

**TABIHAUS<sup>®</sup>**

*Magnetic*



socio PEP 2024



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# 1.- Presentation of the TABIHAUS® Magnetic® System

Vertical or horizontal support system for magnetic ceramics, through the installation of TABIHAUS® insulating panels, large format (2600 mm x 1200 mm).

The development philosophy of the TABIHAUS® Magnetic System is to provide the market with a magnetic support, but also with the necessary characteristics in construction, such as fire resistance, no bacterial generation, thermal and acoustic insulation, permeability to water vapour, etc.

The TABIHAUS® system provides the necessary planimetry that these ceramics require.

In the manufacturing process of TABIHAUS®, a magnetic material is incorporated into the salt board.

The result is a certified support system, both by external laboratories and by the various technical departments of our suppliers.

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## 1.1.- Company

ANDARAGON S.L.® is a company specialised in the manufacture of steel, aluminium and PVC panels. Based in Muel (Zaragoza), they are the manufacturers of the TABIHAUS® system, the name of their industrialised construction system, with a European patent.

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## 1.2.- TABIHAUS® data sheets and quality seals

The quality seals can be found in **ANNEX A**. They comprise the following documents:

- TABIHAUS® CE mark
- TABIHAUS® technical data sheet
- TABIHAUS® Standard UNE-EN 12467

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# 2.- TABIHAUS® Magnetic panel

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## 2.1.- Description and composition of the TABIHAUS® Magnetic® panel

It is a sandwich panel, size 2600 mm x 1200 mm, consisting of one or two Epsom salt boards, and a very high density industrial series XPS, made from 100 % recycled EPS material.

Epsom salt is a natural magnesium sulphate salt. It is named after a lake in England, Lake Epsom. It is a natural desiccant, which is why it is used in agriculture, but it is also used as a drug and in the food industry.

The board is manufactured with a double mesh of glass fibre, waterproofing and retardants, and is lightened with reclaimed EPS spheres. The board is manufactured in two thicknesses, 8 mm and 12 mm. The integral fire stability results are EI 120 and EI 180, respectively. Its thermal conductivity is 0.18 W/mK.

A 100% recycled XPS with a thermal conductivity of 0.035 W/mK is bonded to the board in a collaborative industrial project with URSA®. The EPS material comes mainly from EPS boxes and trays used in the food industry, more specifically in the fish transport and sales sector.

To manufacture XPS, the EPS must be extruded, but not in an atmospheric process, but in a closed chamber and using CO2. This CO2 comes from the waste generated by a nearby chemical industry, which in its manufacturing processes generates this gas as waste. This process gives it a negative carbon footprint and obtains the most demanding quality seals in terms of sustainability in construction, such as the INTERNATIONAL WELL, BREEAM\_ES, and the US GREEN BUILDING COUNCIL.

The adhesion of the Epsom salt board to the XPS is carried out by means of the industrialised process of Andaragon® in its factory in Muel (Zaragoza), in temperature and humidity-controlled cabins.

Subsequently, the magnetic strip is adhered to the salt board, followed by a vacuum, which leads to an even distribution of the glue over the entire contact surface between the materials, and finally to a gluing by weight loading of at least 24 hours. With this process, Andaragon® grants a 10-year guarantee on all its manufactured products.

Andaragon®, as the manufacturer, laminates the XPS with the exact thickness that complies with the transmittance or thickness indicated in the project by the project management, from a minimum of 14 mm onwards, with increases of millimetre by millimetre.



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## 2.2.- Characteristics

The main properties of the TABIHAUS® panel are:

- Lightness 6-7 Kg/m<sup>2</sup>
- Fire resistance, class A1
- Thermal insulation. Board 0,18 W/mK. XPS 0,035 W/mK
- Highly resistant to impact from hard and soft bodies
- Acoustic insulation (- 22 dB)
- Air and water impermeability - category A (100 cycles)
- Highly permeable to water vapour  $\mu = 54$
- Thermal and acoustic refractoriness
- High screwing and hanging capacity, up to 98 kg at shear per point
- Certified null bacterial generation (mould, verdigris, construction pathologies, etc.)

The certificates for both elements are listed in ANNEX B, and are as follows:

- TABIHAUS® data sheet
- Magnetic stripe data sheet
- EI 120
- EI 180
- NO BACTERIAL GENERATION
- XPS data sheet
- TABIHAUS® XPS from URSA®
- XPS safety data sheet
- Euroclass fire rating
- URSA® recycled LEED
- URSA® XPS Certificates (INTERNATIONAL WELL, BREEAM\_ES, US GREEN BUILDING COUNCIL)
- URSA® XPS CO2 Declaration
- URSA® XPS Environmental
- URSA® XPS WELL

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### 2.3.- Adhered magnetic stripe

To manufacture the TABIHAUS® Magnetic panel, an elastomeric magnetic strip is adhered to the salt board, following the adhesion process explained above, by means of gluing and air-conditioned sealing, for which ANDARAGON S.L. gives a 10-year guarantee.



The material used to manufacture the This elastomer band is made of polyethylene, to which barium and strontium ferrites ( $\text{MeFe}_2\text{O}_4$ , where Me can be  $\text{CO}_3\text{Ba}$ ,  $\text{CO}_3\text{Sr}$ ) are added.

The magnetic field generated by the ferrite is limited exclusively to the junction between the ceramic and TABIHAUS®, being limited to this area, with no propagation to the outside. Its field is very low, only 0.15 mT (milliTesla).

The **Tesla** (symbol: **T**) is the unit of magnetic induction (or magnetic flux density) of the International System of Units (SI).

As examples to clarify the attracting power of TABIHAUS® Magnetic, the following can be given:

A powerful loudspeaker generates about 1 T

The force of a typical refrigerator magnet is 5 mT.

1.5 T to 3 T: force of medical magnetic resonance imaging systems.

Earth's magnetic field, between 0.03 mT and 0.07 mT.

DC power lines 0.02 mT Magnetic resonance magnet 150 mT / 200 mT.

Ceramic magnetic materials are so-called ferromagnetic materials. Although their origin is ceramic, they have some particularities in their atomic structure. Some of these materials are the so-called spinels, which are alloys of Mn, Ni, Zn, Mg and Co.

They are often used as passive elements to suppress interference in electronic circuits, as a transponder in radio frequency circuits.

Therefore, they do not have a negative influence on electronic devices or pacemakers.

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### 2.4.- Intended use

The intended use of the TABIHAUS® Magnetic system is indoors and outdoor use is not guaranteed. This is due to the characteristics of the strip.

It can be used in vertical - walls - or horizontal - floors - enclosures.

It is not intended for use as a false ceiling cladding.

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### 2.5.- Panel to be used vertically

The characteristics of magnetic ceramics require exceptional planimetry. For this reason, TABIHAUS® Magnetic panels should preferably be installed on a structure, not directly on the existing wall.

This structure can be made of metal, such as laminated plasterboard profiles, or wood. The panel to be used will be the TABIHAUS® Magnetic panel with a single-sided panel. The XPS of this panel corrects the small irregularities of the structure, thickness jumps between profiles or screw heads.

The recommended TABIHAUS® Magnetic panel is the 8 + 14 tongue and groove, i.e. 8 mm thick board, and 14 mm thick XPS, tongue and groove XPS with an exit of 22 mm.

This 22 mm exit coincides with the thickness of the panel, which facilitates its installation in corners and nooks.

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## 2.6.- Panel to be used horizontally

If we have a loose screed or a floor with a good planimetry, we will use the TABIHAUS® Magnetic panel with a single-sided panel. Small irregularities will be absorbed by the XPS of the panel.

If we have straps or braces, we will use the TABIHAUS® Magnetic panel with salt board on both sides. This structure must have a good planimetry, so that it does not affect the correct subsequent placement of the magnetic ceramic. The recommended TABIHAUS® Magnetic panel is the 8 + 14 straight cut, that is, 8 mm thick board, and 14 mm thick XPS.

ANDARAGON S.L. can supply the panel with the thickness required in the project, increasing the thickness of the XPS by millimetre, up to a maximum of 100 mm.

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## 3.- INSTALLATION OF THE TABIHAUS® MAGNETIC® PANEL

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### 3.1.- Vertical installation. Tiling

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#### 3.1.1.- Supporting structure

The layout, type of profile, its inertia, anchoring to the wall, geometry and thickness must be calculated or authorised by the Project Management on the basis of compliance with the structural safety standards set out in the building regulations. These profiles can be made of steel, plasterboard type, or wood.

However, for a correct installation of TABIHAUS® panels, the following requirements must be met:

- Profiles with vertical uprights shall be installed every 400 mm. In other options, respect this distance.
- Regardless of the distribution obtained in the previous point, the perimeter of window and door openings will be reinforced.
- The panel must not overhang by more than 5 cm.
- The profiles should not have a width of less than 4 cm, in order to have sufficient area for the application of the screws.

Acoustic materials are usually housed in the interior of these profiles and are used for the passage of installations.

For cladding heights greater than 2600 mm, it is recommended that the panels are counter-bored. Heights greater than 6 metres with plasterboard profile supports are not recommended.

For these cases, a calculation of the structure and inertia of the profiles is necessary.

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### 3.1.2.- Laying

The positioning of the panels will be such that the magnetic strip faces outwards and the XPS is in contact with the support.

TABIHAUS® panels are isotropic, i.e. they maintain their properties regardless of their orientation, and can therefore be installed horizontally, vertically or in combination, always seeking the maximum use of material.

- Horizontal position
- Vertical position
- Vertical / horizontal combination

The TABIHAUS® Magnetic construction system does not require the use of panel joints.

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### 3.1.3.- Chemical bonding and screwing

Once the profiles have been installed, they will be chemically bonded with TABIHAUS® Polymer and mechanically fastened with screws.

With the help of a 600 ml sealant gun, a continuous bead of TABIHAUS® polymer is applied to the entire support profile. Subsequently, the TABIHAUS® Magnetic panel is then positioned in the desired location.

The panel is positioned in the desired location, having been previously trimmed if the area requires it. Screw it in place with the recommended screw.

Information on TABIHAUS® polymer in section 4.

Information on the recommended screws in section 5.

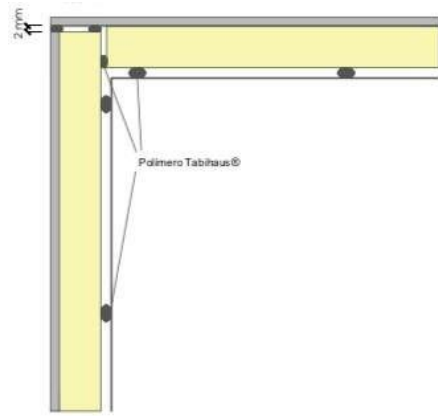
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### 3.1.4.- Singular points

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#### 3.1.4.1.- Corners and nooks

At the corners, remove the excess XPS from the tongue-and-groove joint of one of the panels, and fit it into the 22 mm tongue-and-groove joint of the continuous wall panel.



### 3.1.4.2.- Encounters with doors and windows

Panel Tabihaus interior (8 mm)  
XPS (14 mm)  
Perfil PVL - Montante (48 mm)  
Lana mineral (50 mm)

Panel Tabihaus interior (8 mm)  
XPS (14 mm)  
Lana mineral (50 mm)  
Tomillo  
Perfil PVL - Montante (48 mm)  
Perfil PVL - Guía (46 mm)

DETALLE 1  
ENCUENTRO EN ESQUINA - PANEL TABIHAUS - INTERIOR

Perfil esquinero PVC  
Mortero  
Masa de amarre Andaragón  
Biselado a 35°

Masa de amarre Andaragón  
Biselado a 35°

ENCUENTRO EN ESQUINA		CARACTERÍSTICAS DEL PLANO
DETALLE 2	ENCUENTRO EN RINCÓN	INTERIOR
ESCALA	1/5	
VERSION	06	
FECHA	17/03/2021	
PROYECTO	TBH-02-ENCUENTRO ESQUINA-TABIQUERIA INTERIOR	
AUTOPROYECTO	DANIEL	
REVISOR	TERESA	
TIPO DE PANEL	INTERIOR (8+14+40+14+8); U < 0.4695	

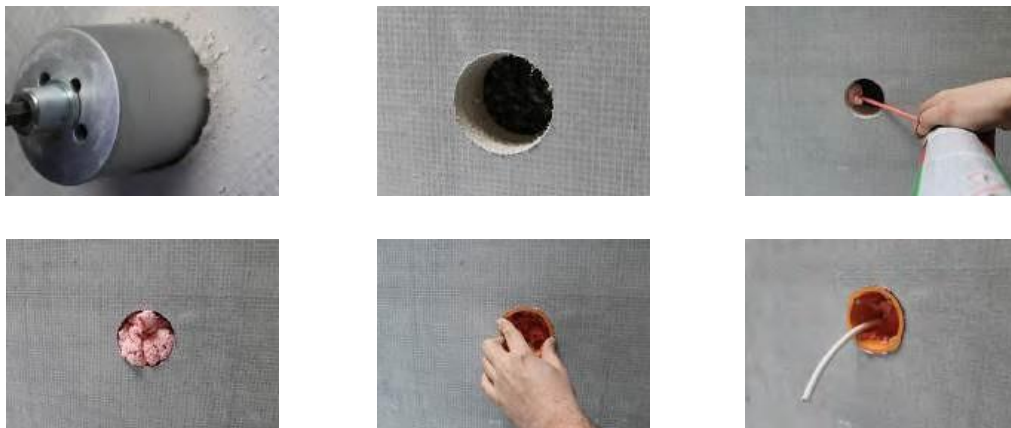
### 3.1.4.3.- Encounters with wall and pillar

Nº DE PLANO	TÍTULO	CARACTERÍSTICAS DEL RAYO
TBH-04	ENCUENTRO CON MURO Y PILAR - DETALLE 1	Encuentro con muro y pilar para tabiquería interior con sistema de paneles Tabihaus interior. Entendido mediante perfiles de PVL y lana mineral embalsada a los perfiles, superior del sistema de paneles Tabihaus interior.
TBH-03	ENCUENTRO PASO DE PUERTA-TABICUERIA INTERIOR	Encuentro del hueco de paso de puerta con sistema Tabihaus interior. Acabado del sistema Tabihaus interior al cara vista para recibir la carpintería del propio hueco, no hay tratamiento ni biselado de los paneles. Se utilizan perfiles PVL para los remates.
TBH-03	ENCUENTRO PASO DE PUERTA-TABICUERIA INTERIOR	Encuentro con muros se utilizan bandas elásticas para separar la estructura portante de PVL y fijación mecánica al mismo.

### 3.1.4.4.- Gaps for junction boxes and mechanisms

In the grooves, the panel allows for core drilling. The gap must be filled with TABIHAUS® fireproof foam before installing the boxes, in order to eliminate the risk of electrical fire in this area.

In general boxes, it may be necessary to project 70 mm profiles to leave a greater depth gap. Remember that TABIHAUS® Magnetic leaves a 26 mm gap.



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### 3.1.5.- TABIHAUS® fireproof foam

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#### 3.1.5.1.- Product description

TABIHAUS® fire retardant foam is a single-component polyurethane foam in an aerosol can, with fire resistant characteristics. The moisture in the air cures the pre-polymerised mixture. TABIHAUS® flame retardant foam complies with European Community regulations and is CFC-free. The cured foam applied on solid, concrete-like material is classified as B1 according to DIN 4102/2.

Once cured it dries rigidly and can be cut, shaped and sanded, but is sensitive to UV light and direct sunlight and must be protected.

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#### 3.1.5.2.- Main characteristics

- Fire resistant.
  - High filling capacity.
  - High thermal and acoustic insulation properties.
  - Good adhesion to a wide range of materials such as wood, concrete, stone, plaster, metal, PVC and polystyrene.
  - Low expansion, which prevents deformation of construction elements.
  - High mechanical strength.
  - Extremely long service life.
  - Paintable and cuttable once cured.
- 

#### 3.1.5.3.- Certifications

It complies with the following specifications:

- Fire resistance is analysed according to the European standard EN1366-4.
  - The reaction to fire is analysed according to DIN4102-1.
  - The fire resistance is classified according to EN13501-2.
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#### 3.1.5.4.- Environmental regulations

- Class A+, according to French legislation on VOC emissions to indoor air.
  - Low emission class M1.
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## 3.2.- Horizontal installation. Paving

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### 3.2.1.- Supporting structure

The supporting structure must have a good planimetry, due to the requirements of the magnetic ceramic. The TABIHAUS® Magnetic panel will correct small irregularities.

If it is installed on an existing floor or on a loose screed, a good planimetry must be guaranteed, which may require prior sanding, the use of self-levelling mortar, or any other technique.

If we have straps or braces, a good planimetry of this structure must be guaranteed, so that it does not affect the correct subsequent placement of the magnetic ceramics.

### 3.2.2.- Laying

TABIHAUS® panels are isotropic, i.e. they maintain their properties regardless of their orientation, and can therefore be installed horizontally, vertically or in combination, always seeking the maximum use of material.

### 3.2.3.- Chemical bonding and screwing

The panel will be positioned in the desired location, having been previously trimmed if the area requires it.

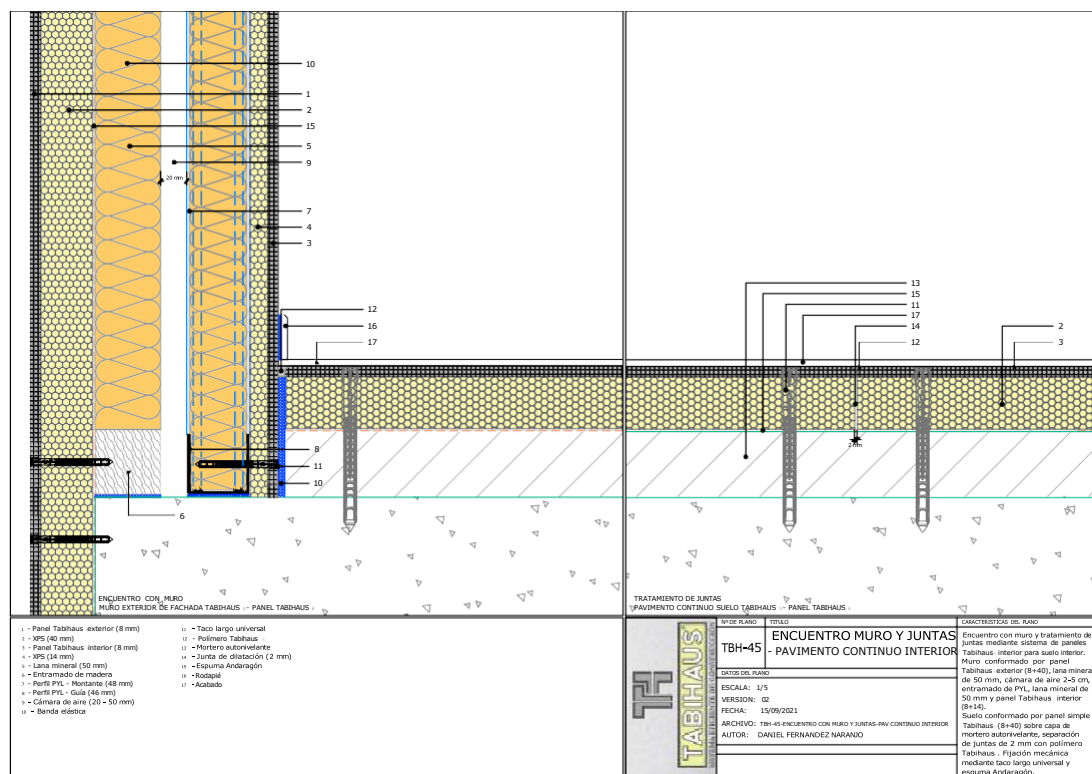
If it is installed on an existing floor or on a loose screed, apply, with the help of a 600 ml sealant gun, beads of TABIHAUS® polymer on the face of the XPS, on the perimeter of the panel, 10 cm from the edge of the panel, and beads distributed around the centre of the panel.

If straps or braces are available, a continuous bead of TABIHAUS® polymer shall be applied along the length of the grid using a 600 ml sealant gun before positioning the panel.

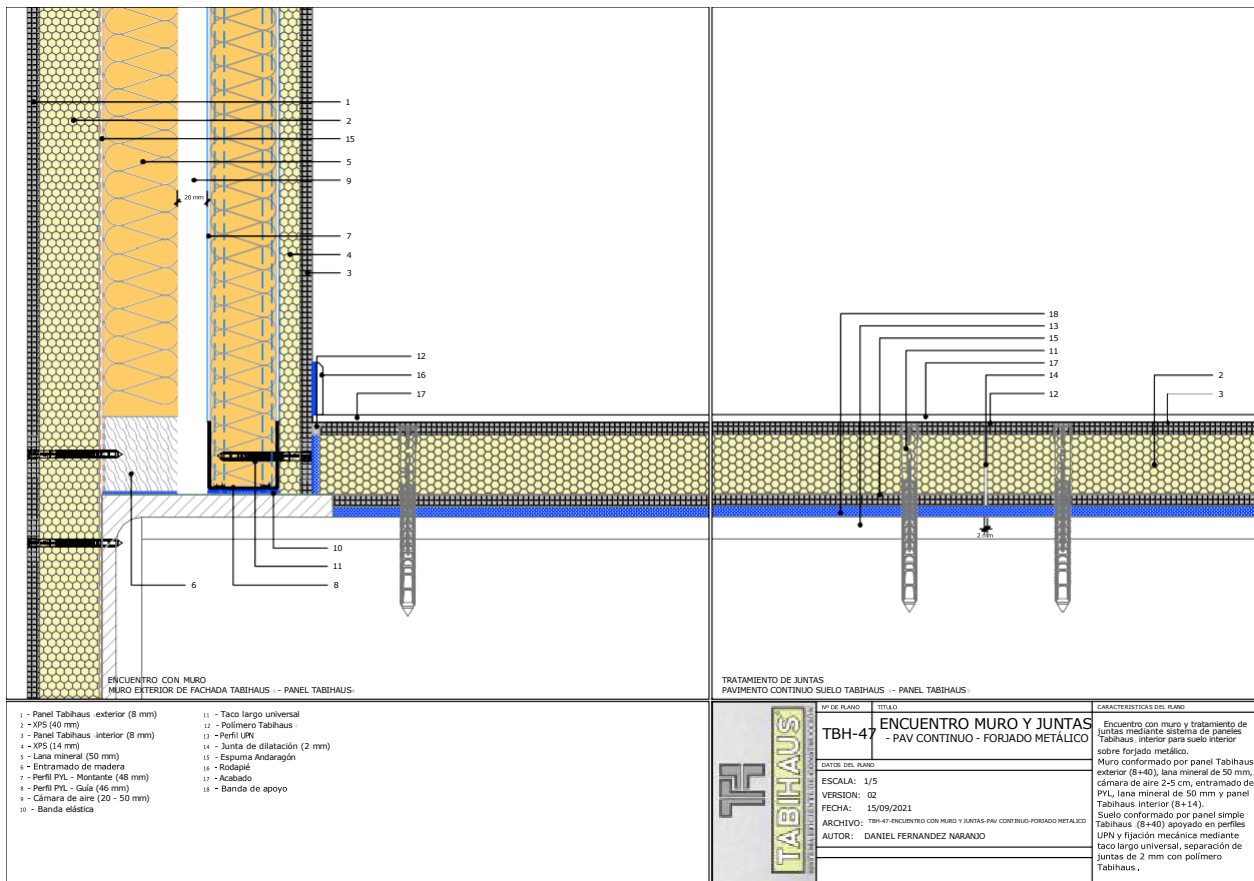
The mechanical bonding, screws, depends on the substrate, whether it is metal, wood, concrete, etc. Information about TABIHAUS® polymer in section 4.

Information about the indicated fasteners in section 5.

### 3.2.4.- Installation on continuous paving



### 3.2.5.- Installation on metal slab



## 4.- CHEMICAL BONDING. TABIHAUS® POLYMER

### 4.1.- Product description

It is a one-component sealant based on innovative hybrid technology. It is characterised by a fast neutral and odourless curing, formed by a permanently elastic joint especially resistant to fire.

It remains stable against atmospheric agents, without ageing, retaining its initial performance and properties. It does not contain isocyanates or solvents.

### 4.2.- Main characteristics

- EI 240.
- Elongation at break (750 %)
- Highly elastic adhesion and movement capability.
- Free of silicones, isocyanates and solvents. Will not emit halogenated by-products in case of fire.
- Fast curing. Almost no shrinkage.
- Will not corrode.
- Excellent adhesion to a wide range of materials.
- Excellent UV, weather and ageing resistance.
- Can be applied on damp surfaces.
- Allows painting, even immediately after application, with water-based paints and mortars and many other systems (pre-testing recommended).
- Easy to apply, even in adverse conditions and low temperatures.

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### 4.3.- Instructions for use

The polymer is applied in a continuous bead, not in dots, without the need for zig-zag movements.

Due to the nature of the polymer, it is not necessary to dry the surface in case the surface is wet, as it adheres regardless of humidity. It does not contain silicones, isocyanates or hazardous elements.

Profiles must be clean, free of dust, grease and other contaminants that may affect adhesion. If grease is present, non-porous surfaces (e.g. steel, aluminium, glass, etc.) must be cleaned with a suitable degreasing agent. Porous surfaces (e.g. concrete, bricks, etc.) must be mechanically cleaned of loose particles. Painted surfaces must be well cured and free of peeling paint. Use protective tape on the edge of joints, if necessary.

TABIHAUS® Flame Retardant Polymer will adhere to most common building materials without primer, however, a preliminary adhesion test is recommended on all surfaces. At times, it may be necessary to treat joint surfaces with a primer for best adhesion results. After substrate preparation, apply the product evenly, using a 600 ml professional sealant gun.

Uncured product can be easily removed with solvents such as isopropyl alcohol or "white spirit". Cured sealant must be removed mechanically.

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### 4.4.- Limitations of use

Do not use TABIHAUS® Flame Retardant Polymer on bituminous substrates or building materials which may release oils, plasticisers, or solvents (e.g. natural rubber, chloroprene, EPDM...). Does not adhere to PE, PP, PTFE (Teflon®). Due to the wide variety of possible substrates, we recommend a preliminary compatibility test.

Not designed for structural glazing and not recommended for direct food contact applications.

TABIHAUS® Fire Retardant Polymer can be painted. Due to the large number of paints and varnishes available, we suggest a compatibility test prior to application.

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### 4.5.- Forms of supply and colours

TABIHAUS® flame retardant polymer: supplied in 600ml cartridges and boxes of 20 pcs. Other formats on request.

Colour: supplied in Ral 7016. Other colours on request.

**NOTE:** It is crucial that the bead is continuous, as with it, we seal the building, not only glue the panels, thus fulfilling one of the Passivhaus® standards, of which TABIHAUS® is part of the Building Platform. The TABIHAUS® system can be sealed, as it is a system that is highly permeable to water vapour,  $\mu= 54$ .

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### 4.6.- Storage and safety

If stored in its original containers, in dry places, protected from direct sunlight and at temperatures between 5 °C and 25 °C, it can be stored for 12 months. Use in well-ventilated areas, avoiding contact with skin and eyes. Keep out of reach of children.

Information concerning the safety of the product is available in the Safety Data Sheet (SDS). Before using the product, we advise you to read the SDS and safety labels carefully.

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## 4.7.- TABIHAUS® Polymer certificates

The certificates are listed in **ANNEX C**. They are the following:

- TABIHAUS® Polymer Technical Data Sheet.
- TABIHAUS® Polymer Safety Data Sheet.
- TABIHAUS® Polymer Declaration of performance.
- ADHESION TESTS Polymer / Panel / different supports
- Pressure and wind suction TESTS.

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## 5.- MECHANICAL FIXING

Screws for the installation of TABIHAUS® panels on the structure:

The screws depend on the support, whether it is made of steel, wood, or if it is necessary to screw directly to the concrete, for example to the slab face.

As a general rule, screws should be installed at a maximum distance of 250 mm from each other, leaving at least 15 mm distance from the edge of the panel.

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### 5.1.- On profiles if less than 1.2 mm

If the profile is of plasterboard type or similar, the PLTR 3545 screw with trumpet head and self-drilling tip will be used. The maximum thickness of the panel will be 37 mm, so that the screw penetrates at least 8 mm into the profile.



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### 5.2.- On profiles if more than 1.2 mm

If the thickness of the profile is greater than 1.2 mm, the ABA screw (options 6370 / 6385) with countersunk head and self-drilling tip with two-wing drill bit will be used. The maximum panel thickness will be 65 mm, so that the screw penetrates at least 20 mm into the profile. For thicker panels, please consult our technical department.



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### 5.3.- On wooden profiles

The TEX high performance lag screw will be installed, of a length such that it enters at least 30 mm into the wooden profile.



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### 5.4.- On concrete

FISCHER SXRL screw plug, diameter 10 will be installed.



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## 5.5.- TABIHAUS® screw certificates

The certificates are listed in **ANNEX D**. They are as follows:

- PLTR Technical Data Sheet
- ABA Technical Data Sheet
- TEX® Technical Data Sheet
- TABIHAUS® / INDEX® Test
- ISO 9001 INDEX
- TESTING pressure and wind suction
- TABIHAUS® / FISCHER SXRL test

**For further details, laboratory tests, certificates and CAD drawings, please visit our website: [www.tabihaus.com](http://www.tabihaus.com), in the private architecture area.**

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## 6.- EXPANSION JOINTS OF TABIHAUS® PANELS

The linear thermal coefficient of TABIHAUS® panels is 0.047%. Its value is low due to its composition in sandwich format, and to the ceramic nature of the panel. With this value, calculating the maximum thermal gradients that can be faced in interiors\*, the panels are laid head-to-head, and the system does not establish expansion joints.

\*The TABIHAUS® Magnetic system is only suitable for indoor installation.

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## 7.- MAGNETIC COATING

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### 7.1.- Presentation

Magnetic ceramics will be supplied with the application of ferromagnetic enamel.

The ferromagnetic enamel is an acrylic polymer for application on substrates of different nature (ceramic, plastic, etc.) that are going to be placed by means of a magnetic fastening system.

The enamel is applied on the back side of the tile, previously fired. It is very important that the pieces are manufactured with as little curvature as possible, and with a flat rib, in order to maximise the contact between TABIHAUS® Magnetic and the ceramic.

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### 7.2.- Proposed models

In this sense, the enamel can be applied on materials of different nature and different formats, even large format.

Contact your supplier or TABIHAUS® for more information.

### 7.3.- Expansion joints

Ceramic tile systems require a minimum of 1 mm expansion joint for indoor installation, but this depends on the format and nature of the material to be tiled.

Consult your supplier.

## 8.- MAGNETIC CERAMIC RESULTS

As indicated in the table below, the result is a tensile adhesion of 0.0023 N/mm<sup>2</sup> (234 Kg/m<sup>2</sup>), and shear adhesion of 0.0009 N/mm<sup>2</sup> (91.77 Kg/m<sup>2</sup>).

There is no vertical displacement when drilling, no change in adhesion due to humidity, and it is resistant to bacteria.

Ensayo	Normativa	Resultado
Envejecimiento por humedad y temperatura	UNE-EN ISO 16701:2015.	No hay cambio de adhesión por humedad
Adherencia a la tracción	UNE EN 12004-2:2017	0,0023 N/mm <sup>2</sup>
Adherencia a la cizalla	UNE EN 12004-2:2017	0,0009 N/mm <sup>2</sup>
Resistencia a las cargas verticales- nivel de carga A (1000N) durante 24h	EAD 210005-00-0505 Apdo.2.2.7.	Sin deformación. Sin daño
Resistencia al desplazamiento vertical por perforación con taladro	Sin normativa vigente	No existe desplazamiento vertical de la baldosa
Resistencia de los materiales a los hongos	UNE-EN ISO 846 Método A	No presentan degradación
Resistencia de los materiales a las bacterias	UNE-EN ISO 846 Método C.	No presenta degradación
Campos magnéticos generados por el sistema	Guide Line on limits of exposure to static magnetic fields. (ICNIRP 2019)	0,15 mT

## 9.- SEALING OF CERAMIC JOINTS

For the setting of magnetic ceramics, the use of BEYEM ADIFLEX is recommended. BEYEM ADIFLEX is a multifunctional powder-based additive based on state-of-the-art polymers and special organic additives.



BEYEM ADIFLEX is specially designed to improve the final performance of setting mortars.

Multifunctional additive for cementitious joints. BEYEM ADIFLEX improves the properties of the grouts to which it is incorporated, beyond the most demanding values contemplated in the standards, while providing new features to these mortars. The improvements provided by BEYEM ADIFLEX result in much more durable and versatile joints.

Increased abrasion resistance (wear and tear is reduced). Increased adhesion (it is easier to joint pieces with very low absorption: porcelain stoneware and natural stone). Increased compactness: decreases porosity and absorption (increases resistance to common cleaning products: oils, bleaches, detergents, etc.). Increased flexibility of the grout, improving the performance of the joint in more demanding applications and substrates (balconies, terraces, natural stone, porcelain stoneware...) and providing the additive joint with transverse deformation category S1. Increased resistance to freeze-thaw cycles of grouts.

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### 9.1.- Advantages

- Increases the service life of joints
  - Improves adhesion
  - Gives greater compactness
  - High resistance to abrasion
  - Decreases absorption and porosity
  - Increases flexibility.
  - Greater resistance to freeze-thaw cycles
  - Easy dosage
- 

### 9.2.- Instructions for use

Add BEYEM ADIFLEX to BEYEM JUNTA UNIVERSAL grout and mix both products dry. Add one 500 g bag of BEYEM ADIFLEX for every 5 kg of grout. Knead the grout already added with water until a creamy consistency is obtained (approx. 1.5 litres of water per 5 kg bag), free of lumps. The paste obtained should be applied in the usual way as indicated on the bag or in the grout technical data sheet.

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### 9.3.- Important notes

- Do not overdose BEYEM ADIFLEX.
- Do not apply on plastic, metal, or wood.
- Do not apply below 5°C and do not apply above 35°C.
- Do not apply when there is a risk of frost, rain, strong winds or direct sun.
- On hot days, the sides of the joints should be moistened with clean water to ensure correct hydration of the joint.
- Outside, the joints should be protected from rain until the grout has dried completely.
- Before grouting the joints, a minimum of 24-48 hours should be allowed to elapse from the laying of the floor or wall covering, depending on the environmental conditions.
- If the surface remains dirty after cleaning, due to an incorrect application procedure, an acid cleaner (BEYEM DESIN) can be used after at least 15 days.
- For antacid grouting, use BEYEM EPOXY JOINT.

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## 9.4.- Technical data

<b>Product identification and application data</b>	
Type	Powder additive
Appearance	White powder
Bulk density	≈ 800 Kg/m <sup>3</sup>
Dosage	500 gr per 5 Kg BEYEM UNIVERSAL JOINT
<b>Final performance of the BEYEM ADIFLEX additive joint</b>	
Abrasion resistance	≤ 500 mm <sup>3</sup>
Water absorption after 30 mm	≤ 1 g
Water absorption after 240 mm	≤ 2.5 g
Transverse deformation	S1

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## 9.5.- Descriptive report

The jointing of ceramic tiles, porcelain stoneware, marble, and natural stone with maximum resistance to abrasion, minimum absorption and with transversal deformation will be done with the anti-fungus jointing mortar Beyem Junta Universal + Beyem Adiflex, from the company Rodacal Beyem, class CG2 according to the EN 13888 standard.

The joints must be free of dust and adhesive residues. Apply the tile-to-tile joint with a spatula, rubber trowel or spray gun. Final cleaning will be carried out with suitable sponges and clean water. The width of the joints is equal to \_\_\_\_\_ and the dimensions of the tiles are \_\_\_\_ x \_\_\_\_\_ cm. The division and perimeter joints shall be respected. 500 gr of Beyem Adiflex shall be dosed for every 5 Kg of Beyem UNIVERSAL JOINT.

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## 9.6.- Certificates

The Beyem Adiflex certificates are listed in **Annex E** and are as follows:

- Beyem Adiflex Technical Data Sheet
  - Beyem Adiflex Safety Data Sheet
  - Rodacal Beyem AENOR R&D&i
  - Rodacal Beyem AEONOR Quality Management
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## 10.- TABIHAUS® APPROPRIATE USE DOCUMENT

Main sheet of the TABIHAUS® Magnetic® System.

The APPROPRIATE USE DOCUMENT OF THE TABIHAUS® SYSTEM is added to the documentation in **ANNEX F**, with its corresponding JUSTIFICATIONS of the different requirements of the building regulations.

Please contact us if you have any doubts, clarifications, further information or queries at the following e-mail addresses:

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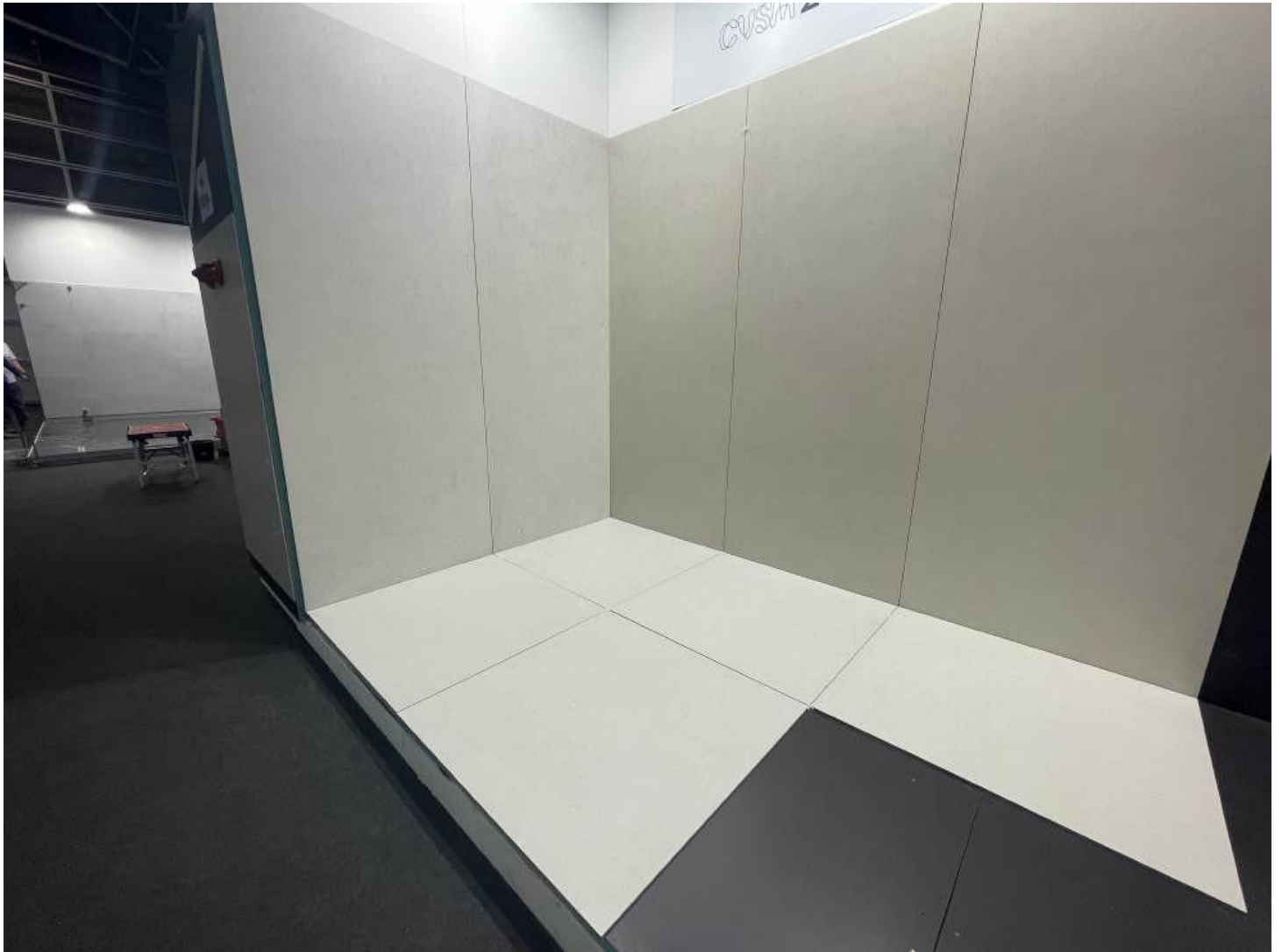
## 11.- SYSTEM SEALS

For the reasons stated above, we point out the quality seals of the TABIHAUS® system components:





**TABIHAUS<sup>®</sup>**  
*Magnetic*





TABIHAUS®

*Magnetic*







TABIHAUS®

*Magnetic*





*Magnetic*



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