
GeoPannel®
ECO-FRIENDLY INSULATION
THE HIGHEST ACOUSTIC AND
THERMAL PERFORMANCE
2020

GeoPannel®

# BY RECYCLING WE CONTRIBUTE TO OUR PLANET SUSTAINABILITY.

Installing a Kilo of GEOPANNEL® you contribute to dispose of up to 850 gr. of industrial waste of the Earth's surface. During production, our minimal energy consumption contributes to keep the atmosphere cleaner.

The high performance and durability of our products ensure considerable energy savings during the life of the works where it's installed.


GEO
PANNEL
®

# INDEX


# THE ECO-SUSTAINABLE INSULATION. THE THERMAL AND ACOUSTIC HIGHEST PERFORMANCES.

**GEOPANNEL®** is up to 85 % recycled and 100% recyclable.

Thermal conductivity: $\lambda$ 0.028 to 0.039 W/(m) K).
Acoustic absorption: $\alpha w$ 0.85 in 50 mm.

Easy installation. No toxicity. Its properties last for the whole life of the building.

It does not irritate the skin or respiratory tract.
With every kilo of GEOPANNEL® installed, it eliminates up to 850 grams of industrial waste.

# WHY INSTALL GEOPANNEL ?

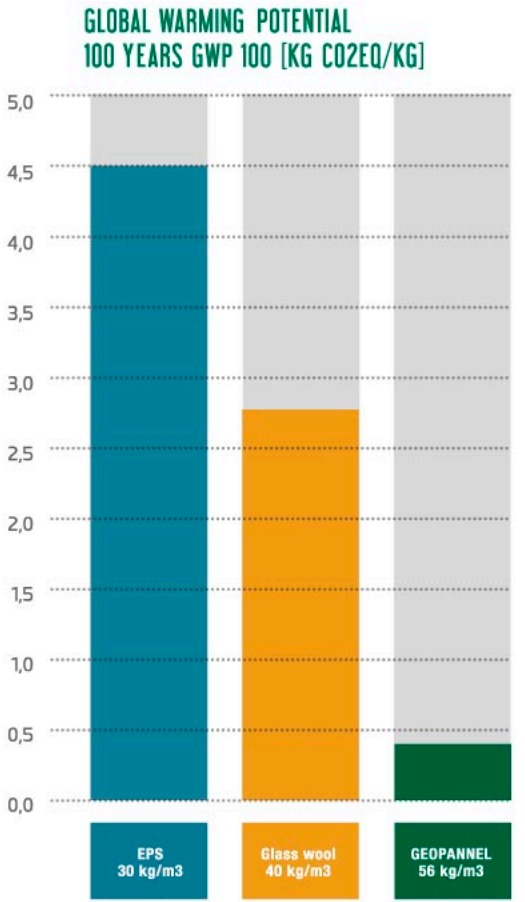
## 1 CARE YOUR PLANET: CHOOSE THE LOWEST CARBON FOOTPRINT ISOLATOR.

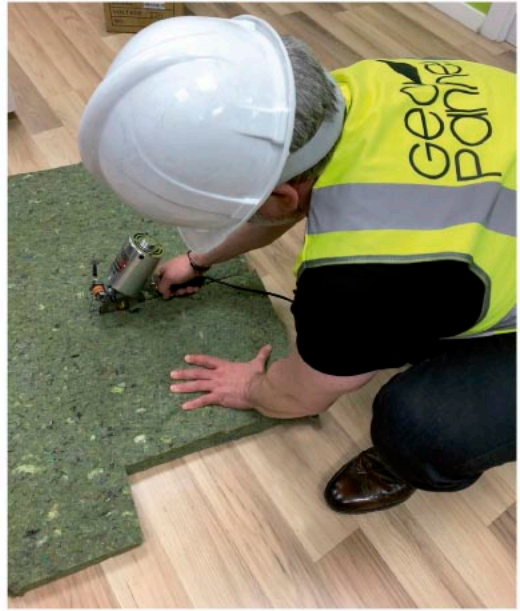
By choosing **GEOPANNEL®** you utilize a LOW CARBON FOOTPRINT Product, helping to minimize GLOBAL warming and reducing industrial waste from the textile industry.

**GEOPANNEL®** and **INPAT®** are manufactured with temperatures around 160 - to 200 Celsius grades while mineral wools need 1,400 to 1,650 and other materials such EPS even much more energy.

All our products are 100% recyclable and up to 85% Come from a recycled source.

Using **GEOPANNEL®** our customers have obtained the most prestigious certifications, as the LEED PLATINO obtained by ABENGOA at its headquarters, **GEOPANNEL®** strictly meets the conditions for a CRADLE TO CRADLE product: REDUCE-REUSE-RECYCLE.





## 2 PRODUCT NOT IRRITATING.
## NON-TOXIC IN ITS ENTIRE USEFUL LIFE

- **GEOPANNEL®** does not irritate the skin or airways.
- It does not contain in its composition MINERAL FIBERS or fiberglass.
- All fibers used in its manufacturing are textiles.
- **YOU do NOT need special protection to cut or install the material.**

The porous structure of the entire GEOPANNEL range, grant excellent acoustic absorbent products, while its air permeability and its water vapor allow the house to perspire.

## 3 EASY INSTALLATION.
## BESPOKE WORKS WITH PERFECT FIT

**GEOPANNEL®** products can be screwed, nailed or glued without losing their internal cohesion. Even without any fixing systems, in internal installations, allows works with perfect finishes. Ideal for outdoor insulation.

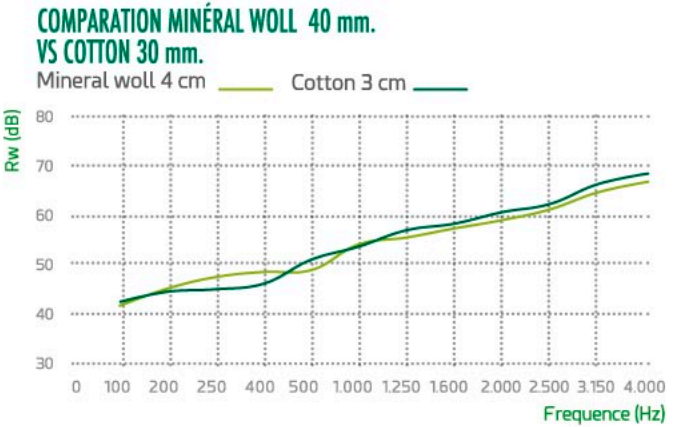
All **GEOPANNEL** products can ® be custom-made. This ensures savings by not wasting material and much shorter installation time. In addition, it provides perfect execution

.

Especially for ventilated facades, acoustic ceilings, large lights, play spaces, airports, stations...

# 4 ACOUSTIC PERFORMANCE: INSULATION

**GEOPANNEL®** has excellent performance associated with WOOD, BLOCKS, GYPSUM boards or BRICKS, etc. It is especially effective in solutions for renovations or interior isolation. In identical solutions with gypsum and bricks and heavy layer is a saving up to 35% of space, (tested on solutions for a Rw of 33, 55 and 65 dB).




# 5 ACOUSTIC PERFORMANCE: ABSORPTION

**GEOPANNEL®** is especially recommended as an acoustic absorber after perforated or decorative plates, whether wall panels, acoustic ceilings, Etc. In both new construction and renovations, the reverberation time is reduced, achieving acoustic comfort suitable for every need. Geopannel allows obtain an $\alpha m$ of 0.78 for solutions in 20 mm with plaster, and 0.85 with just 18% of perforated surface for decorative aluminum ceilings with a solution in 50 mm. These features make our products suitable for stations, airports, congress halls, etc.

# 6 EFFICIENT INSULATION.
## AND ENVIRONMENT PROTECTION

**GEOPANNEL®** products with thermal conductivity between λ= 0.031 and λ=0.037 provide maximum efficiency in thermal insulation. These values are like polyurethane, but adding breathability and with very high values of dynamic stiffness, providing the highest acoustic comfort WATER Absorption.

**GEOPANNEL®** products have up to 538 μ. Our range of products are between 100 and 500 times less permeable than the standard mineral wools according to their declared values. That's the key why GEOPANNEL® maintains its properties in the most demanding climates. The strong cohesion of its fibers prevents the material to be damaged by accidental rain during installation. In case the material soaks during installation, recovers its properties once dries again.

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# 7 DURABILITY

**GEOPANNEL'S®** range of products come from materials originally designed for the automotive industry and improved for use in Construction.

Its lifespan can be the same as that of the building without losing any properties. A standard density mineral wool, 20-22 kg loses partially its cohesion after 3 years. Many mineral wools don't even have that density.

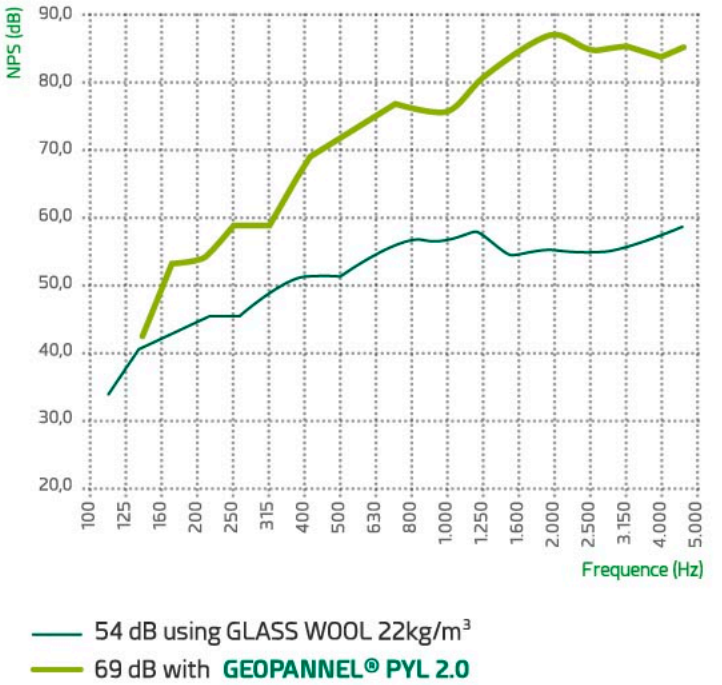
# 8 BEST WORK EXECUTION:

## BEST VALUES IN THERMAL AND ACOUSTIC PERFOMANCES.

**GEOPANNEL ®** products get better measurements in Work. The encounters and finishes are perfectly adjusted without acoustic or thermal bridges.

In blind tests have been reaching up to 15 dB improvement compared to traditional isolations. Although in the laboratory they can be get closer results, **GEOPANNEL®** gets so much good results because it does not rip doesn't sink and doesn't leave gaps. In addition, its durability ensures values over time.

## ISOLATION LEVEL



# 9 PERFECT CUTTING

**GEOPANNEL®** doesn't tear, it has a very high-fiber cohesion higher than any fibrous product and allows for clean cuts, no breaks, allowing even to trim figures.

They can also be cut in tailor-made forms of any measure, acoustic ceilings or ceiling tiles for decorative absorbents.

You can cut **GEOPANNEL®** with a non-tooth circular saw, though can be cut with regular saws and any radial saw.

**GEOPANNEL®** Services.

We can provide to our customers tools specifically designed for cutting our products.

# 10 FEATURES

**Excellent acoustic absorber:**
According to UNE-EN ISO 354:2004.

**Good thermal insulator:**
Thermal conductivity λ from 0.039 W/mK report 2008AN9376 to 0.028 W/mK report 2009AN6534.

**Waterproof:**
The material barely absorbs moisture.

**Easy cutting and handling.**
Clean for the user, it does not tear. Perfect finishes.

**Corrosion resistant**
Certificate 2008AN4084 AITEX Textile Technology Institute

**Resistant to mildew / mold.**
Certificate 2008AN4084 Inst. AITEX textile technology.

**It does not favor combustion.** Fire classification: up to M1 Certificate 09/32300075 applus + 23721-90. Fire reaction test of materials under construction, and up to Bs1d0 Certificate 218206 ENSATEC according to UNE-EN 13823:2002

# 11 BENEFITS

**Organic Product.** Bio-sustainable.
Recycling up to 85% and 100% recyclable.

**Safe in your installation.**
It does not cause discomfort or itching. Based on natural fibers.

**Elastic product.**
It doesn't break when folding. Its module of elasticity is ten times higher compared to rock wool. **GEOPANNEL®** with 35% less weight, has 7 times more tensile strength than rock wool.

**Advantage in thermal insulation.**
Our product offers important advantages for energy saving, by improving thermal insulation of mineral wools.

**Advantage in sound insulation.** In identical construction solutions **GEOPANNEL® CLASSIC or PLUS**, needs less thickness to get the same values as rock wool: 30 mm of **GEOPANNEL®** insulation equal to 40 mm of rock wool. In 100 linear meters of partition isolated with **GEOPANNEL®** we would gain a square meter of living space.

# 12 FINISHING

All **GEOPANNEL ®** products can be manufactured with different surface finishes at 1 or 2 sides:

- Fire treated non-woven.
- Reinforced Aluminum Foil (AL)
- Anti-water, anti-oil finish.
- Decoration fabrics.
- Baffles for acoustic conditioning


The **Geoplafond ®** series ® allow you to design walls and ceilings in any color with maximum acoustic and thermal performance.

geoplafond

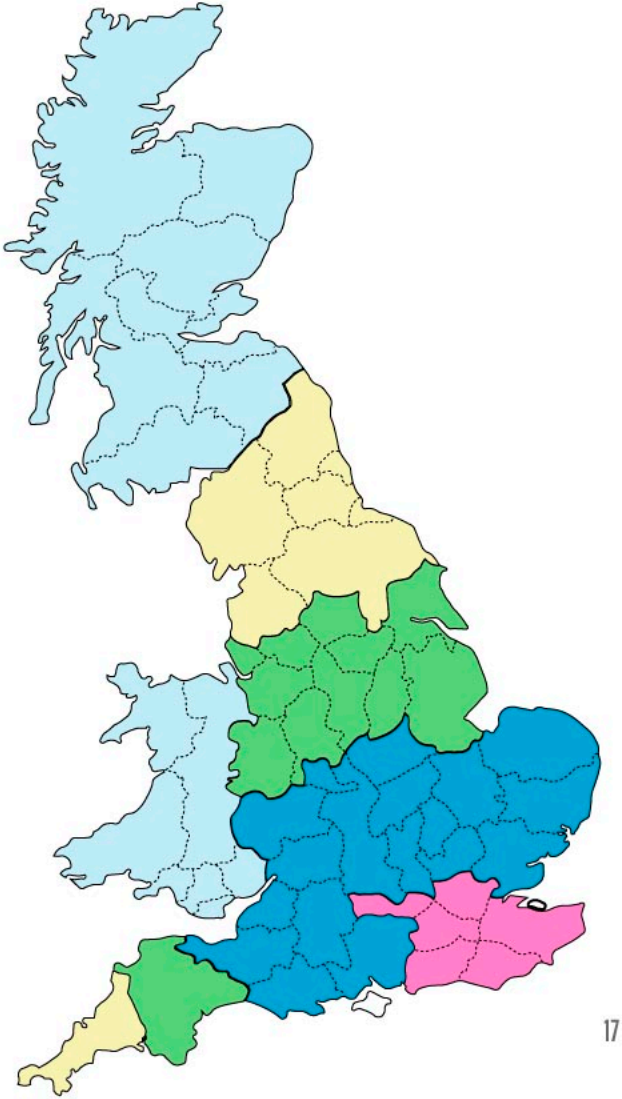

# 13 FORMATS

Our products can be cut to size for special works and packed to the size as needed. Our standard is 1250 x 600 mm, but we can manufacture up to 2600 mm width a very elastic length in rolls or blanks.


# 14 TRANSPORTATION AREAS

- AREA 1
- AREA 2
- AREA 3
- AREA 4

GeoPannel®



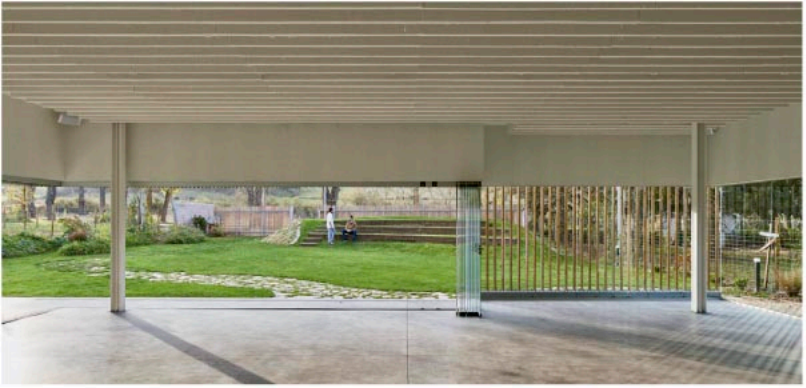

CAUTION
MAKE SURE THE INPUT POWER IS MATCHED
THE MACHINE HAS TO CONNECT GROUND WIRE
KEEP HANDS FROM THE BLADE
NO ADJUSTMENTS OR MAINTENACE REQUIRED

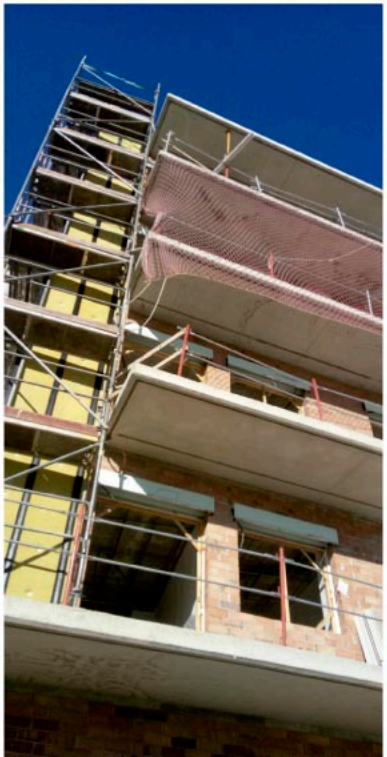
# GEOPANNEL®

## PUTS AT YOUR DISPOSAL SPECIAL MACHINES FOR CUTTING.

**GEOPANNEL®,** products Are flexible and adapt any curvature although they have a high tear resistance. To get perfect executions on the works we recommend using any kind of circular or radial saw.

The product does not exfoliate and allows to be cut achieving a perfect fit. Remember: A well finished work with fine material connections, ensures the best thermal and acoustic performance, as much as the quality if the materials used.

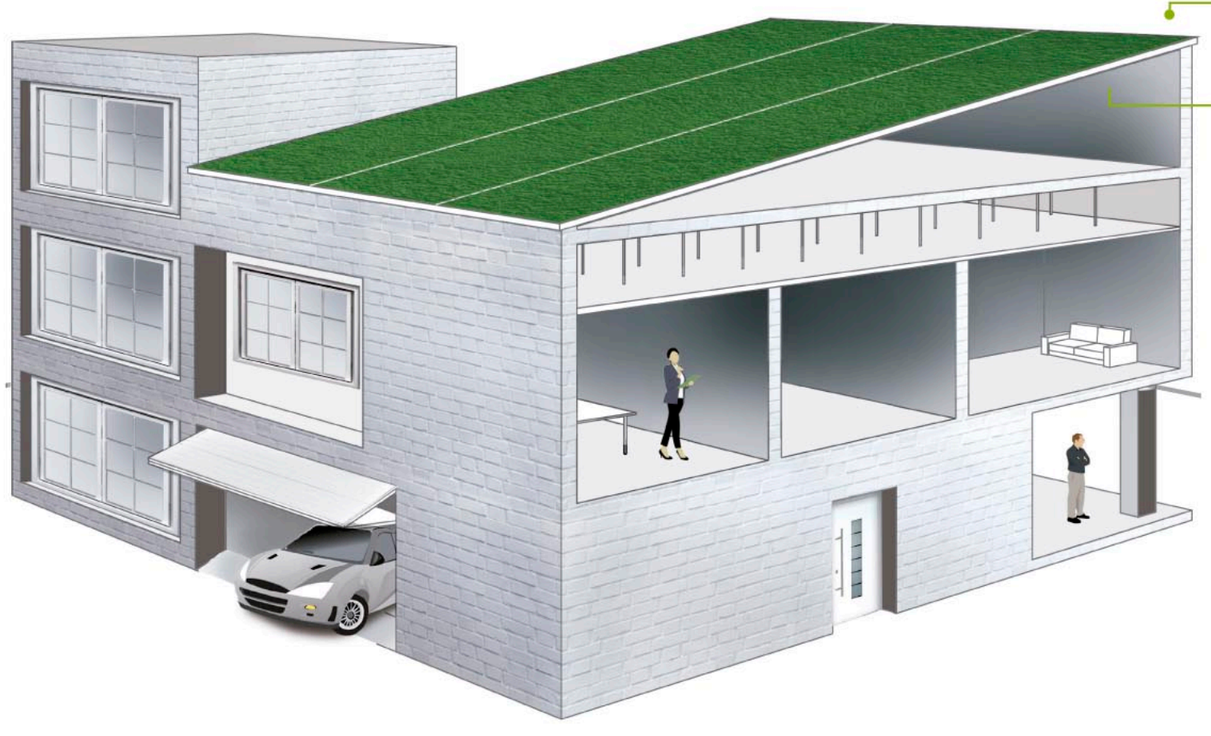




# PRODUCTS AND AND USES

- VENTILATED FACADES AND FACADES
- BATTERED AND DIVIDING WALLS.
- INTERIOR DIVISIONS
- CEILINGS AND TECHNICAL FLOORS
- ACOUSTIC CEILINGS
- SOILS
- INDUSTRIAL USE, AIR CONDITIONING

# COVERS



# ZONES D'APPLICATION TOITURE

## ON DECKS

BETWEEN FILLETS OR STRIPS.

- CLASSIC (pag. 30-31)
- SUPER PYL (pag. 32-33)
- PYL 2.0 (pag. 32-33)
- PASSIV (pag. 32-33)

## UNDER COVER

- CLASSIC (pag. 30-31)
- SUPER PYL (pag. 32-33)
- PYL 2.0 (pag. 32-33)
- PLUS FR2 AL (pag. 34-35)
- PASSIV (pag. 32-33)

# FACADES AND DIVIDING WALLS

## APPLICATION ZONES

## FACADES AND DIVIDING WALLS

BATTERED WALLS

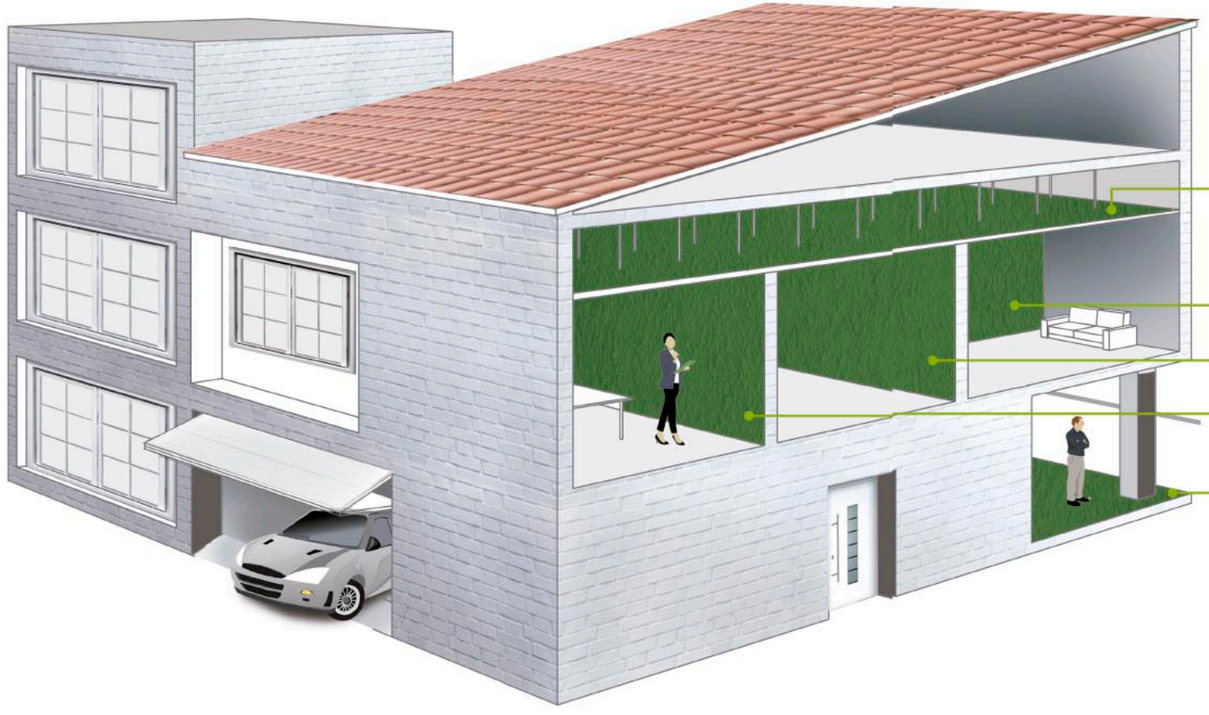
### INTERIOR ISOLATION

- CLASSIC (pag. 30-31)
- SUPER PYL (pag. 32-33)
- PYL 2.0 (pag. 32-33)
- PASSIV (pag. 32-33)

### VENTILATED FACADES

- PLUS FR2 (pag. 34-35)
- PLUS FR2 AL (pag. 34-35)

# INTERIOR PARTITIONS



## CEILINGS

- PLUS FR2 (pag. 34-35)
- PLUS FR2 NW AL (pag. 34-35)
- PLUS FR2 NW (VELO NEGRO) (pag. 34-35)

## INTERIOR PARTITIONS

- CLASSIC (pag. 30-31)
- SUPER PYL (pag. 32-33)
- PYL 2.0 (pag. 32-33)

## SOILS

- INPAT® (pag. 70-83)
- UNDERLAY (pag. 70-83)
- BANDA ACÚSTICA (pag. 70-83)

# FRAME WORKS. REIN FORCED CONCRETE FLOORS

## APPLICATION ZONES

## FRAMEWORKS. REINFORCED CONCRETE FLOORS

### FRAMEWORKS. REINFORCED CONCRETE FLOORS

- INPAT® (pag. 70-83)
- CLASSIC (pag. 70-83)
- UNDERLAY (pag. 70-83)

# REFERENCES AND PRICE

## TECHNICAL DATA AND RATES

Our products are the result of constant evolution, development and improved performance, so **GEOPANNEL®** recommends to any user, that before relying on a certain price or product for the execution of a work, verify with our headquarters its validity or possible changes in their technical description, performance, etc.

Please, be aware this product brochure contains information collected from several companies, experts and laboratories. The data may have been incorrectly transcribed during the process of editing.

Data provided by other companies with integrated **GEOPANNEL®** applications have been tested in laboratories at their request and remain their property..


CE

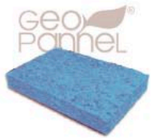
## RESIDENTIAL BUILDING

VERTICAL CHAMBERS' FACADES, -BATTERED WALLS- INTERIOR DIVISIONS, - FRAMEWORK CONCRETE

| PRODUCT | Description | Format | Dimensions (mm) long | Width | Density (mm) | Price (€/m²) | Presentation | Bags / pallet | | Plates / Bags | m2 / Bags | m2 / pallet | Volume Pallet (mm) | Weight Pallet (kg) | m2 / camión | Thermal (W/mK) | Euroclass | Code EAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEOPANNEL® CLASSIC | Cotton insulation regenerated agglomerate with thermo-hardening resin. Green. | Panel | 1.250 | 600 | 60 | 10,10 | Bags | 12 | | 8 | 6 | 72 | 1.200x1.200x2.650 | 209,40 | 1.584 | 0,034 | Ds2d0 | 8436581120189 |
| | | Panel | 1.250 | 600 | 50 | 8,47 | Bags | 12 | | 9 | 6,75 | 81 | 1.200x1.200x2.650 | 197,25 | 1.782 | 0,034 | Ds2d0 | 8436581120196 |
| | | Panel | 1.250 | 600 | 40 | 6,73 | Bags | 12 | | 12 | 9 | 108 | 1.200x1.200x2.650 | 209,40 | 2.376 | 0,034 | Ds2d0 | 8436581120202 |
| | | Panel | 1.250 | 600 | 30 | 5,24 | Bags | 12 | | 16 | 12 | 144 | 1.200x1.200x2.650 | 209,40 | 3.768 | 0,034 | Ds2d0 | 8436581120219 |
| | | Panel | 1.250 | 600 | 20 | 3,85 | Bags | 12 | | 24 | 18 | 216 | 1.200x1.200x2.650 | 209,40 | 4.752 | 0,034 | Ds2d0 | 8436581120226 |
| | | Panel | 1.250 | 600 | 10 | 2,64 | Bags | 12 | | 48 | 36 | 432 | 1.200x1.200x2.650 | 209,40 | 9.504 | 0,034 | Ds1d0 | 8436581120233 |
| | | Panel | 1.250 | 400 | 60 | 10,61 | Bags | 12 | | 12 | 6 | 72 | 1.200x1.200x2.650 | 209,40 | 1.584 | 0,034 | Ds2d0 | 8436581120240 |
| | | Panel | 1.250 | 400 | 50 | 8,90 | Bags | 12 | | 14 | 7 | 84 | 1.200x1.200x2.650 | 204,00 | 1.848 | 0,034 | Ds2d0 | 8436581120257 |
| | | Panel | 1.250 | 400 | 40 | 7,07 | Bags | 12 | | 18 | 9 | 108 | 1.200x1.200x2.650 | 209,40 | 2.376 | 0,034 | Ds2d0 | 8436581120264 |
| | | Panel | 1.250 | 400 | 30 | 5,50 | Bags | 12 | | 23 | 11,5 | 138 | 1.200x1.200x2.650 | 201,30 | 3.036 | 0,034 | Ds2d0 | 8436581120271 |
| | | Panel | 1.250 | 400 | 20 | 4,05 | Bags | 12 | | 34 | 17 | 204 | 1.200x1.200x2.650 | 198,60 | 4.488 | 0,034 | Ds2d0 | 8436581120288 |
| | | Panel | 1.250 | 400 | 10 | 2,78 | Bags | 12 | | 68 | 34 | 408 | 1.200x1.200x2.650 | 198,60 | 8.976 | 0,034 | Ds1d0 | 8436581120295 |

# SPECIAL PRODUCTS FOR GYPSUM BOARDS:

Chamber facades - battered walls - interior divisions - roofs




CE

| PRODUCT | Description | Format | Dimensions (mm) long | Dimensions (mm) Width | Density (mm) | Price (€/m²) | Presentation | Bags / pallet | Plates / Bags | m2 / Bags | m2 / pallet | Volume Pallet (mm) | Weight Pallet (kg) | m2 / camión | Thermal (W/mK) | Code EAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEOPANNEL® PYL 2.0 | Cotton insulation regenerated agglomerate with thermo fibers. Bluish grey color. | Panel | 1.250 | 600 | 60 | 7,34 | Bags | 12 | 8 | 6 | 72 | 1.200x1.200x2.650 | 144,60 | 1.584 | 0,034 | 8436581120059 |
| | | Panel | 1.250 | 600 | 50 | 5,95 | Bags | 12 | 9 | 6,75 | 81 | 1.200x1.200x2.650 | 136,50 | 1.782 | 0,034 | 8436581120066 |
| | | Panel | 1.250 | 600 | 40 | 4,78 | Bags | 12 | 12 | 9 | 108 | 1.200x1.200x2.650 | 144,60 | 2.376 | 0,034 | 8436581120073 |
| | | Panel | 1.250 | 600 | 30 | 3,78 | Bags | 12 | 16 | 12 | 144 | 1.200x1.200x2.650 | 144,60 | 3.768 | 0,034 | 8436581120080 |

| PRODUCT | Description | Format | Dimensions (mm) long | Dimensions (mm) Width | Density (mm) | Price (€/m²) | Presentation | Bags / pallet | Plates / Bags | m2 / Bags | m2 / pallet | Volume Pallet (mm) | Weight Pallet (kg) | m2 / camión | Thermal (W/mK) | Code EAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEOPANNEL® SUPER PYL | Cotton insulation regenerated agglomerate with thermo fibers. Bluish grey color. | Panel | 1.250 | 600 | 60 | 8,29 | Bags | 12 | 8 | 6 | 72 | 1.200x1.200x2.650 | 187,80 | 1.584 | 0,033 | 8436581120097 |
| | | Panel | 1.250 | 600 | 50 | 6,74 | Bags | 12 | 9 | 6,75 | 81 | 1.200x1.200x2.650 | 177,00 | 1.782 | 0,033 | 8436581120103 |
| | | Panel | 1.250 | 600 | 40 | 5,41 | Bags | 12 | 12 | 9 | 108 | 1.200x1.200x2.650 | 187,80 | 2.376 | 0,033 | 8436581120110 |
| | | Panel | 1.250 | 600 | 30 | 4,25 | Bags | 12 | 16 | 12 | 144 | 1.200x1.200x2.650 | 187,80 | 3.168 | 0,033 | 8436581120127 |
| | | Panel | 1.250 | 600 | 20 | 3,15 | Bags | 12 | 24 | 18 | 216 | 1.200x1.200x2.650 | 187,80 | 4.752 | 0,033 | 8436581120011 |
| | | Panel | 1.250 | 400 | 60 | 8,71 | Bags | 12 | 12 | 6 | 72 | 1.200x1.200x2.650 | 187,80 | 1.584 | 0,033 | 8436581120134 |
| | | Panel | 1.250 | 400 | 50 | 7,09 | Bags | 12 | 14 | 7 | 84 | 1.200x1.200x2.650 | 183,00 | 1.848 | 0,033 | 8436581120141 |
| | | Panel | 1.250 | 400 | 40 | 5,69 | Bags | 12 | 18 | 9 | 108 | 1.200x1.200x2.650 | 187,80 | 2.376 | 0,033 | 8436581120158 |
| | | Panel | 1.250 | 400 | 30 | 4,47 | Bags | 12 | 23 | 11,5 | 138 | 1.200x1.200x2.650 | 180,60 | 3.036 | 0,033 | 8436581120165 |
| | | Panel | 1.250 | 400 | 20 | 3,31 | Bags | 12 | 34 | 17 | 204 | 1.200x1.200x2.650 | 178,20 | 4.488 | 0,033 | 8436581120172 |

High levels of thermal and acoustic insulation: roofs - facades

| PRODUCT | Description | Format | Dimensions (mm) long | Dimensions (mm) Width | Density (mm) | Price (€/m²) | Presentation | Bags / pallet | Plates / Bags | m2 / Bags | m2 / pallet | Volume Pallet (mm) | Weight Pallet (kg) | m2 / camión | Thermal (W/mK) | Code EAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEOPANNEL® PASSIV | Cotton insulation regenerated agglomerate with thermo fibers. Bluish grey color. | Panel | 1.250 | 600 | 120 | 13,87 | Bags | 12 | 5 | 3,75 | 45 | 1.200x1.200x2.650 | 123,00 | 990 | 0,039 | 8436581120578 |
| | | Panel | 1.250 | 600 | 100 | 9,98 | Bags | 12 | 6 | 4,5 | 54 | 1.200x1.200x2.650 | 123,00 | 1.188 | 0,039 | 8436581120561 |
| | | Panel | 1.250 | 600 | 80 | 8,08 | Bags | 12 | 7 | 6 | 63 | 1.200x1.200x2.650 | 123,00 | 1.386 | 0,039 | 8436581120042 |

| PRODUCT | Description | Format | Dimensions (mm) long | Dimensions (mm) Width | Density (mm) | Price (€/m²) | Presentation | Bags / pallet | Plates / Bags | m2 / Bags | m2 / pallet | Volume Pallet (mm) | Weight Pallet (kg) | m2 / Truck | Thermal (W/mK) | Euroclass | Code EAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEOPANNEL® PLUS FR2  | Recycled Cotton agglomerated with thermo-setting resin. Yellow. | Panel | 1.250 | 600 | 60 | 12,34 | Bags | 12 | 8 | 6 | 72 | 1.200x1.200x2.650 | 209,40 | 1.584 | 0,034 | Cs1d0 | 8436581120301 |
| | | Panel | 1.250 | 600 | 50 | 10,34 | Bags | 12 | 9 | 6,75 | 81 | 1.200x1.200x2.650 | 197,25 | 1.782 | 0,034 | Cs1d0 | 8436581120318 |
| | | Panel | 1.250 | 600 | 40 | 8,22 | Bags | 12 | 12 | 9 | 108 | 1.200x1.200x2.650 | 209,40 | 2.376 | 0,034 | Cs1d0 | 8436581120004 |
| | | Panel | 1.250 | 600 | 30 | 6,36 | Bags | 12 | 16 | 12 | 144 | 1.200x1.200x2.650 | 209,40 | 3.168 | 0,034 | Cs1d0 | 8436581120325 |
| | | Panel | 1.250 | 600 | 20 | 4,60 | Bags | 12 | 24 | 18 | 216 | 1.200x1.200x2.650 | 209,40 | 4.752 | 0,034 | Cs1d0 | 8436581120332 |
| | | Panel | 1.250 | 600 | 10 | 3,06 | Bags | 12 | 48 | 36 | 432 | 1.200x1.200x2.650 | 209,40 | 9.504 | 0,034 | Bs1d0 | 8436581120349 |
| | | Panel | 1.250 | 400 | 60 | 12,96 | Bags | 12 | 12 | 6 | 72 | 1.200x1.200x2.650 | 209,40 | 1.584 | 0,034 | Cs1d0 | 8436581120356 |
| | | Panel | 1.250 | 400 | 50 | 10,87 | Bags | 12 | 14 | 7 | 84 | 1.200x1.200x2.650 | 204,00 | 1.848 | 0,034 | Cs1d0 | 8436581120363 |
| | | Panel | 1.250 | 400 | 40 | 8,64 | Bags | 12 | 18 | 9 | 108 | 1.200x1.200x2.650 | 209,40 | 2.376 | 0,034 | Cs1d0 | 8436581120370 |
| | | Panel | 1.250 | 400 | 30 | 6,68 | Bags | 12 | 23 | 11,5 | 138 | 1.200x1.200x2.650 | 201,30 | 3.036 | 0,034 | Cs1d0 | 8436581120387 |
| | | Panel | 1.250 | 400 | 20 | 4,83 | Bags | 12 | 34 | 17 | 204 | 1.200x1.200x2.650 | 198,60 | 4.488 | 0,034 | Cs1d0 | 8436581120394 |
| | | Panel | 1.250 | 400 | 10 | 3,21 | Bags | 12 | 68 | 34 | 408 | 1.200x1.200x2.650 | 198,60 | 8.976 | 0,034 | Bs1d0 | 8436581120400 |

| PRODUCT | Description | Format | Dimensions (mm) long | Dimensions (mm) Width | Density (mm) | Price (€/m²) | Presentation | Bags / pallet | Plates / Bags | m2 / Bags | m2 / pallet | Volume Pallet (mm) | Weight Pallet (kg) | m2 / Truck | Thermal (W/mK) | Euroclass | Code EAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEOPANNEL® PLUS FR2 AL  | Recycled cotton agglomerated with thermo-setting resin. Yellow. Laminated aluminum in one of its Faces. | Panel | 1.250 | 600 | 60 | 14,92 | Bags | 12 | 8 | 6 | 72 | 1.200x1.200x2.650 | 209,40 | 1.584 | 0,032 | Cs1d0 | 8436581120417 |
| | | Panel | 1.250 | 600 | 50 | 12,93 | Bags | 12 | 9 | 6,75 | 81 | 1.200x1.200x2.650 | 197,25 | 1.782 | 0,032 | Cs1d0 | 8436581120424 |
| | | Panel | 1.250 | 600 | 40 | 10,81 | Bags | 12 | 12 | 9 | 108 | 1.200x1.200x2.650 | 209,40 | 2.376 | 0,032 | Cs1d0 | 8436581120431 |
| | | Panel | 1.250 | 600 | 30 | 8,94 | Bags | 12 | 16 | 12 | 144 | 1.200x1.200x2.650 | 209,40 | 3.168 | 0,032 | Cs1d0 | 8436581120448 |
| | | Panel | 1.250 | 600 | 20 | 7,19 | Bags | 12 | 24 | 18 | 216 | 1.200x1.200x2.650 | 209,40 | 4.752 | 0,032 | Cs1d0 | 8436581120455 |
| | | Panel | 1.250 | 600 | 10 | 5,64 | Bags | 12 | 48 | 36 | 432 | 1.200x1.200x2.650 | 209,40 | 9.504 | 0,032 | Bs1d0 | 8436581120462 |

| PRODUCT | Description | Format | Dimensions (mm) | Density (mm) | Price (€/m²) | Presentation | Box / pallet | Plates / Box | m2 / Box | m2 / pallet | Volume Pallet (mm) | Weight Pallet (kg) | m2 / Truck | Thermal (W/mK) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEOPANNEL® PLUS FR2 NW  | Recycled cotton agglomerated with thermo-setting resin. Yellow. Laminated in black NW in one of their faces. | Placa | check available dies | 60 | 18,42 | cardboard boxes | 4 | 16 | 5,76 | 23,04 | 1.200x1.200x1.150 | 77,21 | 1.014 | 0,032 |
| | | Placa | | 50 | 15,47 | | 4 | 20 | 7,2 | 28,8 | 1.200x1.200x1.150 | 79,80 | 1.267 | 0,032 |
| | | Placa | | 40 | 12,71 | | 4 | 24 | 8,64 | 34,56 | 1.200x1.200x1.150 | 77,21 | 1.521 | 0,032 |
| | | Placa | | 30 | 10,15 | | 4 | 32 | 11,52 | 46,08 | 1.200x1.200x1.150 | 77,21 | 2.028 | 0,032 |
| | | Placa | | 20 | 7,45 | | 4 | 50 | 18 | 72 | 1.200x1.200x1.150 | 79,80 | 3.168 | 0,032 |
| | | Placa | | 10 | 5,24 | | 4 | 100 | 36 | 144 | 1.200x1.200x1.150 | 79,80 | 6.336 | 0,032 |


CAMPUS
PALMAS
ALTAS


Tondoluna

# TESTS GEOPANNEL®
# AND THEIR COMMITMENT WITH THE INSTALLER

Please, notice **GEOPANNEL®** has a much more complete acoustic measurements in different solutions constructive than those published below.
Please, contact our technical support for how many consultations you may need.

At GEOPANNEL® we are committed to total information and transparency with our customers. That's why we prefer lab tests that are endorsed in the Practice. All the results of our trials are reproducible on site because they are tested in a specialized laboratory with the maximum guarantee, using exclusively the same assembly to be used on site.

Thus, for your peace of mind, GEOPANNEL® only employs to laboratory-testing plasterboard, paste, taping, standard studs and screws, and silicones or other attenuators are never used nor any product focused on improving the result.

Thus, architects can prescribe our materials with the assurance that the result in their works will be similar to the provided data. Thus, installers acquire a product with achievable values in actual works.

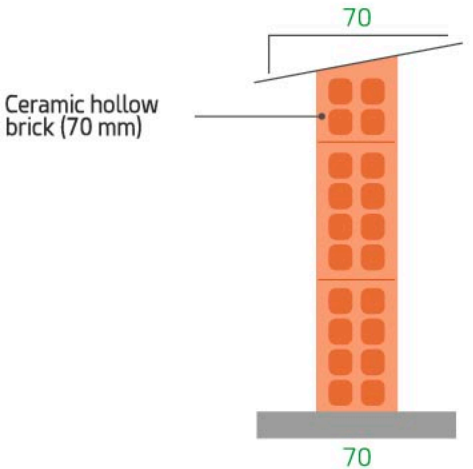
All trials have been both verified in laboratory and by on-site measurements.

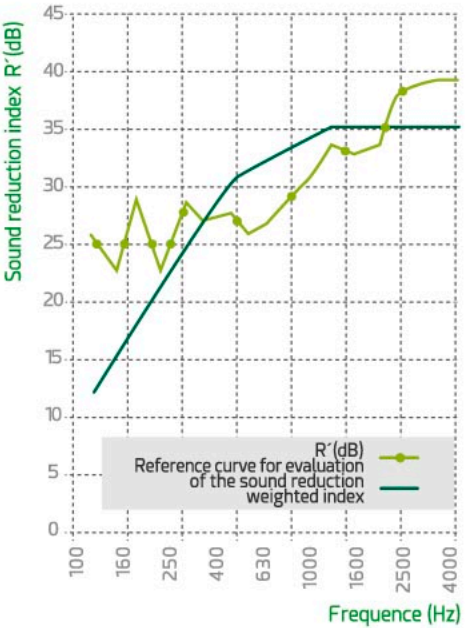
## FOR A BUILDING EFFICIENT AND ENVIROMENTALLY SUSTAINABLE

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 1

### CERAMIC HOLLOW BRICK OF 7, WITHOUT PLASTER IN ANY FACE




| f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 36,40 | 315 | 58,70 | 1000 | 64,30 | 3150 | 69,70 |
| 125 | 44,70 | 400 | 59,40 | 1250 | 66,60 | 4000 | 74,10 |
| 160 | 43,90 | 500 | 59,10 | 1600 | 68,70 | 5000 | 75,20 |
| 200 | 48,70 | 630 | 60,80 | 2000 | 68,50 | | |
| 250 | 55,60 | 800 | 64,80 | 2500 | 68,80 | | |

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# CERAMIC HOLLOW BRICK OF 7, WITHOUT PLASTER IN ANY FACE

**31 dB**

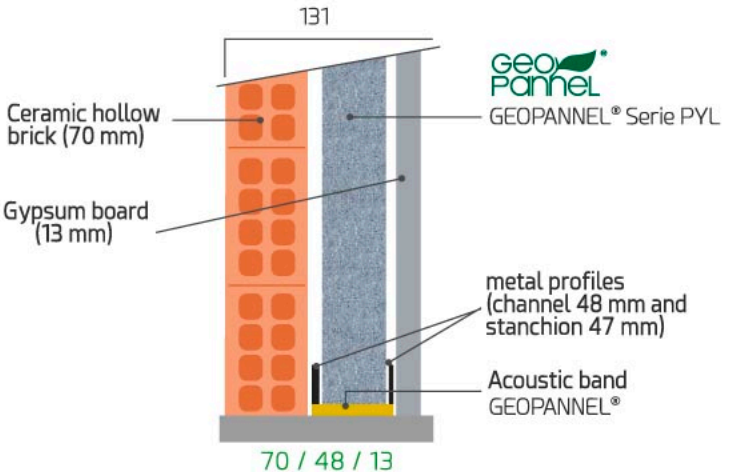
Isolation rates according to UNE-EN ISO 717-1

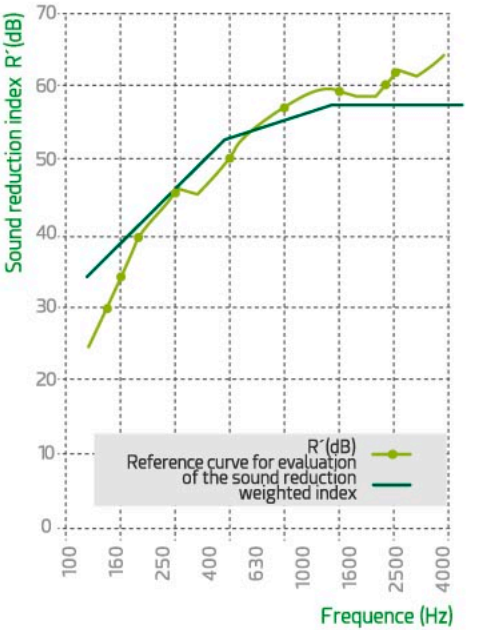
| | | |
|---|---|---|
| $R'_A$: | 32 | dBA |
| $R'_W(C;C_{tr})$ | 31 (0; -2) dB | dB |

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 2

### 7 CM CERAMIC HOLLOW BRICK, WITHOUT PLASTER IN ANY FACE, HANDED TO ONE SIDE WITH GEOPANNEL® PYL SERIES 40 mm AND 13mm GYPSUM BOARD.




| f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 24,70 | 315 | 45,70 | 1000 | 58,60 | 3150 | 60,40 |
| 125 | 29,60 | 400 | 48,30 | 1250 | 59,20 | 4000 | 64,00 |
| 160 | 38,30 | 500 | 52,60 | 1600 | 57,80 | 5000 | 65,60 |
| 200 | 41,60 | 630 | 54,70 | 2000 | 58,40 | | |
| 250 | 46,50 | 800 | 56,90 | 2500 | 61,70 | | |

Tests carried out following the technique of real assembly in construction with sealing paste and Tape. Silicones have not been used.

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

### 7 CM CERAMIC HOLLOW BRICK, WITHOUT PLASTER IN ANY FACE, HANDED TO ONE SIDE WITH GEOPANNEL® PYL SERIES 40 mm AND 13mm GYPSUM BOARD.

**53 dB**

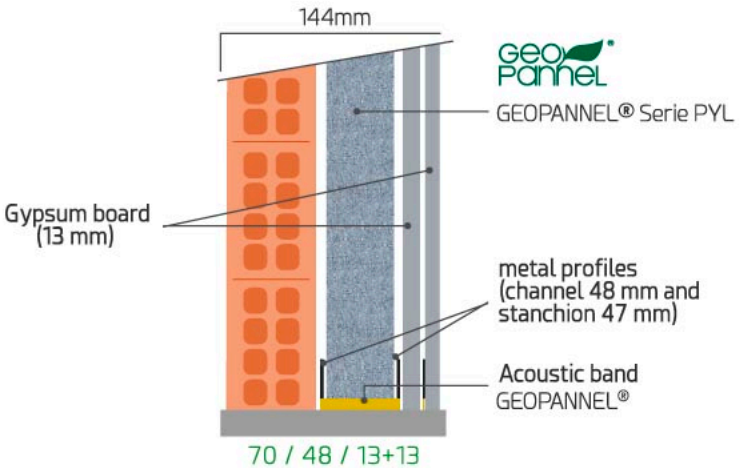
Isolation rates according to UNE-EN ISO 717-1

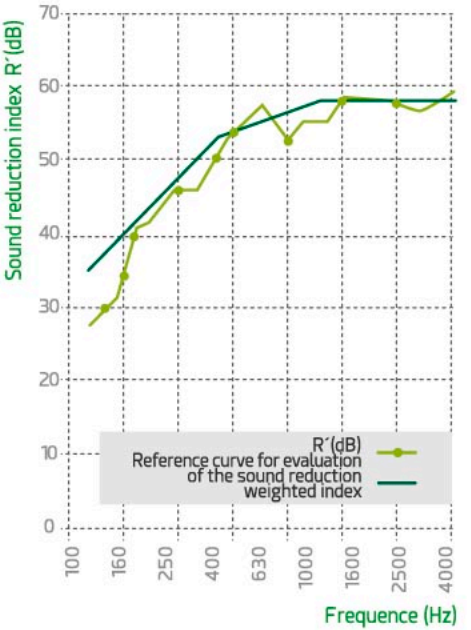
| | | |
|---|---|---|
| $R'_A$: | 51 | dBA |
| $R'_W(C;C_{tr})$ | 53 (-4; -10) dB | dB |

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 3

### 7 CM CERAMIC HOLLOW BRICK, WITHOUT PLASTER IN ANY FACE, HANDED TO ONE SIDE WITH GEOPANNEL® PYL SERIES 40 MM AND DOUBLE 13 MM GYPSUM BOARD.



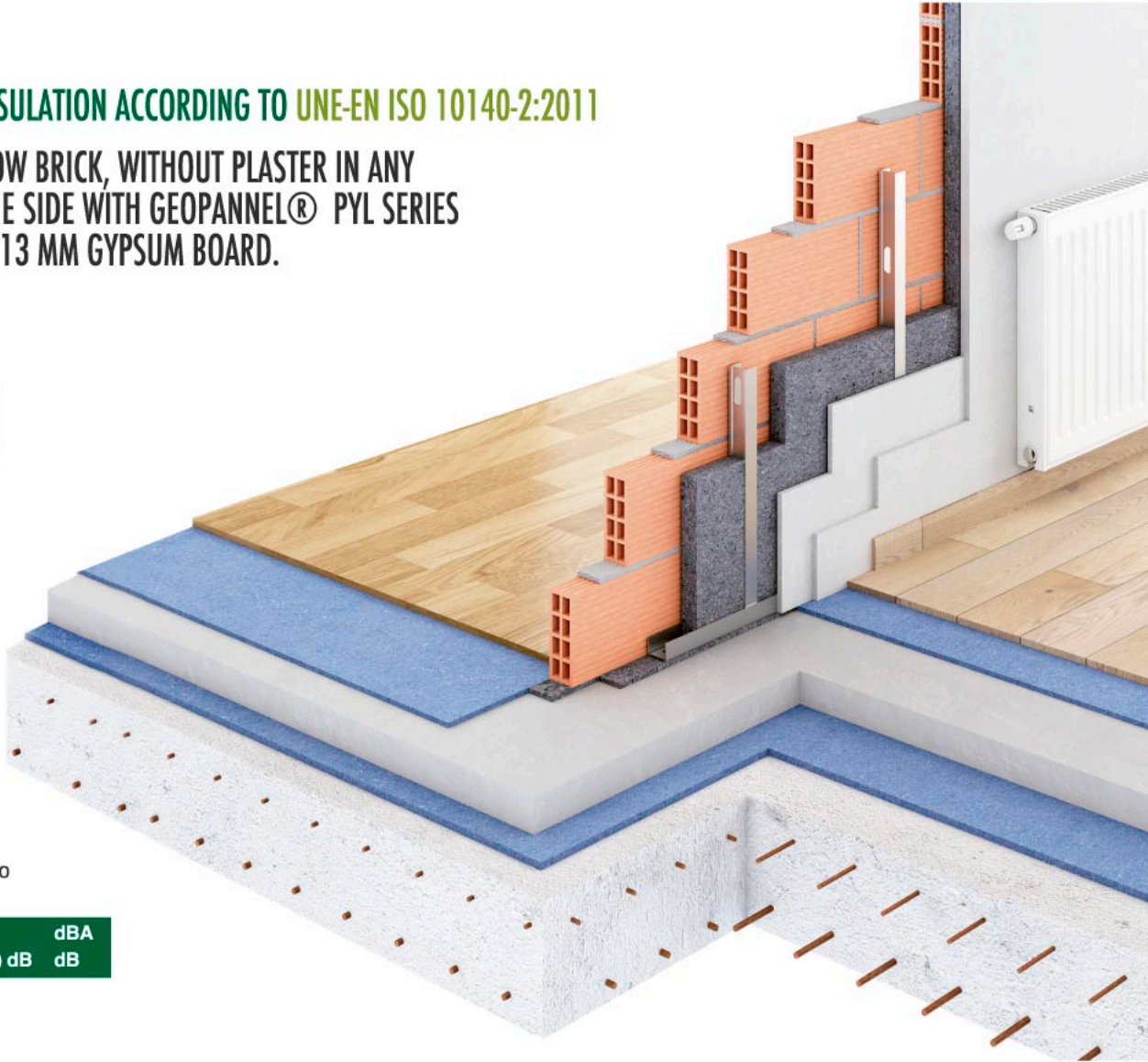

| f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 27,20 | 315 | 45,90 | 1000 | 55,80 | 3150 | 57,20 |
| 125 | 31,00 | 400 | 51,70 | 1250 | 55,10 | 4000 | 57,70 |
| 160 | 39,30 | 500 | 55,20 | 1600 | 58,20 | 5000 | 59,30 |
| 200 | 43,70 | 630 | 57,60 | 2000 | 58,10 | | |
| 250 | 45,80 | 800 | 53,20 | 2500 | 58,70 | | |

Tests carried out following the technique of real assembly in construction with sealing paste and Tape. Silicones have not been used.

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

### 7 CM CERAMIC HOLLOW BRICK, WITHOUT PLASTER IN ANY FACE, HANDED TO ONE SIDE WITH GEOPANNEL® PYL SERIES 40 MM AND DOUBLE 13 MM GYPSUM BOARD.

**58 dB**



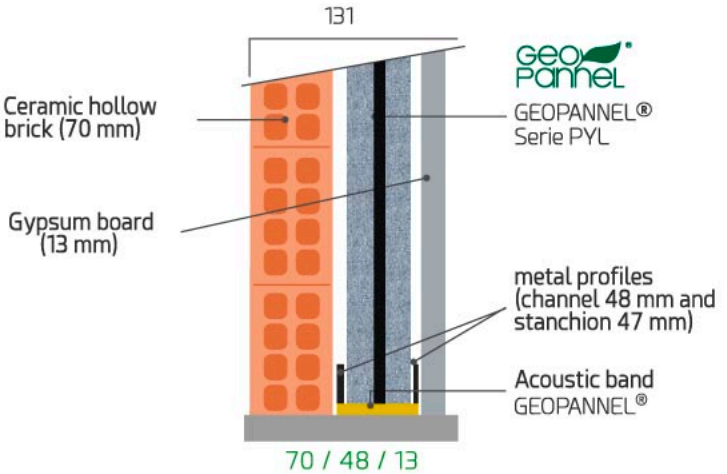
Isolation rates according to UNE-EN ISO 717-1

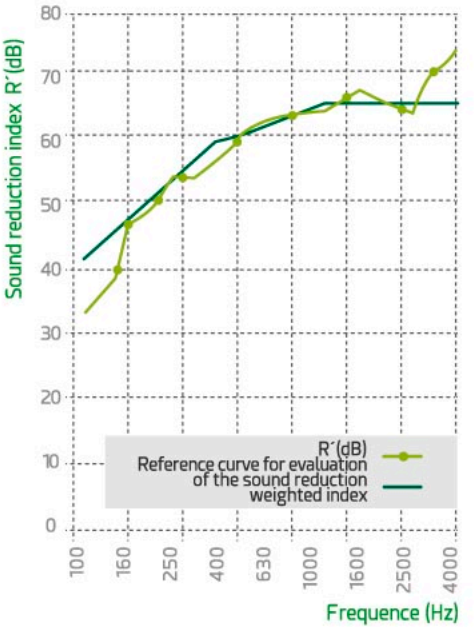
| | | |
|---|---|---|
| $R'_A$: | 56 | dBA |
| $R'_W(C;C_{tr})$ | 58 (-3; -10) dB | dB |

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 4

### 7 CM CERAMIC HOLLOW BRICK, WITHOUT PLASTER IN ANY FACE, ONE-SIDED WITH SANDWICH GEOPANNEL® PYL SERIES 50 MM WITH HEAVY LAYER AND 13MM LAMINATED PLASTERBOARD



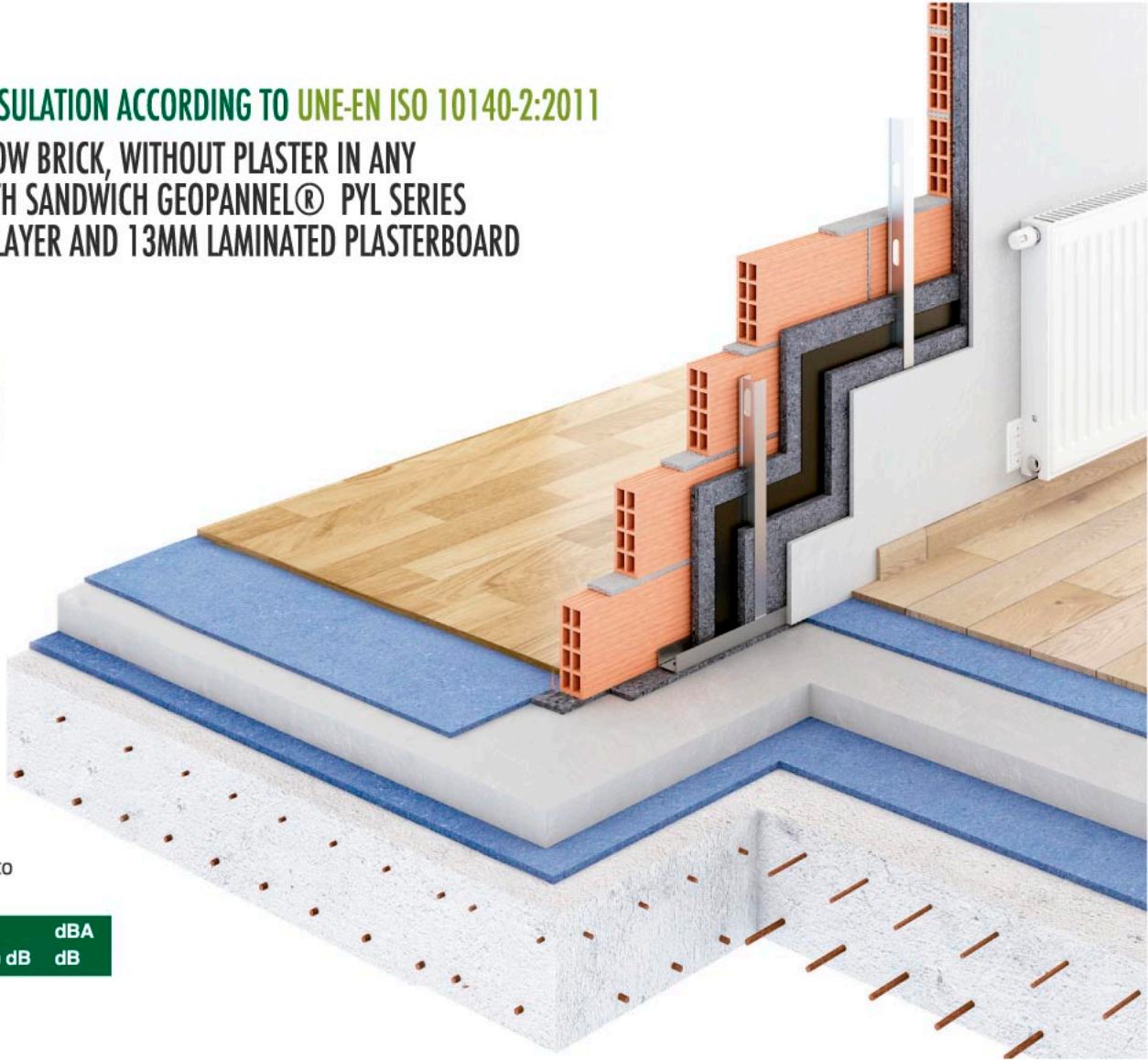

| f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 33,10 | 315 | 52,90 | 1000 | 63,60 | 3150 | 63,90 |
| 125 | 36,60 | 400 | 55,60 | 1250 | 63,10 | 4000 | 69,60 |
| 160 | 46,30 | 500 | 59,60 | 1600 | 65,60 | 5000 | 72,10 |
| 200 | 49,00 | 630 | 61,80 | 2000 | 66,90 | | |
| 250 | 53,70 | 800 | 62,90 | 2500 | 64,30 | | |

Tests carried out following the technique of real assembly in construction with sealing paste and Tape. Silicones have not been used.

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# 7 CM CERAMIC HOLLOW BRICK, WITHOUT PLASTER IN ANY FACE, ONE-SIDED WITH SANDWICH GEOPANNEL® PYL SERIES 50 MM WITH HEAVY LAYER AND 13MM LAMINATED PLASTERBOARD

**54 dB**



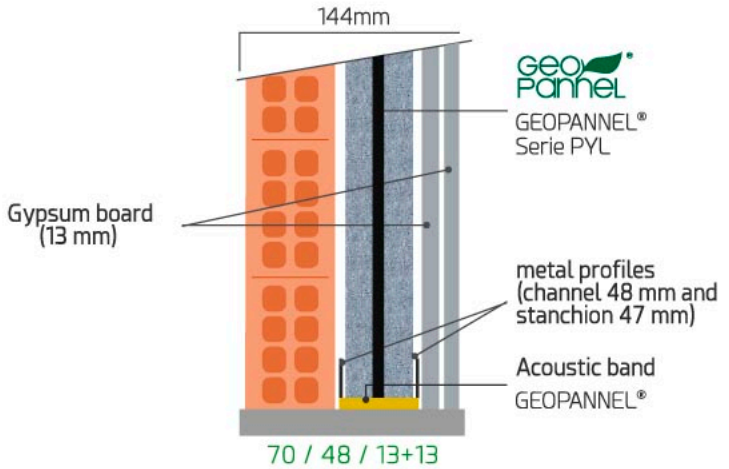
Isolation rates according to UNE-EN ISO 717-1

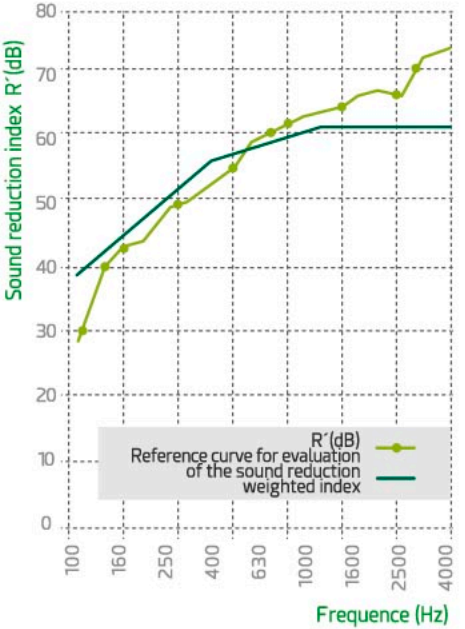
| | | |
|---|---|---|
| $R'_A$: | 53 | dBA |
| $R'_W(C;C_{tr})$ | 54 (-3; -9) dB | dB |

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 5

### 7 CM CERAMIC HOLLOW BRICK, WITHOUT PLASTER IN ANY FACE ONE-SIDED WITH SANDWICH GEOPANNEL® PYL SERIES 50 MM WITH HEAVY LAYER AND DOUBLE 13 MM GYPSUM BOARD.



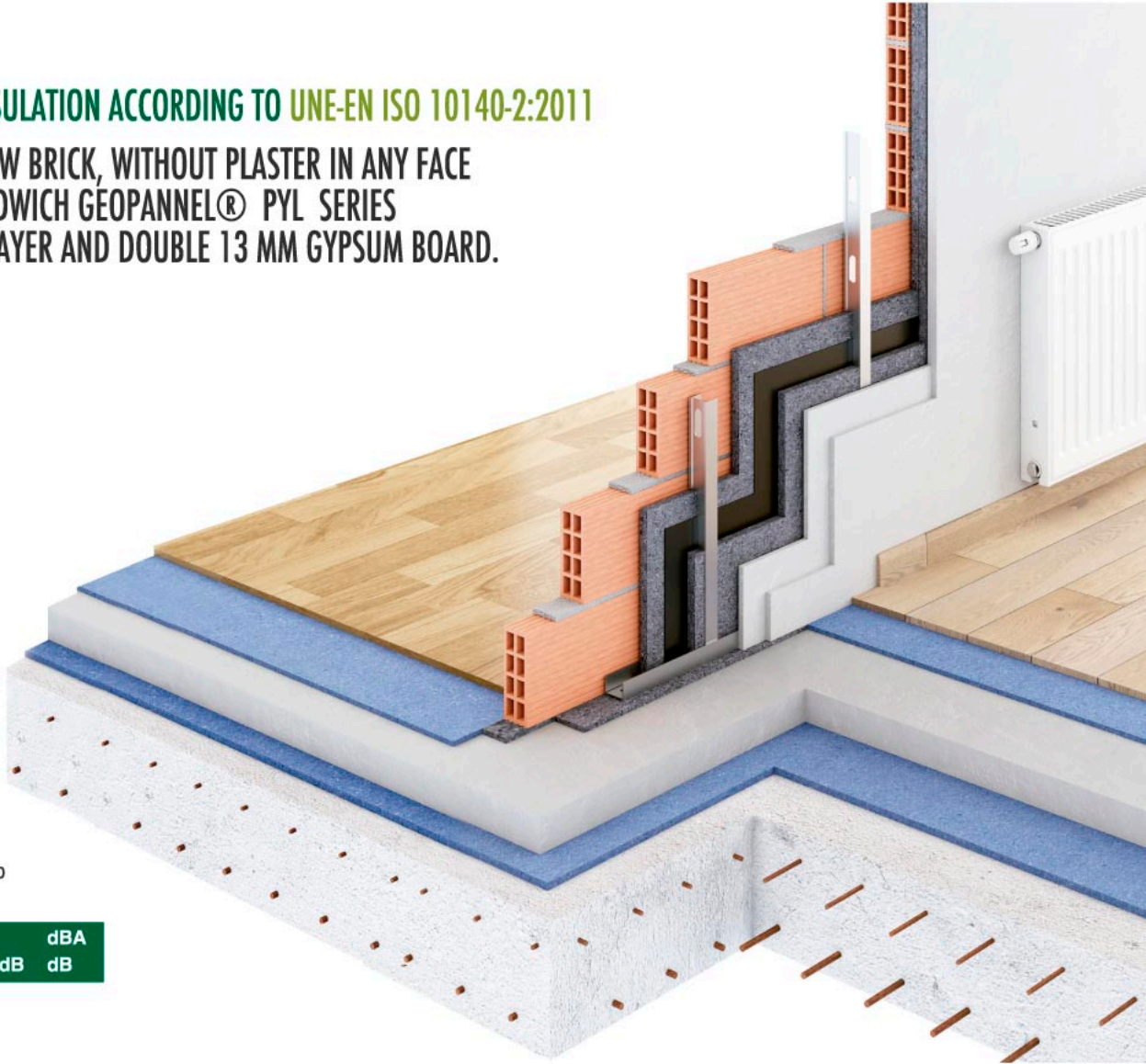

| f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 29,30 | 315 | 50,60 | 1000 | 63,40 | 3150 | 67,50 |
| 125 | 39,90 | 400 | 53,20 | 1250 | 63,80 | 4000 | 72,50 |
| 160 | 43,00 | 500 | 55,80 | 1600 | 64,60 | 5000 | 74,50 |
| 200 | 44,60 | 630 | 60,00 | 2000 | 67,50 | | |
| 250 | 49,40 | 800 | 61,80 | 2500 | 68,30 | | |

Tests carried out following the technique of real assembly in construction with sealing paste and Tape. Silicones have not been used.

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# 7 CM CERAMIC HOLLOW BRICK, WITHOUT PLASTER IN ANY FACE ONE-SIDED WITH SANDWICH GEOPANNEL® PYL SERIES 50 MM WITH HEAVY LAYER AND DOUBLE 13 MM GYPSUM BOARD.

**61 dB**



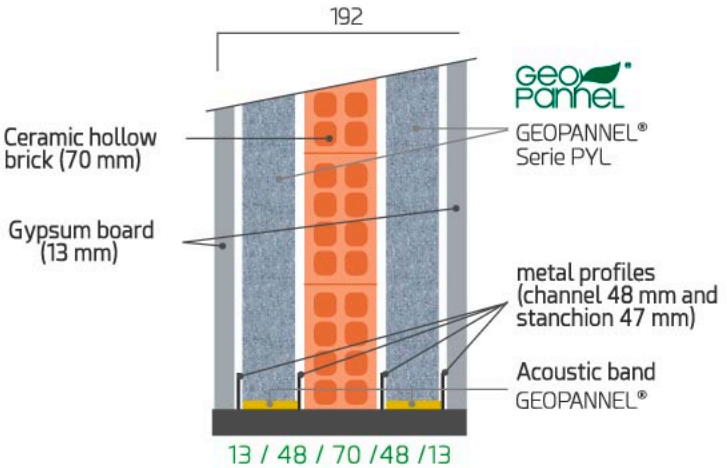
Isolation rates according to UNE-EN ISO 717-1

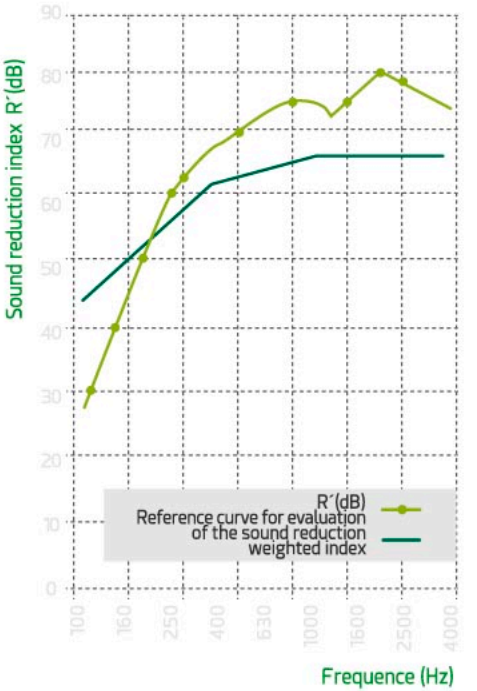
| | | |
|---|---|---|
| $R'_A$: | 58 | dBA |
| $R'_W(C;C_{tr})$ | 61 (-4; -11) dB | dB |

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 6

### 7 CM CERAMIC HOLLOW BRICK, WITHOUT PLASTER IN ANY SIDE, TWO-SIDED WITH GEOPANNEL PYL SERIES 40 mm AND 13 mm GYPSUM BOARD.




| f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 28,00 | 315 | 65,40 | 1000 | 76,50 | 3150 | 79,70 |
| 125 | 39,00 | 400 | 69,20 | 1250 | 76,60 | 4000 | 77,70 |
| 160 | 47,30 | 500 | 71,30 | 1600 | 74,10 | 5000 | 75,80 |
| 200 | 54,20 | 630 | 73,60 | 2000 | 77,90 | | |
| 250 | 62,10 | 800 | 75,20 | 2500 | 81,00 | | |

Tests carried out following the technique of real assembly in construction with sealing paste and Tape. Silicones have not been used.

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

### 7 CM CERAMIC HOLLOW BRICK, WITHOUT PLASTER IN ANY SIDE, TWO-SIDED WITH GEOPANNEL PYL SERIES 40 mm AND 13 mm GYPSUM BOARD.

**64 dB**

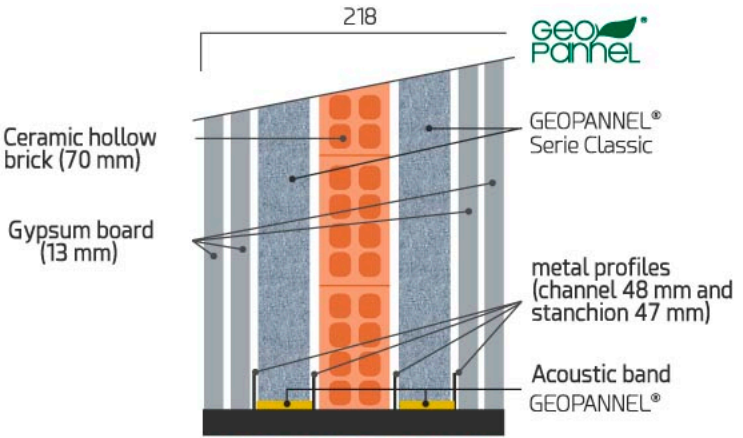
Isolation rates according to UNE-EN ISO 717-1

| | | |
|---|---|---|
| $R'_A$: | 57 | dBA |
| $R'_W(C;C_{tr})$ | 64 (-8; -16) dB | dB |

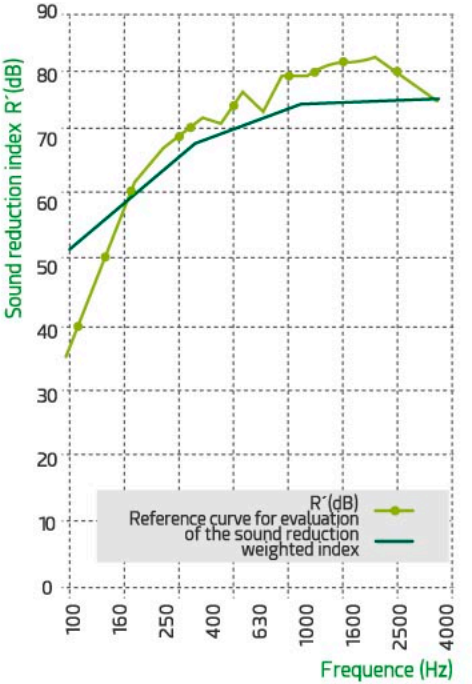
## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 7

### 7 CM CERAMIC HOLLOW BRICK, WITHOUT PLASTER ON ANY SIDE, TWO-SIDED BACKING WITH GEOPANNEL® CLASSIC SERIES 40 mm AND DOUBLE 13 mm GYPSUM BOARD.




13+13 / 48 / 70 /48 /13+13




| f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 36,20 | 315 | 70,10 | 1000 | 80,10 | 3150 | 81,20 |
| 125 | 46,40 | 400 | 73,70 | 1250 | 79,80 | 4000 | 78,30 |
| 160 | 54,40 | 500 | 73,20 | 1600 | 82,60 | 5000 | 76,20 |
| 200 | 63,50 | 630 | 77,60 | 2000 | 82,90 | | |
| 250 | 67,70 | 800 | 74,70 | 2500 | 83,40 | | |

Tests carried out following the technique of real assembly in construction with sealing paste and Tape. Silicones have not been used.

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

### 7 CM CERAMIC HOLLOW BRICK, WITHOUT PLASTER ON ANY SIDE, TWO-SIDED BACKING WITH GEOPANNEL® CLASSIC SERIES 40 mm AND DOUBLE 13 mm GYPSUM BOARD.

**72 dB**

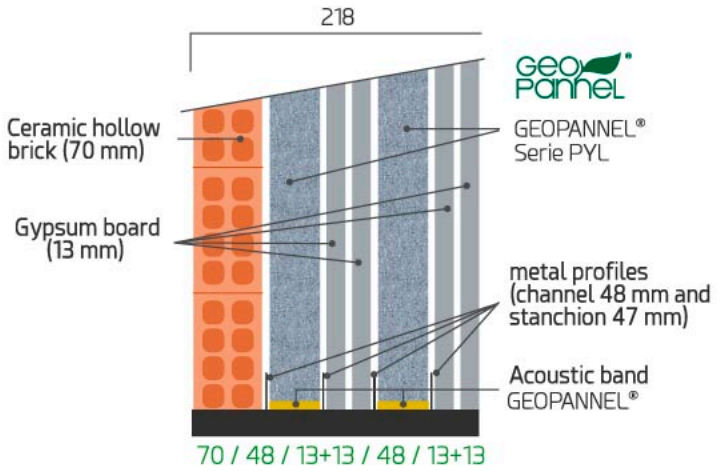
Isolation rates according to UNE-EN ISO 717-1

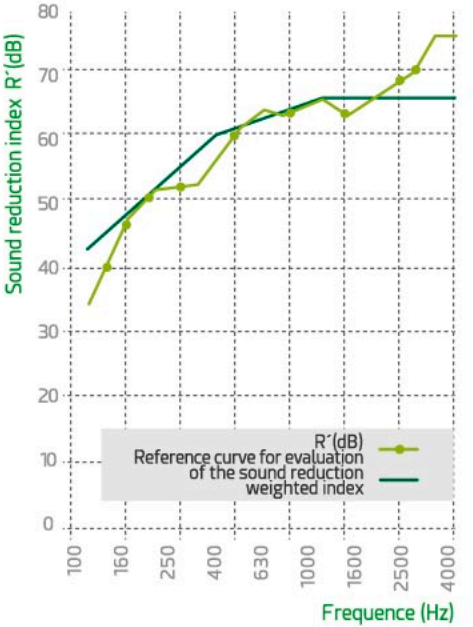
| | | |
|---|---|---|
| $R'_A$: | 65 | dBA |
| $R'_W(C;C_{tr})$ | 72 (-8; -16) dB | dB |

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 8

### 7 CM CERAMIC HOLLOW BRICK, WITHOUT PLASTER ON ANY SIDE, DOUBLE-SIDED WITH GEOPANNEL® PYL SERIES 40 mm AND DOUBLE 13 mm GYPSUM BOARD.



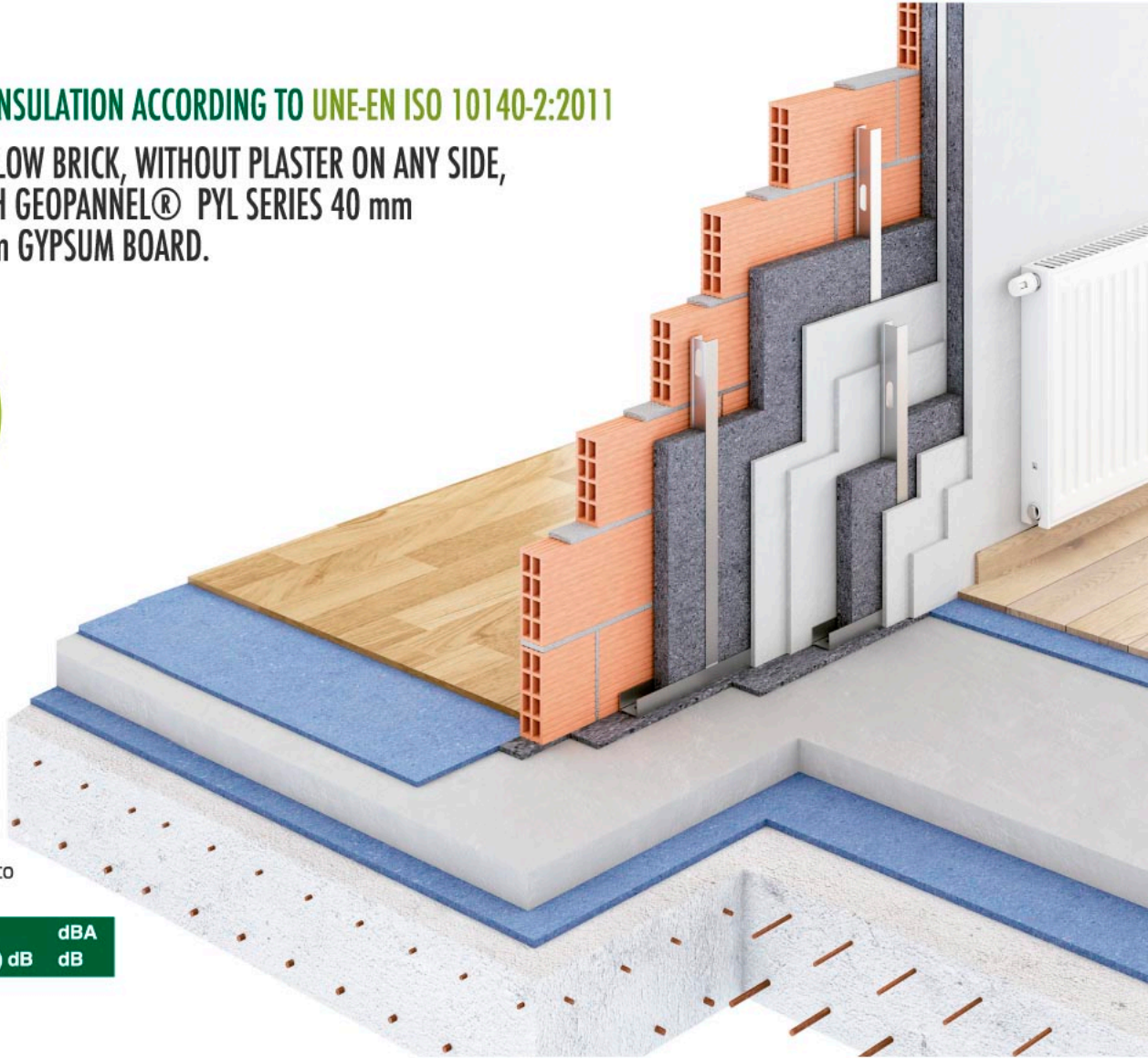

| f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 34,50 | 315 | 53,00 | 1000 | 65,90 | 1000 | 69,90 |
| 125 | 39,70 | 400 | 57,20 | 1250 | 66,50 | 1250 | 76,00 |
| 160 | 48,00 | 500 | 61,70 | 1600 | 64,40 | 1600 | 76,00 |
| 200 | 52,50 | 630 | 64,30 | 2000 | 66,40 | 2000 | |
| 250 | 53,30 | 800 | 64,20 | 2500 | 69,10 | 2500 | |

Tests carried out following the technique of real assembly in construction with sealing paste and Tape. Silicones have not been used.

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# 7 CM CERAMIC HOLLOW BRICK, WITHOUT PLASTER ON ANY SIDE, DOUBLE-SIDED WITH GEOPANNEL® PYL SERIES 40 mm AND DOUBLE 13 mm GYPSUM BOARD.

**62 dB**



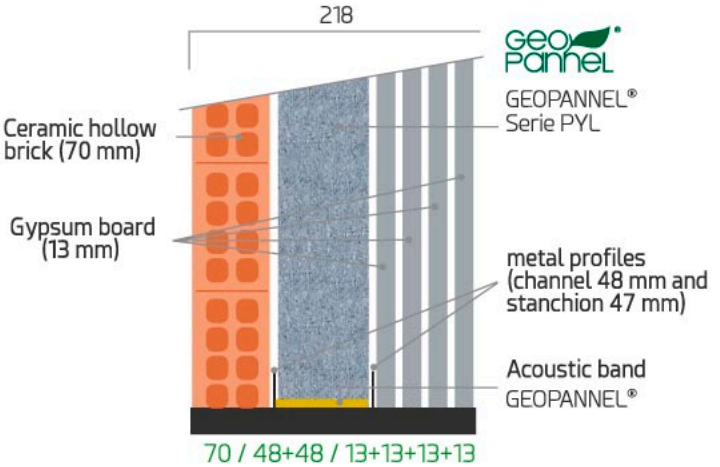
Isolation rates according to UNE-EN ISO 717-1

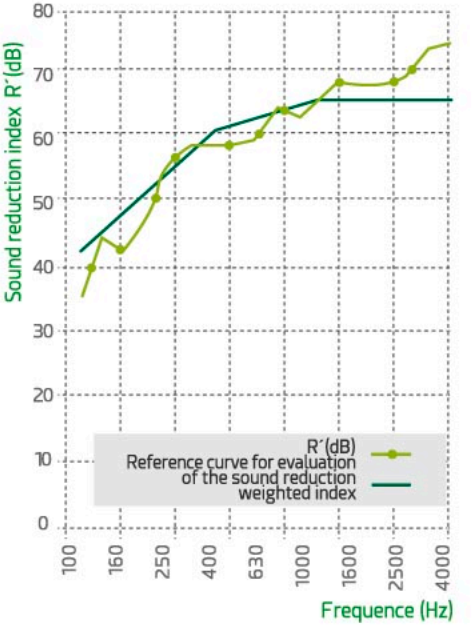
| | | |
|---|---|---|
| $R'_A$: | 60 | dBA |
| $R'_W(C;C_{tr})$ | 62 (-3; -10) dB | dB |

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 9

### 7 CERAMIC HOLLOW BRICK, WITHOUT PLASTER ON ANY SIDE, DOUBLE-SIDED WITH GEOPANNEL ® PYL SERIES 40 mm AND FOUR 13 mm GYPSUM BOARD.



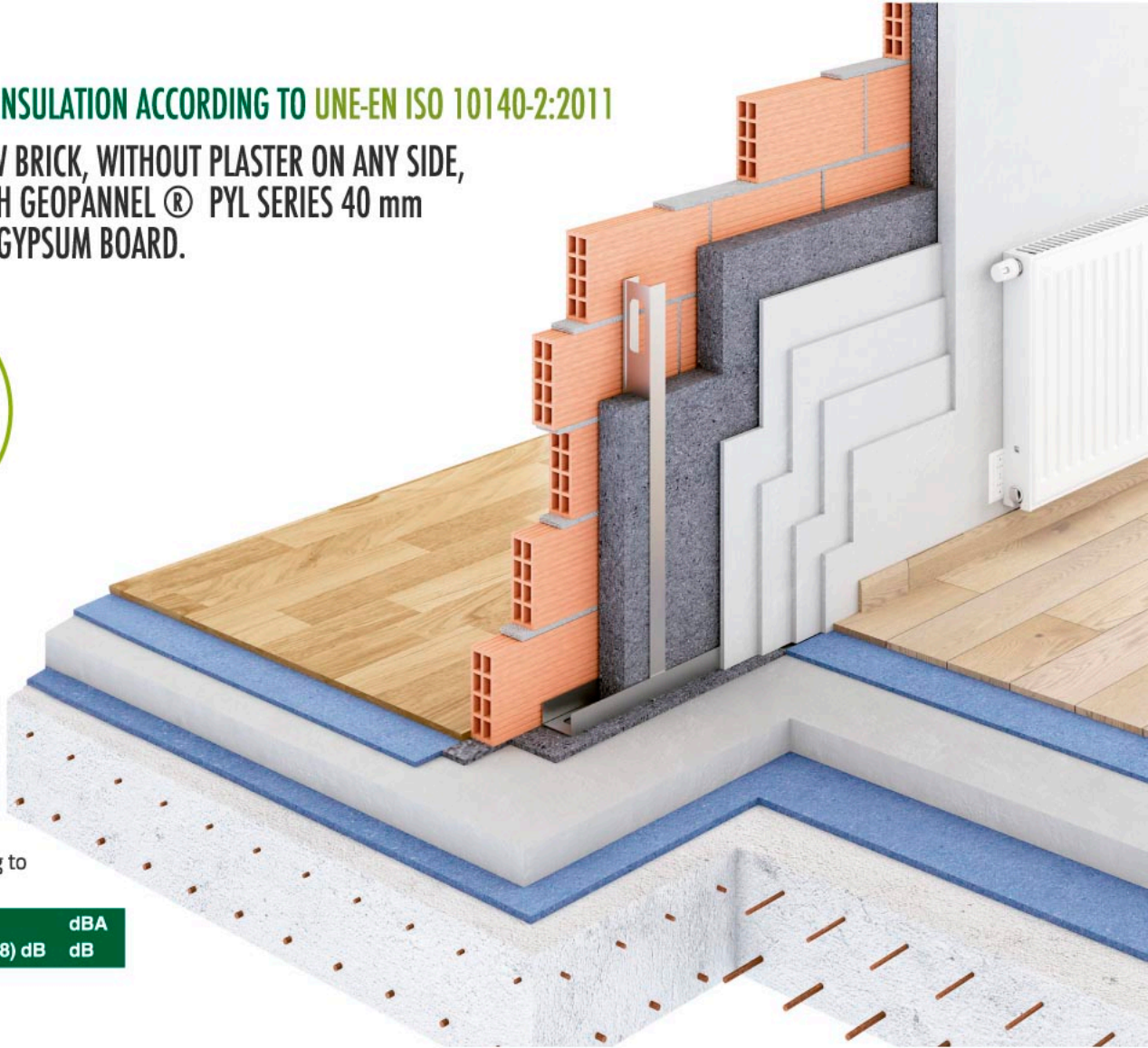

| f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 36,40 | 315 | 58,70 | 1000 | 64,30 | 3150 | 69,70 |
| 125 | 44,70 | 400 | 59,40 | 1250 | 66,60 | 4000 | 74,10 |
| 160 | 43,90 | 500 | 59,10 | 1600 | 68,70 | 5000 | 75,20 |
| 200 | 48,70 | 630 | 60,80 | 2000 | 68,50 | | |
| 250 | 55,60 | 800 | 64,80 | 2500 | 68,80 | | |

Tests carried out following the technique of real assembly in construction with sealing paste and Tape. Silicones have not been used.

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# 7 CERAMIC HOLLOW BRICK, WITHOUT PLASTER ON ANY SIDE, DOUBLE-SIDED WITH GEOPANNEL ® PYL SERIES 40 mm AND FOUR 13 mm GYPSUM BOARD.

**62 dB**



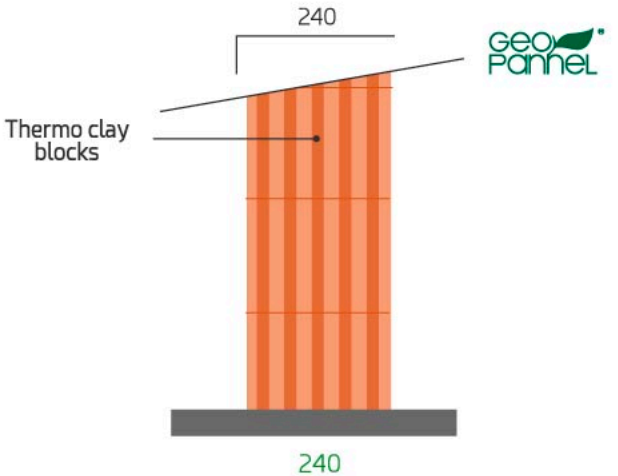
Isolation rates according to UNE-EN ISO 717-1

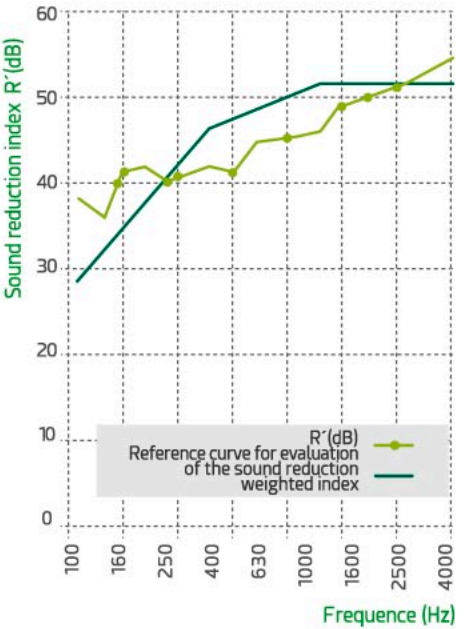
| | | |
|---|---|---|
| $R'_A$: | 61 | dBA |
| $R'_{W(C;C_{tr})}$ | 62 (-2; -8) dB | dB |

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 10

### THERMO CLAY BLOCKS 24 CM. PLASTERED IN ONE OF ITS FACES



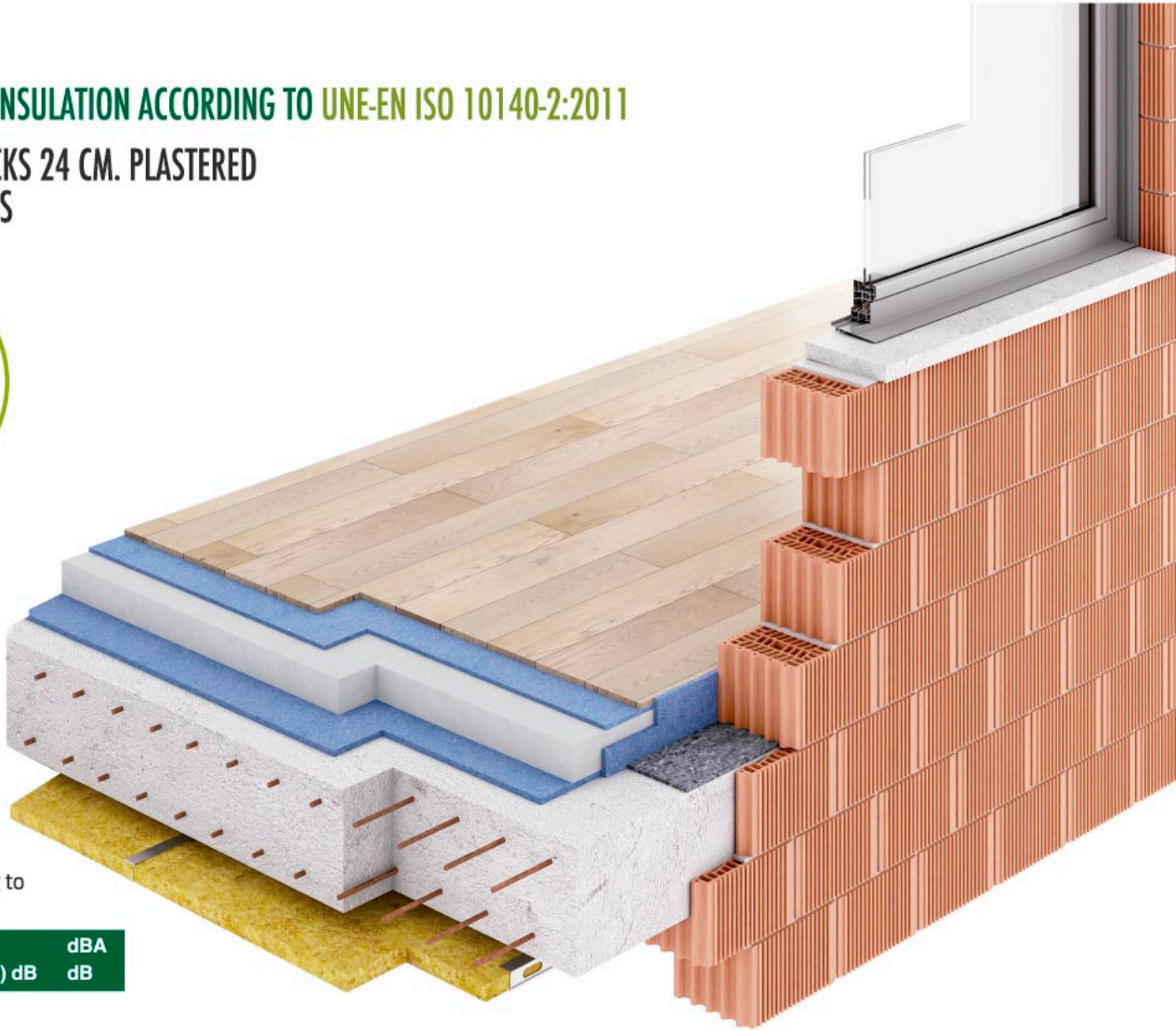




| f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 38,00 | 315 | 41,00 | 1000 | 45,60 | 3150 | 51,30 |
| 125 | 36,70 | 400 | 41,90 | 1250 | 46,30 | 4000 | 53,00 |
| 160 | 41,40 | 500 | 41,50 | 1600 | 48,80 | 5000 | 54,70 |
| 200 | 41,70 | 630 | 45,00 | 2000 | 49,50 | | |
| 250 | 40,40 | 800 | 45,30 | 2500 | 50,40 | | |

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# THERMO CLAY BLOCKS 24 CM. PLASTERED IN ONE OF ITS FACES

**46 dB**



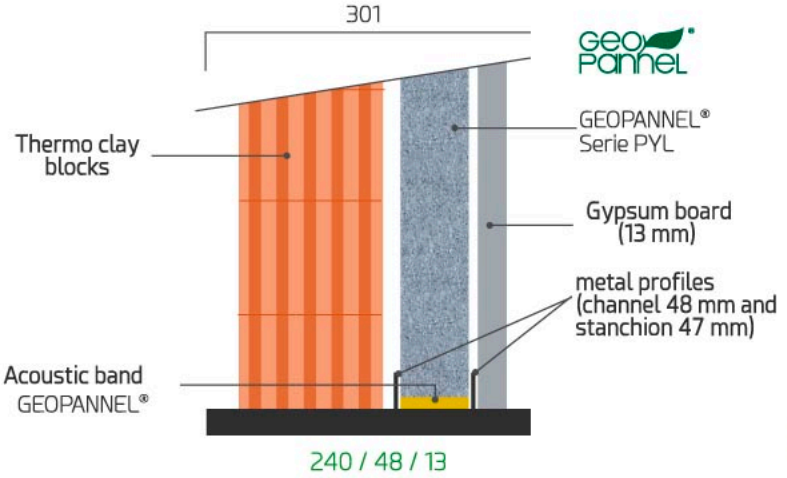
Isolation rates according to UNE-EN ISO 717-1

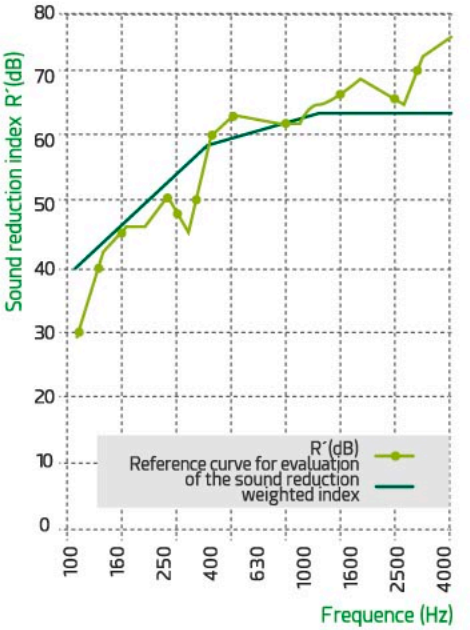
| | | |
|---|---|---|
| $R'_A$: | 47 | dBA |
| $R'_W(C;C_{tr})$ | 46 (0; -2) dB | dB |

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 11

### THERMO CLAY BLOCKS 24 CM. PLASTERED IN ONE OF ITS FACES BACKED TO A FACE WITH GEOPANNEL® PYL SERIES 40 mm AND 13 mm PLASTERBOARD



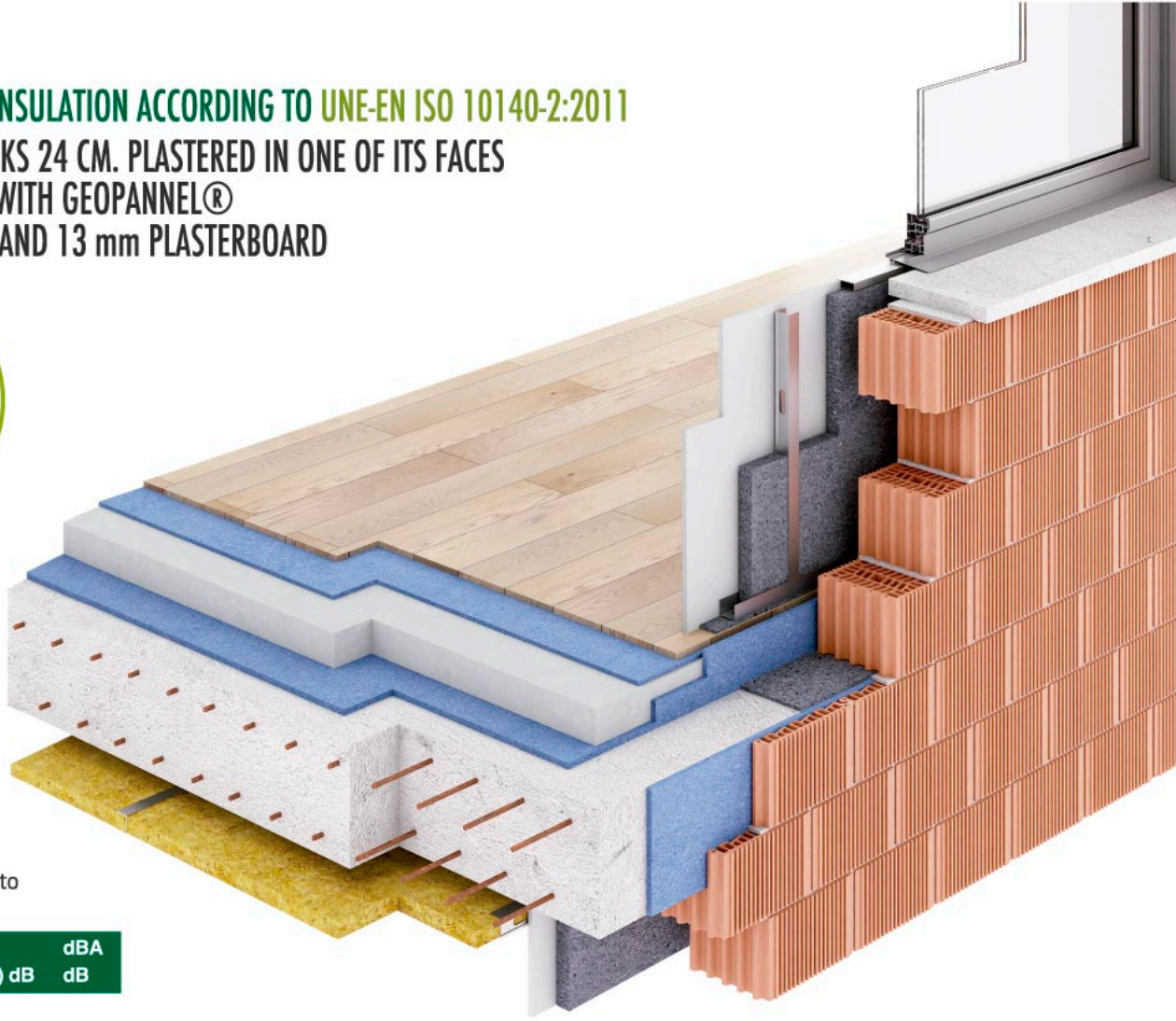

| f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 30,50 | 315 | 45,30 | 1000 | 63,10 | 3150 | 66,30 |
| 125 | 43,00 | 400 | 60,80 | 1250 | 65,30 | 4000 | 73,00 |
| 160 | 46,20 | 500 | 63,10 | 1600 | 66,50 | 5000 | 76,10 |
| 200 | 46,90 | 630 | 63,50 | 2000 | 69,30 | | |
| 250 | 51,10 | 800 | 63,00 | 2500 | 67,90 | | |

Tests carried out following the technique of real assembly in construction with sealing paste and Tape. Silicones have not been used.

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# THERMO CLAY BLOCKS 24 CM. PLASTERED IN ONE OF ITS FACES BACKED TO A FACE WITH GEOPANNEL® PYL SERIES 40 mm AND 13 mm PLASTERBOARD

**60 dB**



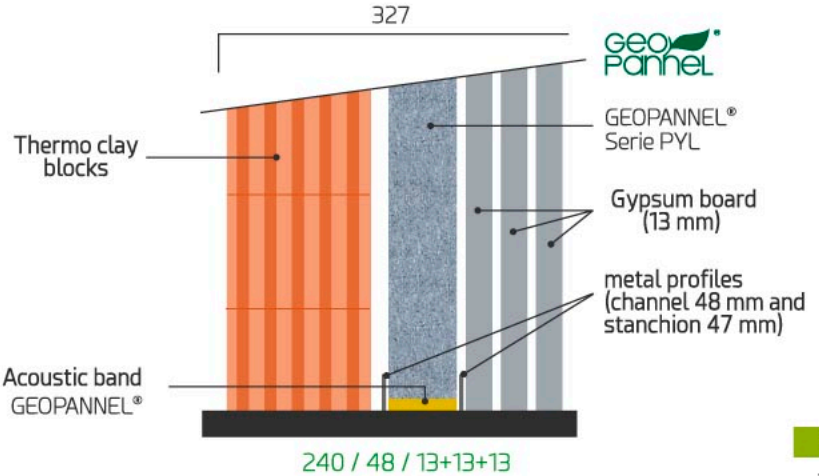
Isolation rates according to UNE-EN ISO 717-1

| | | |
|---|---|---|
| $R'_A$: | 57 | dBA |
| $R'_W(C;C_{tr})$ | 60 (-4; -11) dB | dB |

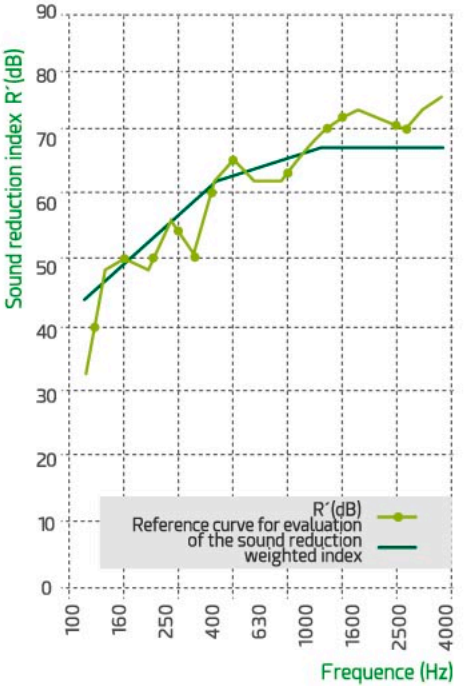
## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 12

### THERMO CLAY BLOCKS 24 CM. PLASTERED IN ONE OF ITS FACES BACKED TO A FACE WITH GEOPANNEL®
### PYL SERIES 40 mm AND TRIPLE 13 mm PLASTERBOARD




240 / 48 / 13+13+13




| f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) | f (Hz) | R'(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 34,50 | 315 | 52,40 | 1000 | 67,70 | 3150 | 71,50 |
| 125 | 50,70 | 400 | 63,80 | 1250 | 70,20 | 4000 | 75,70 |
| 160 | 51,40 | 500 | 66,40 | 1600 | 73,40 | 5000 | 76,70 |
| 200 | 50,30 | 630 | 64,10 | 2000 | 75,10 | | |
| 250 | 57,00 | 800 | 64,50 | 2500 | 72,80 | | |

Tests carried out following the technique of real assembly in construction with sealing paste and Tape. Silicones have not been used.

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# THERMO CLAY BLOCKS 24 CM. PLASTERED IN ONE OF ITS FACES BACKED TO A FACE WITH GEOPANNEL® PYL SERIES 40 mm AND TRIPLE 13 mm PLASTERBOARD

**65 dB**

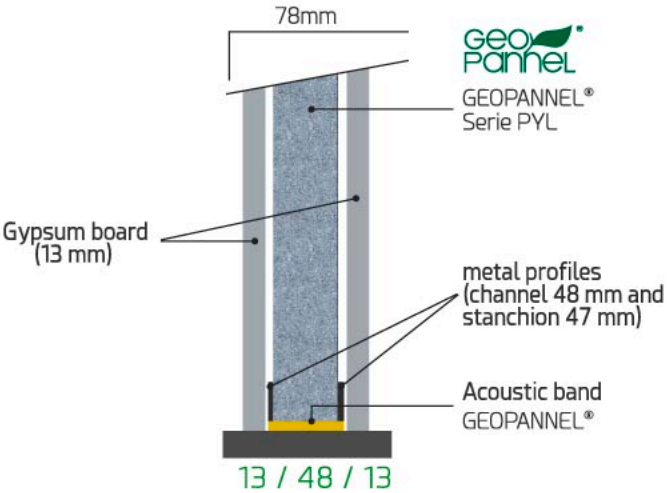
Isolation rates according to UNE-EN ISO 717-1

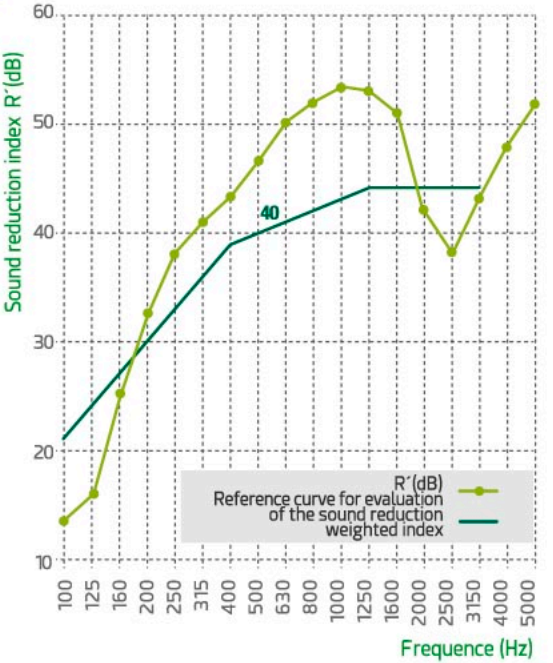
| | | |
|---|---|---|
| $R'_A$: | 62 | dBA |
| $R'_W(C;C_{tr})$ | 65 (-4; -11) dB | dB |

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 13

### PARTITION WALL WITH 13 mm GYPSUMBOARD. GEOPANNEL® PYL SERIES 40 mm




| f (Hz) | R(dB) | f (Hz) | R(dB) | f (Hz) | R(dB) | f (Hz) | R(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 13,5 | 315 | 40,7 | 1000 | 53,1 | 3150 | 43,0 |
| 125 | 15,9 | 400 | 43,0 | 1250 | 52,9 | 4000 | 47,6 |
| 160 | 25,0 | 500 | 46,5 | 1600 | 50,8 | 5000 | 51,5 |
| 200 | 32,4 | 630 | 49,8 | 2000 | 42,0 | | |
| 250 | 37,8 | 800 | 51,8 | 2500 | 38,1 | | |

Tests carried out following the technique of real assembly in construction with sealing paste and Tape. Silicones have not been used.

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# PARTITION WALL WITH 13 mm GYPSUMBOARD. GEOPANNEL® PYL SERIES 40 mm

**40 dB**

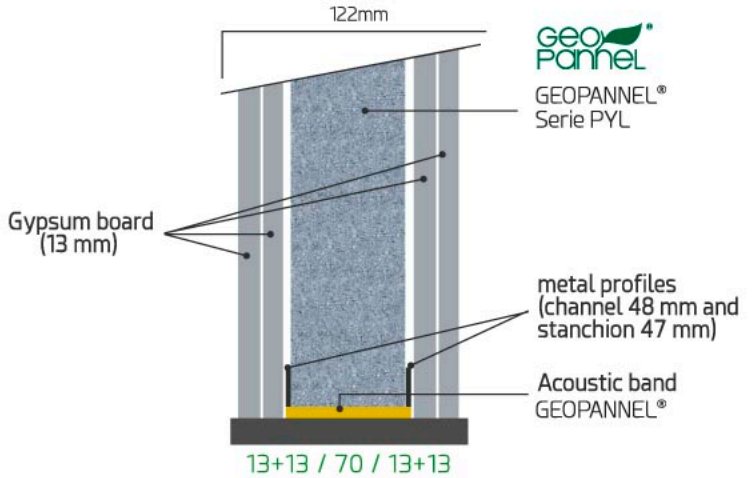
Isolation rates according to UNE-EN ISO 717-1

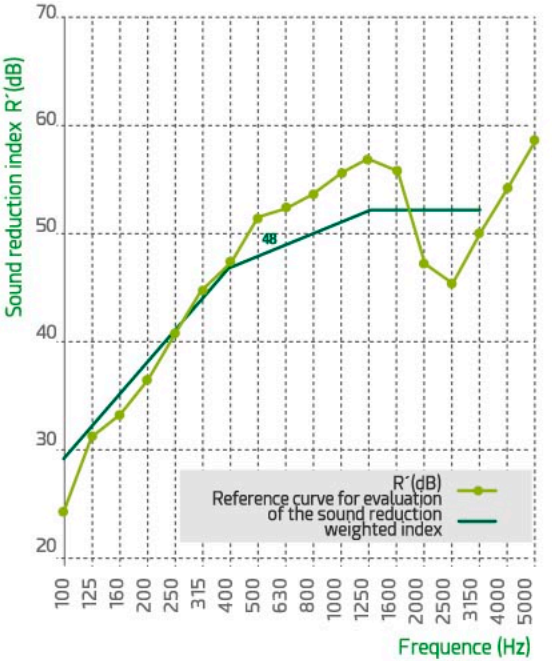
| | | |
|---|---|---|
| $R_A$: | 40 | dBA |
| $R_W(C;C_{tr})$ | 40 (-3;-9) | dB |

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 14

### SINGLE PARTITION WALL DOUBLE 13 mm PLASTERBOARD. GEOPANNEL® PYL SERIES 60 mm.




| f (Hz) | R(dB) | f (Hz) | R(dB) | f (Hz) | R(dB) | f (Hz) | R(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 24,3 | 315 | 44,4 | 1000 | 55,2 | 3150 | 49,9 |
| 125 | 31,1 | 400 | 47,1 | 1250 | 56,9 | 4000 | 54,1 |
| 160 | 33,2 | 500 | 51,2 | 1600 | 55,9 | 5000 | 58,4 |
| 200 | 36,4 | 630 | 52,3 | 2000 | 47,0 | | |
| 250 | 40,7 | 800 | 53,5 | 2500 | 45,1 | | |

Tests carried out following the technique of real assembly in construction with sealing paste and Tape. Silicones have not been used.

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

### SINGLE PARTITION WALL DOUBLE 13 mm PLASTERBOARD. GEOPANNEL® PYL SERIES 60 mm.

**48 dB**

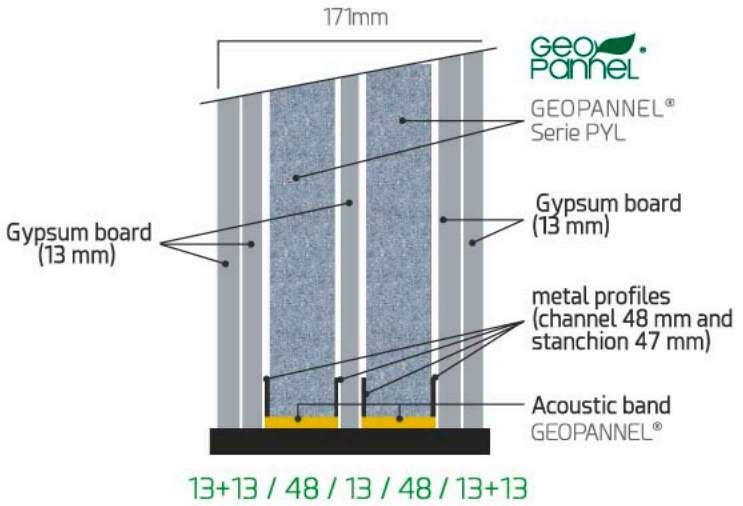
Isolation rates according to UNE-EN ISO 717-1

| | | |
|---|---|---|
| $R_A$: | 47,2 | dBA |
| $R_W(C;C_{tr})$ | 48 (-2;-6) | dB |

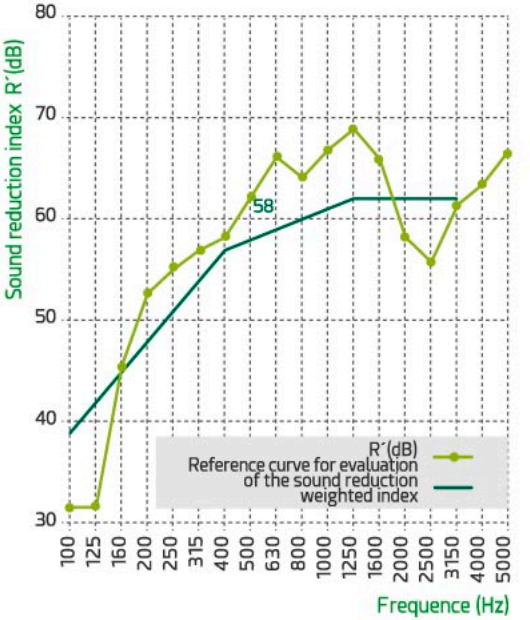
## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

# TEST 15

### DOUBLE PLATE PARTITION WALL WITH PLASTERBOARD 13 mm.
### GEOPANNEL® PYL SERIES 40 mm.




13+13 / 48 / 13 / 48 / 13+13




| f (Hz) | R(dB) | f (Hz) | R(dB) | f (Hz) | R(dB) | f (Hz) | R(dB) |
|---|---|---|---|---|---|---|---|
| 100 | 31,3 | 315 | 56,5 | 1.000 | 66,6 | 3.150 | 60,8 |
| 125 | 31,2 | 400 | 58,2 | 1.250 | 68,7 | 4.000 | 63,3 |
| 160 | 45,2 | 500 | 62,1 | 1.600 | 65,9 | 5.000 | 66,4 |
| 200 | 52,6 | 630 | 66,0 | 2.000 | 58,3 | | |
| 250 | 55,2 | 800 | 64,5 | 2.500 | 55,5 | | |

Tests carried out following the technique of real assembly in construction with sealing paste and Tape. Silicones have not been used.

## AIRBORNE SOUND INSULATION ACCORDING TO UNE-EN ISO 10140-2:2011

### DOUBLE PLATE PARTITION WALL WITH PLASTERBOARD 13 mm. GEOPANNEL® PYL SERIES 40 mm.

**58 dB**

Isolation rates according to UNE-EN ISO 717-1

| | | |
|---|---|---|
| $R_A$: | 55,0 | dBA |
| $R_W(C;C_{tr})$ | 58 (-4;-10) | dB |

## ACOUSTIC ABSORPTION ACCORDING TO UNE - IN ISO 354:2004

# TEST 16

### MEASUREMENT OF ACOUSTIC ABSORPTION IN A CHAMBER. GEOPANNEL PYL SERIES 50 mm, REVERBERATING TEST

Absorption coefficient $\alpha_p$

$0{,}8\,\alpha_w$


| f (Hz) | αp |
|---|---|
| 125 | 0,20 |
| 250 | 0,55 |
| 500 | 0,85 |
| 1000 | 0,90 |
| 2000 | 0,80 |
| 4000 | 0,90 |

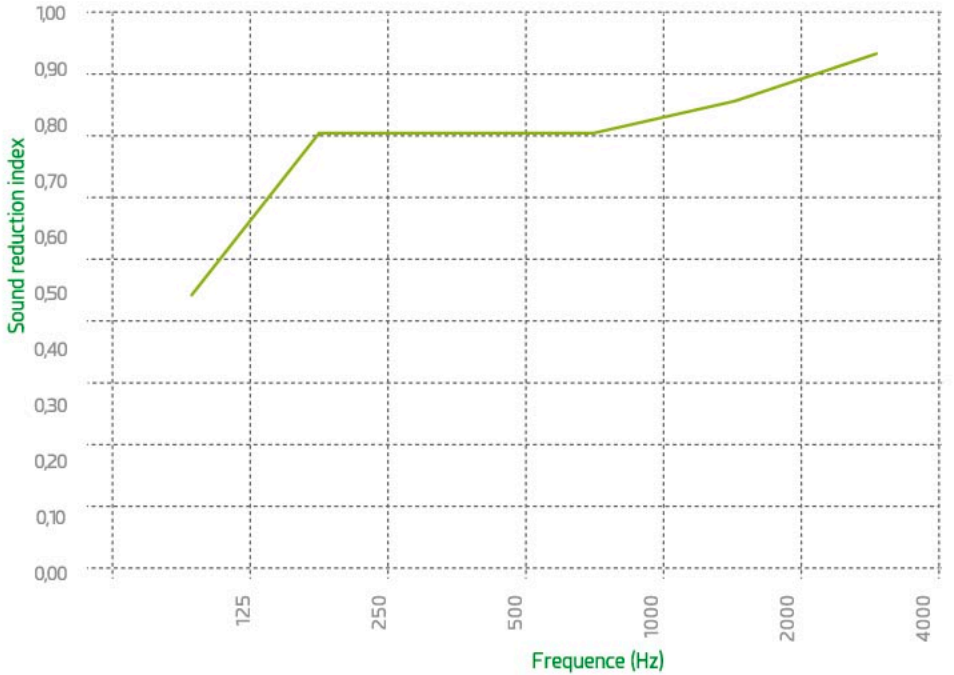
## ACOUSTIC ABSORPTION ACCORDING TO UNE - IN ISO 354:2004

# TEST 17

### MEASUREMENT OF ACOUSTIC ABSORPTION IN A CHAMBER. GEOPANNEL® 50 MM PYL SERIES WITH PLENUM, REVERBERATING TEST

Absorption coefficient $\alpha_p$

$0{,}85\,\alpha_w$




| f (Hz) | αp |
|---|---|
| 125 | 0,50 |
| 250 | 0,80 |
| 500 | 0,80 |
| 1000 | 0,80 |
| 2000 | 0,85 |
| 4000 | 0,95 |

# GEOPANNEL® FLOORS

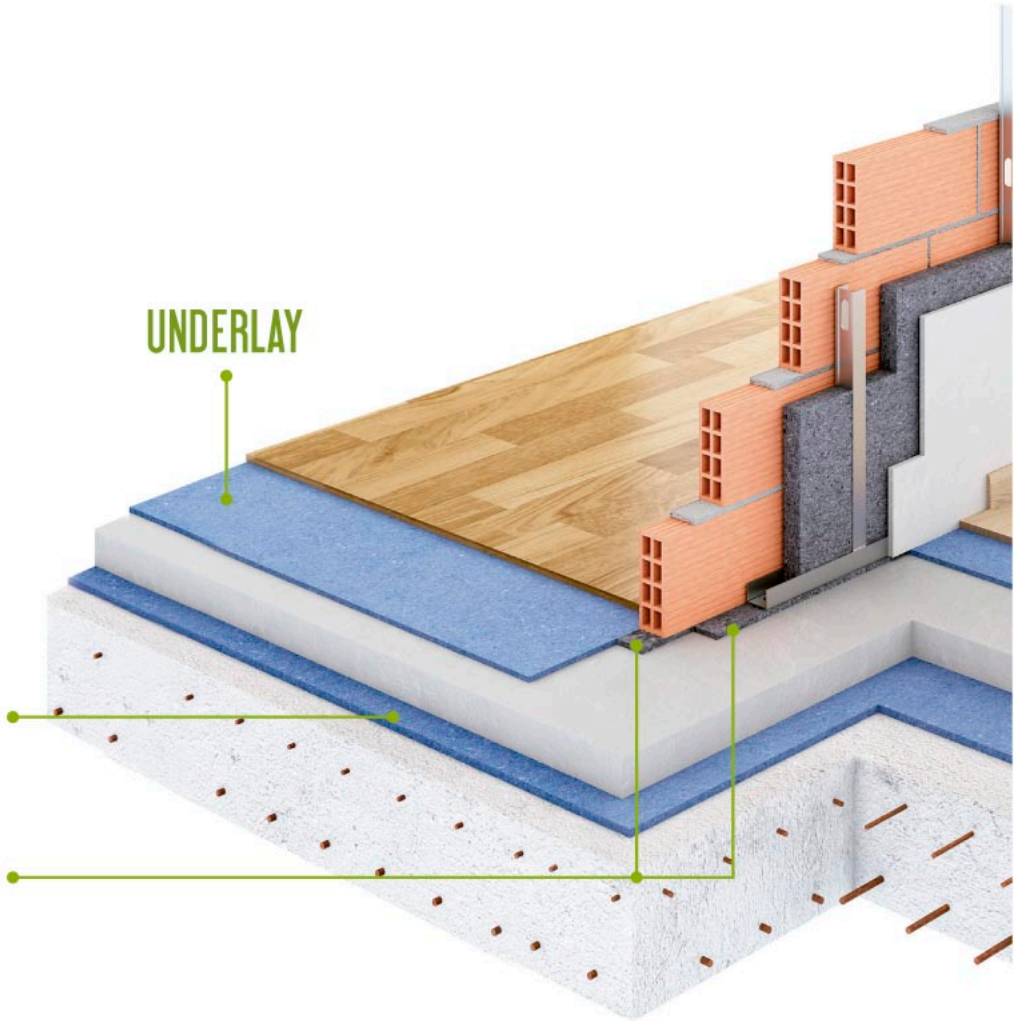
## IMPACT SHEETS, COMFORT AND SUSTAINABILITY

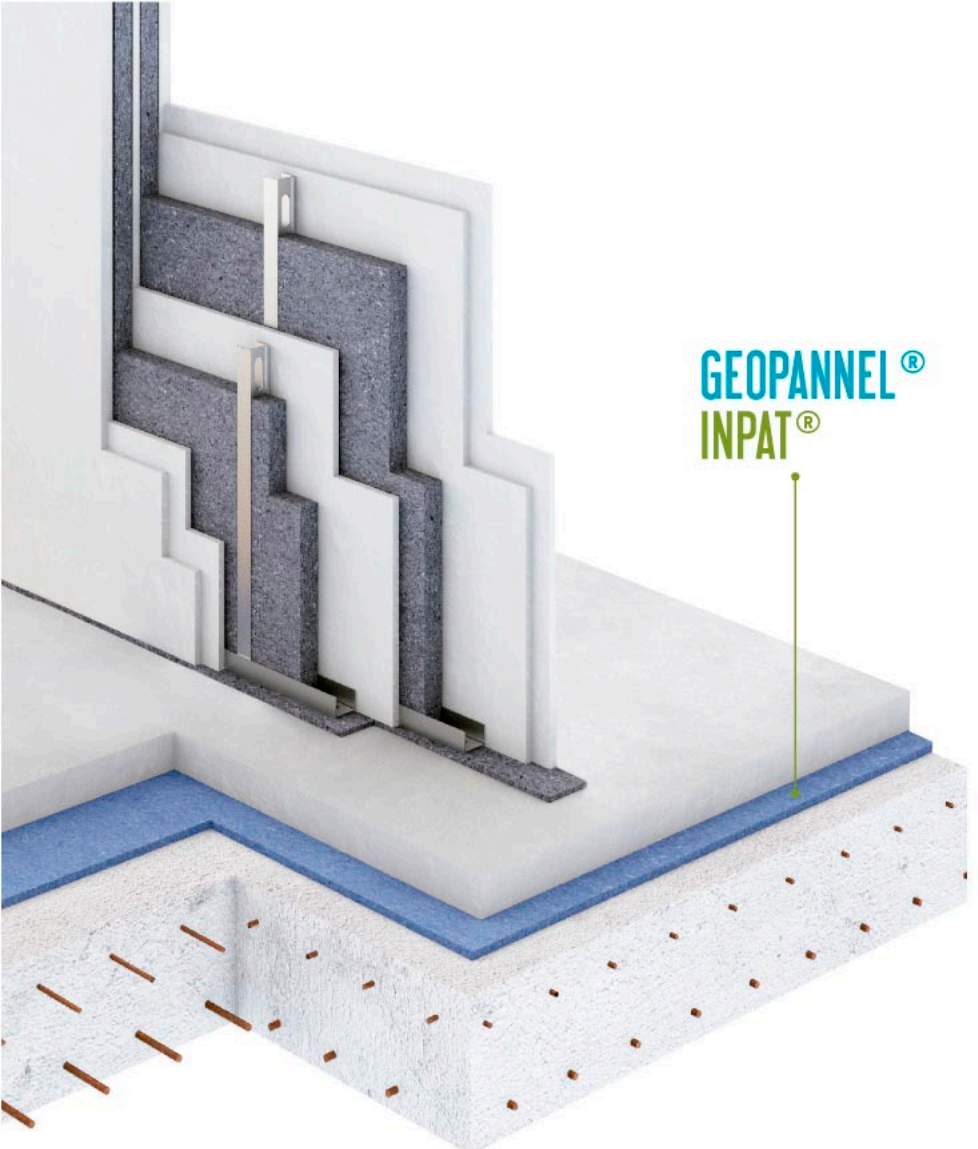
1. GEOPANNEL® FLOORS. ANTI IMPACT NOISE SHEETS. 100% RECYCLABLE AND MADE FROM RECYCLED TEXTILES UP TO 80%.
2. ITS ACOUSTIC AND THERMAL BEHAVIOR REPRESENTS THE NEW WORLD BENCHMARK OF COMFORT IN BUILDING.
3. OPTIMIZING THE THERMAL PERFORMANCE OF BUILDINGS WE CAN ACHIEVE A HIGH CUT IN EMISSIONS OF CO2, FAVORING THE SUSTAINABILITY OF THE PLANET.
4. USING GEOPANNEL® FLOORS WE COLLABORATE IN REDUCING PART OF THE 12 MILLION T/YEAR OF TEXTILE WASTE PRODUCED BY THE INDUSTRY. THE VAST MAJORITY OF THOSE WASTES END IN LANDFILLS (65%) OR ARE INCINERATED (18%).
5. DURABILITY. GEOPANNEL® FLOORS DOES NOT DEGRADE WITH THEOVER TIME, ENSURING PROPER BEHAVIOR DURING THE LIFE OF THE BUILDING.

eco-innovation

# INSULATION FOR FLOORS

## INPAT®
## ACOUSTIC BÁNDS
## UNDERLAY






inpat®

# INPAT®
# REACHES

## A WEIGHTED REDUCTION OF THE SOUND PRESSURE LEVEL IMPACTS ACCORDING TO THE ISO 717-2 STANDARD

$\Delta L_w = 27$ dB

# WHY USE INPAT®?

THE LARGEST IMPACT NOISE REDUCTION IN THE MARKET -27DB

GREAT TRACTION RESISTANCE
NO TEARING
NO PUNCHING

VERY LOW THERMAL CONDUCTIVITY: $\lambda$ =0,031 W/mK

EXCELLENT ACOUSTICS THANK YOU TO ITS DYNAMIC RIGIDITY
$\alpha$ SABINE=0.5-0.78

INPAT MAINTAINS ITS RESISTANCE AND MECHANIC PROPERTIES AFTER AN ALKALINE BATH (CONCRETE, MORTAR)

HIGH RESISTANCE WATER VAPOR DIFFUSION: $\mu$=233,77

# HOW IS IT INSTALLED ?

The new INPATsheet ® is carried easily thanks to its comfortable roll format and allows for a simple process of installation with little effort and in a minimum time.

For the installation of INPAT® use cutting tools for textile materials.

For best results you can use our specific self-adhesive acoustic band for INPAT®, as a sealant for joints or as skirting board.

1 Placement of the INPAT® sheet on the ground.

2 Use acoustic band Geopannel® for cover the joints helps to avoid thermal bridges acoustics.

3 It can be used optionally a plastic cover as an extra protection against the Moisture.

4 The concrete layer is being poured.

inpat®

# TECHNICAL FEATURES

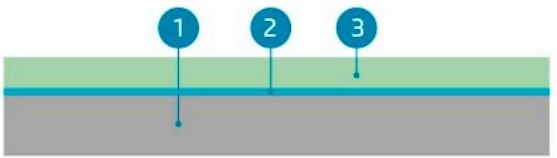
## SHEETS
## ANTI-IMPACT

| TEST | STANDARD | INPAT ® 600/100 |
|---|---|---|
| Loss thickness 220Kg/m² | EN 29073-2 | 3,0 mm (30%) |
| Water vapor diffusion resistance factor | EN 12086 | 233,77 μ |
| Thermal conductivity | EN 12667 | 0,031 W/mK |
| Mechanical resistance (longitudinal/transversal) | EN ISO 10319 | 2,18/2,36 kN/m |
| Alkaline liquid resistance (% mechanical resistance) | EN 14030 | 70,20/33,05 % |

# TEST

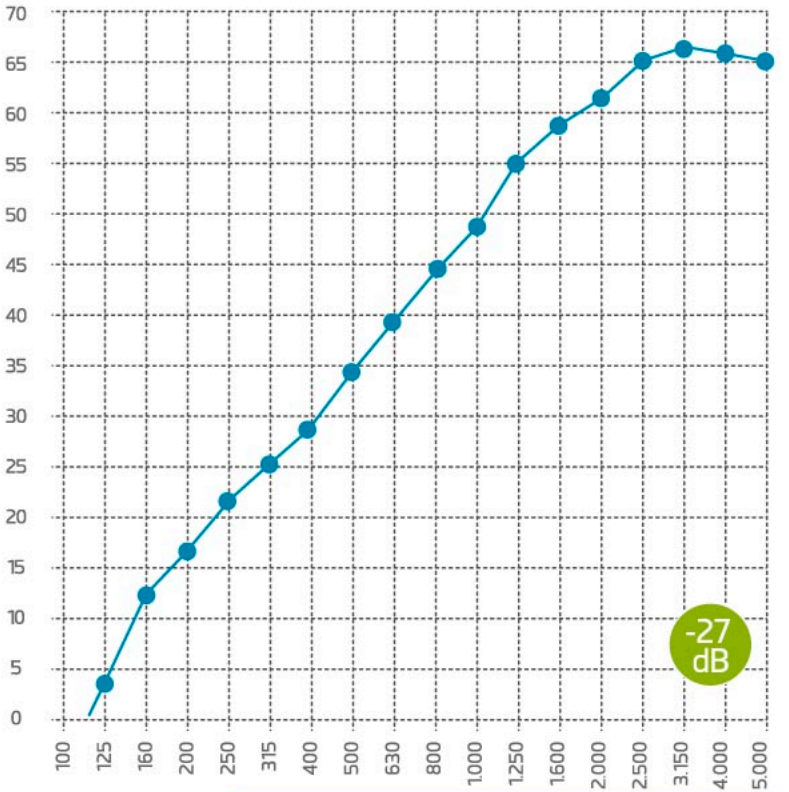
## IMPACT NOISE REDUCTION ΔL (dB)

Sample identification:
1: 14cm SLAB.
2: Anti-impact sheet "INPAT®"600/10 (e=10mm)
3: 5 cm mortar layer (100 kg/m2))
Total thickness: 20 cm
Total surface mass: 451 Kg/m2




| Frec.f (Hz) | $L_{n,0}$ (dB) | ΔL (dB) | Frec.f (Hz) | $L_{n,0}$ (dB) | ΔL (dB) |
|---|---|---|---|---|---|
| 100 | 60,4 | -3,1 | 800 | 74,8 | 44,4 |
| 125 | 57,3 | 2,6 | 1.000 | 72,0 | 48,7 |
| 160 | 60,9 | 12,2 | 1.250 | 72,0 | 55,0 |
| 200 | 65,9 | 16,1 | 1.600 | 71,5 | 59,0 |
| 250 | 68,4 | 21,2 | 2.000 | 71,2 | 61,0 |
| 315 | 70,6 | 25,5 | 2.500 | 70,8 | 65,0 |
| 400 | 71,3 | 28,6 | 3.150 | 71,4 | 66,4 |
| 500 | 72,3 | 33,7 | 4.000 | 70,5 | 65,6 |
| 630 | 73,9 | 39,3 | 5.000 | 68,8 | 65,0 |

## WEIGHTED REDUCTION IN IMPACT NOISE SOUND PRESSURE LEVEL ACCORDING TO ISO 717-2

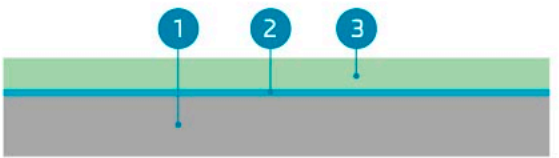



$\Delta L_w$= 27 dB  $C_{I\Delta}$= -16 dB  $L_{n\,w,r}$ = -51 dB ; $C_{I,r}$ = -5 dB  $L_{n\,w,0}$ = -77 dB ; $C_{I,0}$ = -9 dB

# TEST

## CONTRIBUTION TO REDUCING THE SOUND LEVEL TO AIRBORNE NOISE (dB)

Identification de l'échantillon:
1: Chappe de référence de 14 cm
2: Feuille anti impact "INPAT®" 600/10 (e=10mm)
3: Dalle en mortier de 5 cm (100 kg/m2)
Épaisseur total: 20 cm
Masse superficielle totale: 451 Kg/m2

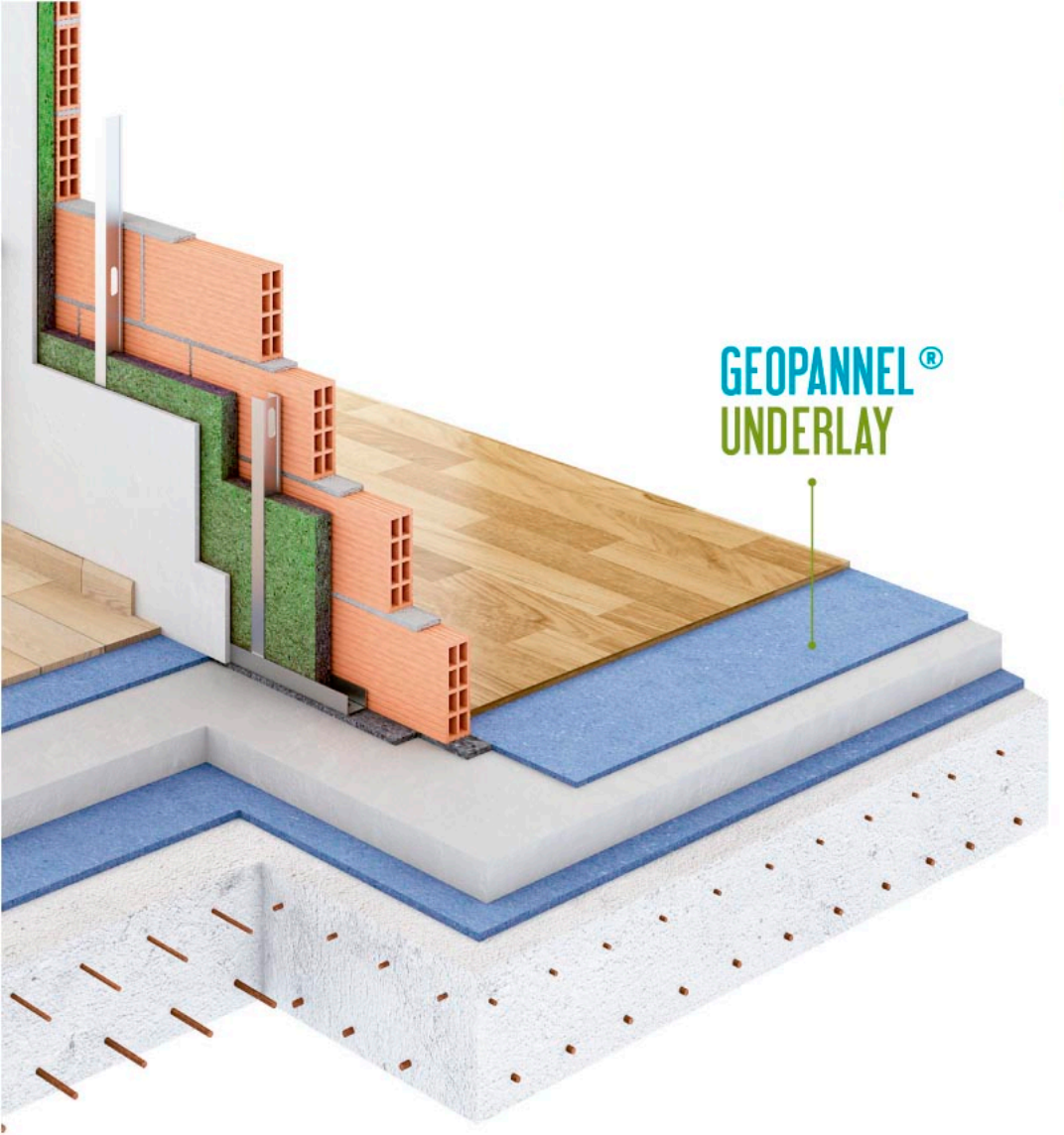



| Frec.f (Hz) | Rcon (dB) | Rsin (dB) | ΔR (dB) | Frec.f (Hz) | Rcon (dB) | Rsin (dB) | ΔR (dB) |
|---|---|---|---|---|---|---|---|
| 100 | 40,1 | 44,5 | -4,4 | 800 | 60,5 | 51,2 | 9,3 |
| 125 | 48,9 | 44,3 | 4,6 | 1.000 | 66,2 | 56,6 | 9,5 |
| 160 | 54,7 | 45,5 | 9,2 | 1.250 | 71,9 | 59,5 | 12,5 |
| 200 | 53,2 | 45,8 | 7,5 | 1.600 | 79,7 | 63,7 | 16,0 |
| 250 | 53,9 | 44,8 | 9,1 | 2.000 | 83,3 | 66,3 | 17,0 |
| 315 | 55,2 | 41,6 | 13,6 | 2.500 | 84,7 | 68,2 | 16,6 |
| 400 | 57,2 | 45,9 | 11,3 | 3.150 | 84,4 | 70,2 | 14,2 |
| 500 | 57,4 | 48,0 | 9,4 | 4.000 | 83,7 | 72,4 | 11,3 |
| 630 | 58,5 | 49,5 | 9,0 | 5.000 | 75,9 | 73,0 | 2,9 |

## WEIGHTED REDUCTION IN SOUND PRESSURE LEVEL TO AIRBORNE NOISEIMPACTS ACCORDING TO ISO 717-2


ΔLw= 27 dB  $C_{I\Delta}$= -16 dB  $L_{n\,w,r}$ = -51 dB ; $C_{I,r}$ = -5 dB  $L_{n\,w,0}$ = -77 dB ; $C_{I,0}$ = -9 dB

# UNDERLAY




## UNDERLAY REACHES

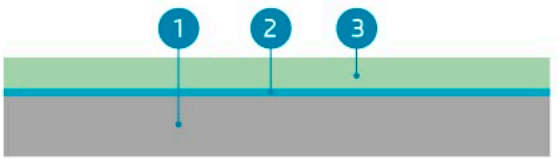
A WEIGHTED REDUCTION
OF THE SOUND PRESSURE LEVEL
IMPACTS ACCORDING TO THE
ISO 717-2 STANDARD

$\Delta Lw = 19$ dB

# TEST

## IMPACT NOISE REDUCTION ΔL (dB)Δ

Sample identification:
1: 14cm SLAB.
2: Anti-impact sheet "UNDERLAY®"(e=4mm)
3: 8 mm laminated floor
Total thickness: 15,2 cm



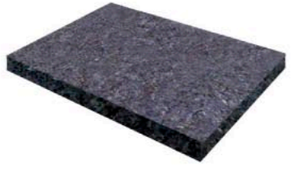

| Frec f (Hz) | $L_{n,0}$ (dB) | ΔL (dB) | Frec f (Hz) | $L_{n,0}$ (dB) | ΔL (dB) |
|---|---|---|---|---|---|
| 100 | 59,1 | 0,3 | 800 | 72,3 | 35,4 |
| 125 | 57,0 | 1,0 | 1.000 | 70,5 | 41,0 |
| 160 | 61,9 | 0,8 | 1.250 | 70,80 | 47,9 |
| 200 | 63,6 | 0,4 | 1.600 | 70,7 | 52,3 |
| 250 | 69,6 | 2,5 | 2.000 | 69,3 | 56,1 |
| 315 | 69,5 | 6,9 | 2.500 | 68,8 | 59,3 |
| 400 | 70,6 | 17,8 | 3.150 | 69,3 | 62,0 |
| 500 | 71,5 | 21,0 | 4.000 | 68,5 | 61,6 |
| 630 | 72,9 | 29,8 | 5.000 | 66,9 | 60,1 |

## WEIGHTED REDUCTION IN IMPACT NOISE SOUND PRESSURE LEVEL ACCORDING TO ISO 717-2


ΔLw= 19 dB  $C_{I\Delta}$= -11 dB  $L_{n\,w,r}$ = 59 dB ; $C_{I,r}$ = -0 dB  $L_{n\,w,0}$ = 76 dB ; $C_{I,0}$ = -10 dB

# REFERENCES AND PRICES

## IMPACT NOISE INSULATING PANEL FROM TEXTILE INDUSTRY WASTE




| PRODUCT | Description | Format | Dimensions (mm) long | Dimensions (mm) Width | Density (mm) | Price (€/m²) | Presentation | Bags / pallet | m2 / Reels | m2 / pallet | Volume Pallet (mm) | Weight Pallet (kg) | m2 / truck | Thermal (W/mK) | impact insulation (Iso 712-2) | Code EAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEOPANNEL® INPAT® | Recycled cotton agglomerated with thermo fibers. Bluish grey colour. | Reel | 14 | 1200 | 10 | 2,10 | Reel | 18 | 16,8 | 302,4 | 1200x1200x2650 | 196,44 | 6.653 | 0,031 | -27 dB | 8436581120530 |

| PRODUCT | Description | Format | Dimensions (mm) long | Dimensions (mm) Width | Density (mm) | Price (€/m²) | Presentation | Bags / pallet | m2 / Reels | m2 / pallet | Volume Pallet (mm) | Weight Pallet (kg) | m2 / truck | Thermal (W/mK) | impact insulation (Iso 712-2) | Code EAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEOPANNEL® UNDERLAY | Recycled cotton agglomerated with thermo fibers. Bluish grey colour. | Reel | 28,6 | 1050 | 4 | 1,98 | Reel | 12 | 16,8 | 360 | 1200x800x2400 | 195,00 | 7.920 | 0,031 | -19 dB | 8436581120554 |

| PRODUCT | Description | Format | Dimensions (mm) long | Dimensions (mm) Width | Density (mm) | Price (€/m²) | Presentation | Bags / pallet | Reels / Box | Reels / pallet | mL /Box | mL /Pallet | Volume Pallet (mm) | Weight Pallet (kg) | m2 / truck | Thermal (W/mK) | Code EAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEOPANNEL® BANDA ACÚSTICA AUTOADHESIVA | Acoustic band in recycled cotton agglomerated with thermo fibers and acrylic self-adhesive with a protective liner. Bluish grey colour. | Roll | 18000 | 70 | 4 | 12,37 | Bags | 96 | 1 | 96 | 18 | 1728 | 1200 x 1200 x 500 | 195,00 | - | 0,031 | 8436581120035 |
| | | | | 50 | 4 | 9,74 | | 96 | 1 | 96 | 18 | 1728 | 1200 x 1200 x 650 | | | | 8436581120028 |

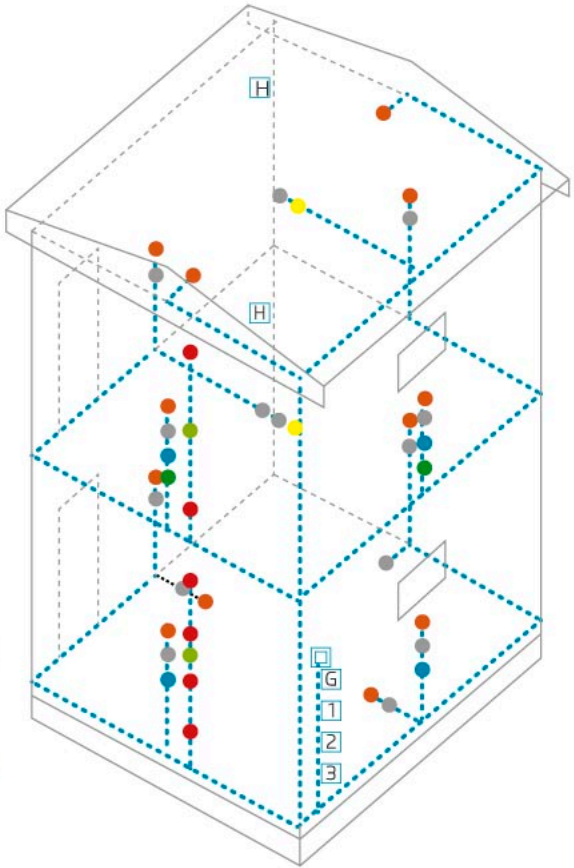
# SAVING ENERGY

## EXAMPLE OF SAVINGS IN A HOME 100 SQM:

About 800 euros/year if the difference in temperature with the other plants is 15 Celsius degrees.

About 500 euros/year if the difference in temperature with the other plants is 7 Celsius degrees.

About 300 euros/year if the difference in temperature with the other plants is 5 Celsius degrees.



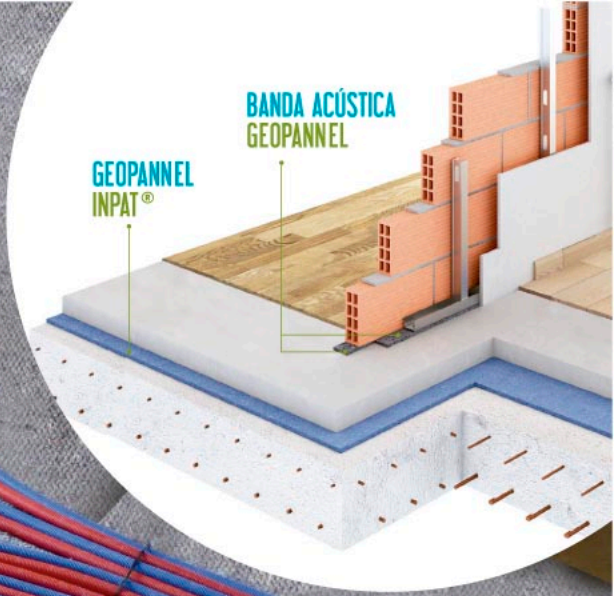

THE EXCEPTIONAL THERMAL PROPERTIES OF INPAT ® PROVIDES- BESIDES ACOUSTIC COMFORT- ADDITIONAL SAVINGS BY SAVING ENERGY

### THERMAL MEASUREMENT

| with INPAT® | without INPAT® |
|---|---|
| R = 0,88 m² K/W | R = 0,37 m² K/W |

- Natural lighting interior sensor
- Indoor sensor Environmental ta and HR%
- Outdoor sensor air velocity
- Outdoor sensor Environmental ta
- Surface Inside Sensor
- Surface-top exterior sensor
- CO concentration sensor2
- G General accountant
- 1 Radiant floor counter
- 2 Counter A/A plant 1st
- 3 Counter A/A plant 2nd
- H Control HVAC
- Data control system

inpat®



# PROJECTS

## KAHLE & ARAUZO ARQUITECTURA
## PROJECT: THE PASSAGE OF THE JACOBA

New design of the architecture studio Kahle & Arauzo Arquitectura, the cafeteria restaurant "The Passage of the Jacoba".

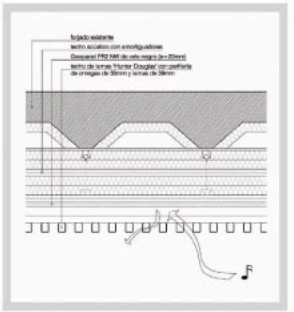
A fundamental aspect to consider in the design of a cafeteria-restaurant it's good sound management. Getting an atmosphere pleasant in this aspect is important in a place where you can bringing together many people at the same time and where there is also a musical ambience.

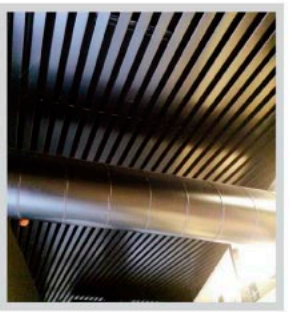
That's why the Kahle & Arauzo Arquitectura studio has relied On the use of permeable materials , as finishing , such as the slats on the ceiling and the brick placed singing on the wall.

The black tissue of **GEOPANNEL®** FR2 NW is placed behind these finishes, thus significantly improving acoustic comfort
of the compound.

Without a doubt a cozy place, thought on the well-being of its customers.

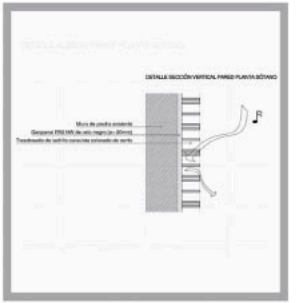
## REINFORCED CONCRETE SLAB CONSTRUCTIVE DETAIL



## CONSTRUCTIVE DETAIL WALL BASEMENT BASEMENT


## CONSTRUCTIVE DETAIL 2 WALL BASEMENT




# YAKITORO RESTAURANT (MADRID)

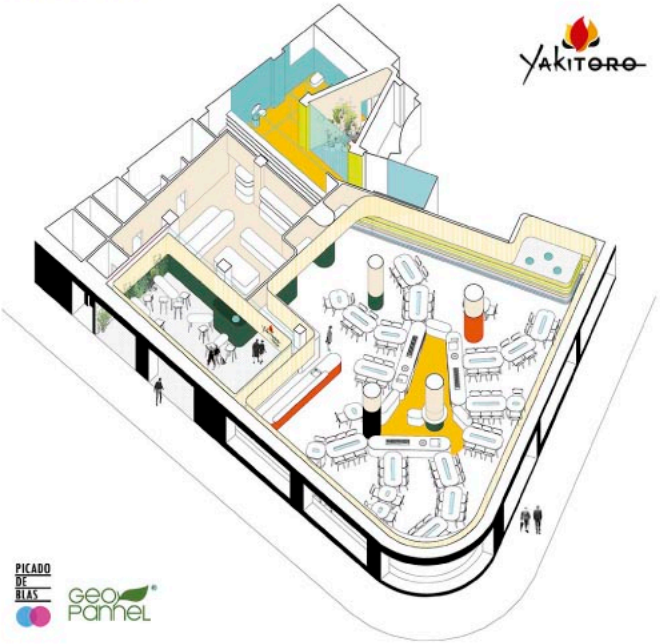
An extraordinary design led by the architects of the studio ©Picado de Blas, in which he tries to approach the functionality and comfort of Diners. The sensitivity of design space tries to merge with the presentation of each dish.

In short, the Yakitoro Restaurant is a space thought of enjoyment, both by the place as the taste of each dish. As we can see in the images, our material has been displayed on a unique way to carry out the acoustic comfort of the customers.

Strips of our **GEOPANNEL** ® recycled material, are placed horizontally along a large wall of 10 meters getting a great acoustic absorption and a colorful design.

Furthermore, as part of the decoration and still thinking in acoustic well-being, we observe the 240 baffles hanging out of the ceiling.

# ESTUDIO ©PICADO DE BLAS/ PROJECT: YAKITORO RESTAURANT



**Technical:**

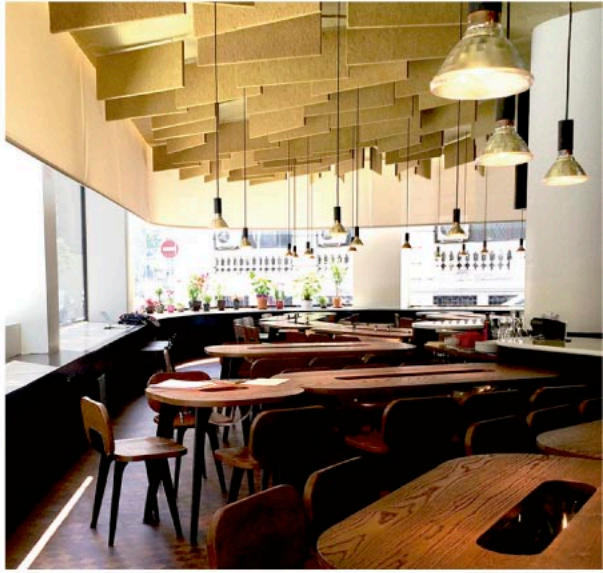
**Design:** PICADO-DE BLAS ARQUITECTOS SLP

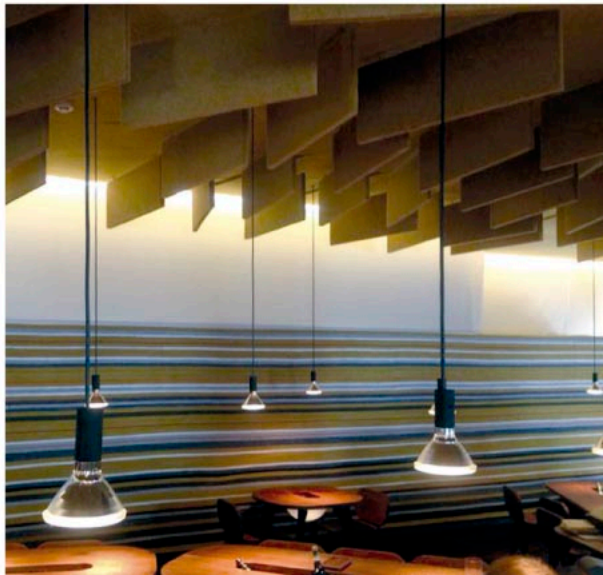
**Directors:** María José de Blas and Rubén Picado

**Acoustic insulators:** GEOPANNEL® Classic, PYL Series and Plus FR2

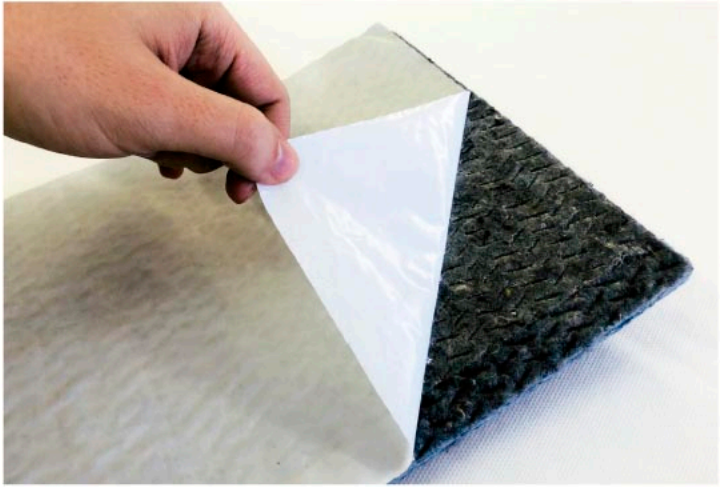
**Square meters installed:** 10 meters (wall) + 248m2 (ceiling) + hanging backstage

**Geopannel installation time:** 1 week





# SPECIAL FEATURES



## 1 AUTO ADHESIVE

We can add a durable high-fixation adhesive to one side of the product in time, with an easy-to-remove protective film. This self-adhesive is very practical for large surfaces that do not allow the use of solvent-based glues, avoiding toxic gases by being fully composed of a water-based acrylic, which also does not deplete its adhesive capacity with heat or cold.

There are numerous application possibilities: under covers between crawlers, in old houses between beams, covering downs or pipes, lining blinds or simply remove spaces without the need for traces or of retainers and multitudes of applications to improve acoustics or thermal, isolation in garages, rehearsal facilities, picnic areas, noisy neighbors and many more solutions.

# 2 GEOPANNEL® WITH A FACE OF ALUMINUM/ BARRIER STEAM:

A vapor barrier prevents or minimizes the passage of water vapour. It is widely used in construction to avoid interstitial condensation

Interstitial condensation is a phenomenon occurring inside of a material due to a sharp fall of temperature between one of their faces and the other. This phenomenon is common in most thermal insulators.

Imagine the following situation: In a house, in winter, a person he's taking a shower. The temperature in the bath can easily exceed 20 degrees C and relative humidity will be probably 100%. However, in the outside, the temperature can be 0 degrees C. By the wall that separates the bathroom from the street is leaking the water vapor, but when we go through the thermal insulator, the temperature gradually changes from 20 C at 0 C. The air can no longer contains so much steam, so condenses in the steam insulating, wetting it and making lose its properties in the event of glass and rock wools. It's here that the vapor barrier is necessary to contain the leakage of steam into
the insulator, thus allowing keep dry.

Vapour barriers are placed in the hot side of enclosures, because their function is to prevent steam from passing from the hot side to the cold side, which is the situation where condensation occurs.

Because of this, in cold climates the foil is placed inside the insulator, and in warmer climates, by the face Outside.

There must also be a air chamber inside the enclosure to allow the evacuation of steam, but with GEOPANNEL® is not necessary, if the exterior facade has the necessary porosity, as cotton absorbs those small amounts of water and returns them to the outside.

We also apply aluminum to all our range for floors, for protect them from the moisture of the ground and avoid efflorescence phenomena by Capillarity.

# 3 GEOPANNEL® COLOR

Acoustic isolation means preventing a sound from penetrating a medium, or get out of it. For this reason, the role of materials insulators can be: reflect most of the energy they receive (on the outside), or, on the contrary, absorb it.

Therefore, it is important to differentiate between sound insulation and absorption Acoustic:

**Sound insulation** provides protection to the enclosure against noise penetration, while preventing sound from coming out outwards.

**GEOPANNEL®** materials have excellent properties in acoustic absorption: to improve the acoustics of the enclosure itself, controlling the reverberation time. This technique is known also as acoustic conditioning.

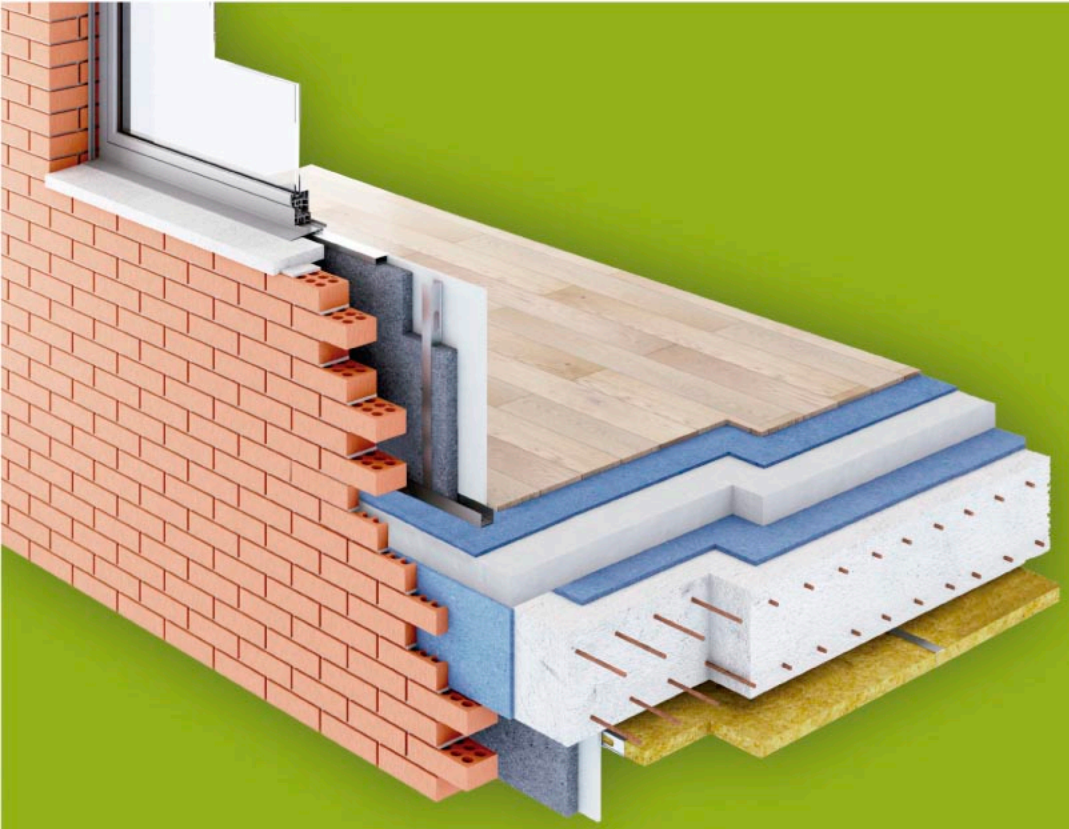
If we add a scrim to **GEOPANNEL®** we improve acoustic comfort and we can also get a better finish on perforated plates of wood, metal or plaster. Even leaving the scrim in sight, in the case indoors in indoor applications such as a garage, a cellar or a sloping space, a rehearsal venue, bar, disco, public events, sports centers and many more applications.

# NOTE IMPORTANT

## Our products are fruit of a constantevolutionary development and performance improvement,

so GEOPANNEL® recommend to any user, before getting based on a certain features or price of a product for the execution of a work, please check with our headquarters the validity and possible changes in its technical description, performances, etc.

This product brochure contains information collected from various companies, experts and Laboratories. The data could have been mis transcribed during the process of editing.



ángel ruiz ibáñez, s.a.

AENOR ER Empresa Registrada UNE-ISO/TS 16949

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