R_w$  (dB) or impact noise insulation index  $\Delta L_w$  (dB).



## INNOVATION SINCE 1908

SOPREMA has developed around the idea that the quality, durability and reliability of materials must match builders' ambitions and expectations. For more than 100 years, SOPREMA has been using its expertise to develop a variety of high-end products that meet or exceed all the requirements of the construction field.



SOPREMA is an international manufacturer specializing in the production of waterproofing and insulation products, as well as vegetative and soundproofing solutions, for the building and civil engineering sectors.

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