

Technical guide

Dry underfloor heating systems based on EPS boards

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List of Murexin products described in this guide

Guide Summary

This guide describes the main issues of TIA's underfloor heating, the installation method, and a set of instructions for covering floors with dry underfloor heating. Before purchasing the desired floor covering, you should present this guide to the installer. TIA is not responsible for refusals from installers and is not obligated to seek alternative contractors.

ATTENTION!

Before proceeding with the installation, please review the warranty conditions!

Technical Information - Introduction

This guide covers issues related to dry underfloor heating systems:

- Standard System EPS 300 Alu
- Standard System EPS 400 Alu

Guide includes installation instructions, theoretical issues, and the detailed technical specification of the described products.

Features of underfloor heating

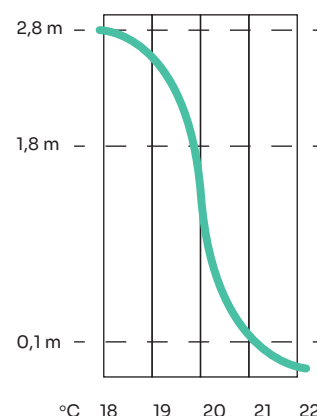
The primary advantage of surface heating systems is the increased sense of thermal comfort and energy efficiency compared to convective heating. Underfloor heating is a type of low-temperature installation, where the heat exchange predominantly occurs through the radiation of the floor surface. Free convection is minimal, absolutely imperceptible to humans, and diminishes as the indoor temperature stabilizes.

Thanks to radiation, the perceived temperature is higher than the measured air temperature in heated rooms. There are almost no convective air movements, which is a great relief for allergy sufferers and people with respiratory conditions. The vertical temperature profile is close to the ideal profile. Such a temperature distribution significantly increases the feeling of thermal comfort while ensuring operational savings.

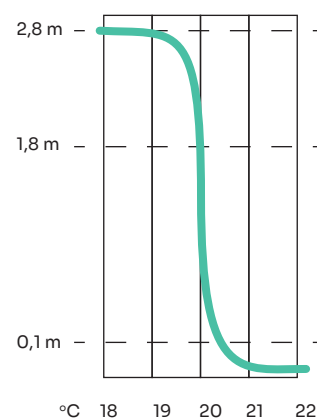
Dry underfloor heating

The Standard Alu dry underfloor heating allows apply floor covering without a concrete screed. The base is a EPS board made by injecting styrofoam into a mold, ensuring the repeatability of dimensions and physical properties of each produced board. Each board is covered with an aluminum foil which is a heat radiator and ensures perfect heat distribution from the pipe across the board's surface.

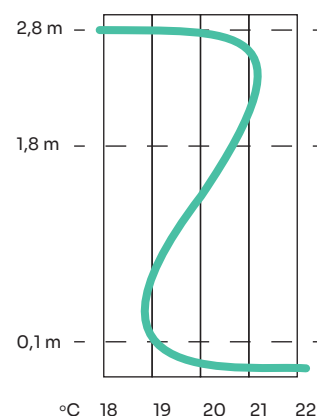
The Standard Alu system boards have a universal groove pattern for the pipe, allowing for any routing of the underfloor heating loops. Standard Alu system is characterized by a very low thickness of UFH layer (starting from 20 mm) and a low weight less than 2 kg/m². Dry underfloor heating is ready for operation immediately after the installation is completed, a leak test is performed, and the floor is covered.



rys. 1. Ideal temperature distribution in the room



Temperature distribution profile in a room with underfloor heating



Temperature distribution profile in a room with convective heating (e.g. with radiators)

Advantages of underfloor heating:

Healthy and energy-efficient

Perfect vertical temperature distribution

Easy interior design

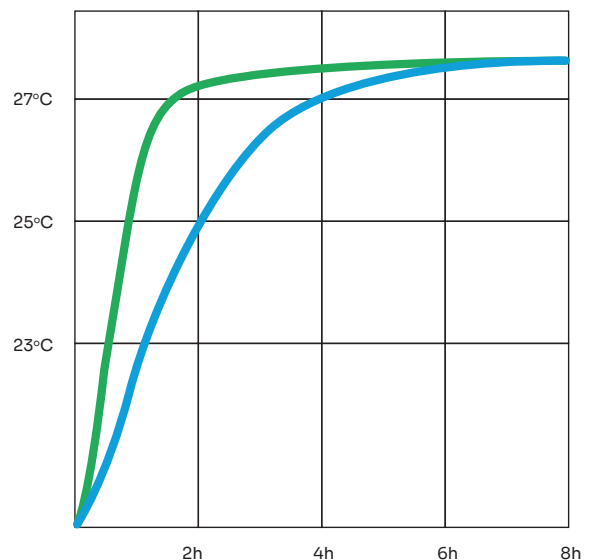
Thermal comfort

Dry underfloor heating system is perfect for places where technical conditions do not allow for wet underfloor heating. The total thickness of such an underfloor system is the sum of the system board thickness and the floor covering. Another advantage of dry underfloor heating is its simplicity and short installation time, as well as the immediate readiness for operation right after installation and performing the necessary leak test.

In comparison, wet underfloor heating systems require a minimum of 4 weeks for concrete binding, followed by at least 8 days of pre-heating. Only after this period can the floor covering be applied. A significant benefit of choosing dry underfloor heating is the minimal thermal inertia. The absence of a concrete screed means that it reaches the desired heating parameters within 2 hours of launch.

In recent years, underfloor heating has become the primary heating system in single-family homes in Poland, and it is increasingly found in multi-family residential buildings. Underfloor heating is successfully used in large spaces such as sports and industrial halls and churches. In renovated buildings, underfloor heating helps maintain interior character. The invisible installation and optimal microclimatic conditions related to temperature and humidity distribution are beneficial for historic buildings.

Graph of the change in average floor surface temperature over time.



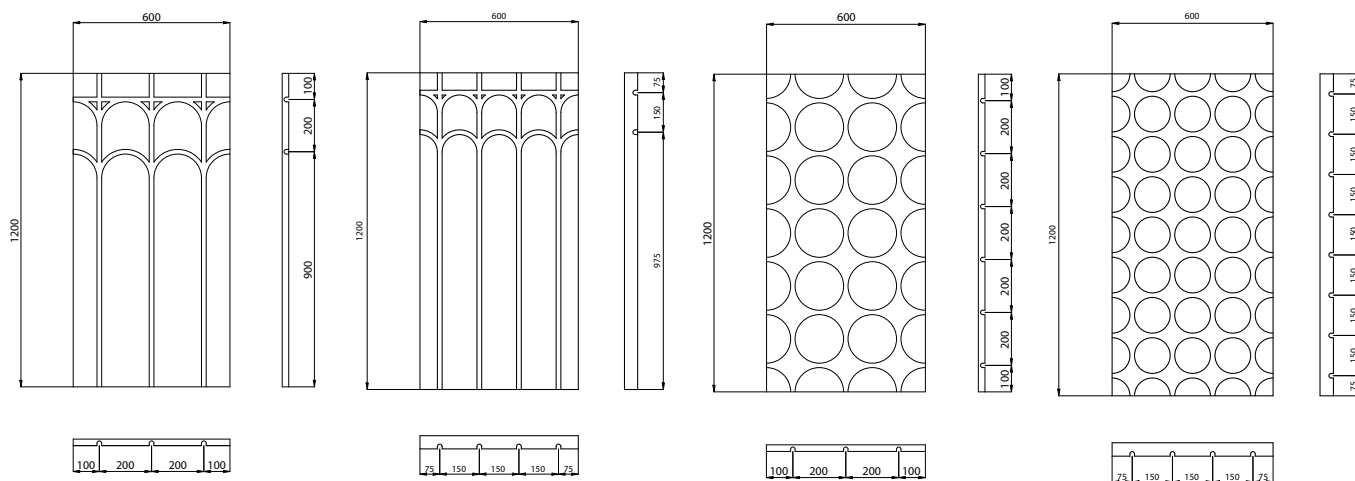
— Dry underfloor heating

— Screed underfloor heating

Building standards

During design and construction, appropriate regulations and standards must be followed. The applicable standard for underfloor heating is EN 1264

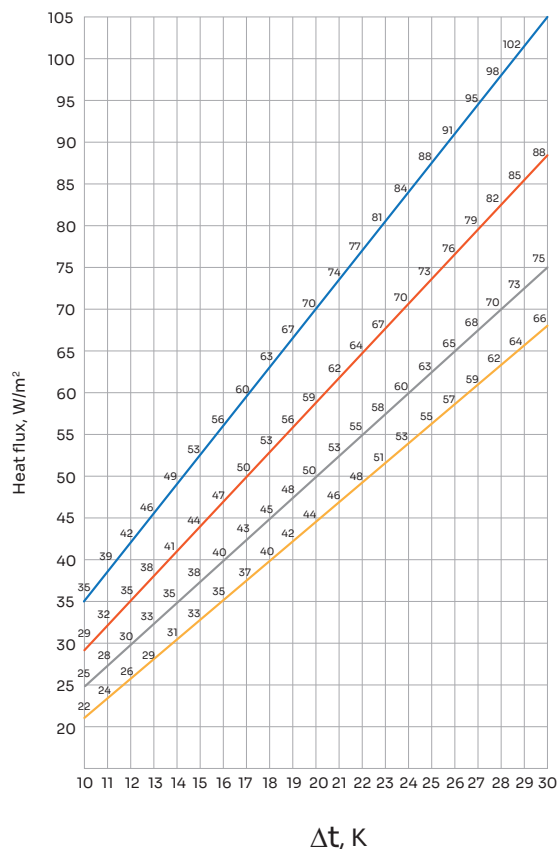
Technical data of system boards



Material	EPS300	EPS400
Compressive strength	300 kPa at a max deformation of 10%	400 kPa at a max deformation of 10%
Length	1200 mm	
Width	600 mm	
Thickenss	25 30 50 mm	20 mm
Pipe spacing	150 mm	
Thermal conductivity coefficient - W/mK	0,0316	0,0314
Thermal resistance - m ² K/W	0,79 for 25 mm 0,95 for 30 mm 1,58 for 50 mm	0,64 for 20 mm
Dynamic stiffness - MN/m ³	461 for 25 mm 449,5 for 30 mm	500,6 for 20 mm
Fire reaction class (RtF)	E	

Performance parameters

Temperature difference, K	Floor covering total thermal resistance, m ² K/W			
	0	0,05	0,1	0,15
	Heat flux, W/m ²			
10	35	29	25	22
11	39	32	28	24
12	42	35	30	26
13	46	38	33	29
14	49	41	35	31
15	53	44	38	33
16	56	47	40	35
17	60	50	43	37
18	63	53	45	40
19	67	56	48	42
20	70	59	50	44
21	74	62	53	46
22	77	64	55	48
23	81	67	58	51
24	84	70	60	53
25	88	73	63	55
26	91	76	65	57
27	95	79	68	59
28	98	82	70	62
29	102	85	73	64
30	105	88	75	66



The thermal resistance value of floor covering.



Δt - The calculated difference between the average water temperature in the pipes and the room, K

$$\Delta t = \frac{t_z + t_p}{2} - t_f$$

z - Supply temperature - °C

p - Return temperature - °C

f - Return temperature - °C

The thermal resistance should be calculated based on the thickness of the layer and the thermal conductivity coefficient, which is a characteristic parameter of the floor material

$$R = \frac{\delta}{\lambda}$$

R - thermal resistance - m²K/W

δ - layer thickness - m

λ - Thermal conductivity coefficient - W/mK

The total resistance applied to underfloor heating should not exceed 0.15 (m²K)/W. In exceptional cases, 0.17 (m²K)/W. Exceeding these values significantly reduces the efficiency of the system and negatively affects the performance of the heat source.

The table shows the thermal resistance values for floors with typical thicknesses. It should be noted that thermal resistance is proportional to the thickness of the covering

Flooring type	Thermal resistance range
Ceramic/stone tiles	0,01-0,04
Laminated MDF panel	0,04-0,1
LVT panels/PVC coverings	0,03-0,07
Wooden floors	Above 0,08
Carpet coverings	Above 0,1

Application

Dry underfloor heating is dedicated:

- for wooden and prefabricated buildings,
- for renovated buildings,
- for buildings where underfloor heating was not planned in the project, and the required height for the installation of wet underfloor heating was not provided
- for attics, if the load-bearing capacity of the floors is insufficient for concrete screed.

Dry underfloor heating shouldn't be a substitute for traditional solutions. However, it should be installed wherever technical conditions do not allow the implementation of wet underfloor heating (with concrete or anhydrite screed).

Installation principles for dry underfloor heating

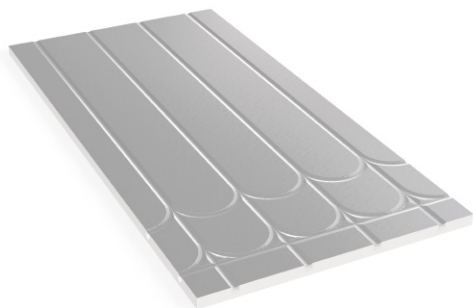
1. Substrate preparation

The EPS Alu system board is only a support for the pipes. Necessary static support, thermal and acoustic insulation, and protection against moisture penetration must be provided by the layers beneath the system boards. The rooms must be dry, clean, degreased, and free of dust. Any debris and mortar residues must be removed. All installers carrying out subsequent work must be informed about the installation of the underfloor heating system to prevent damage. After the installation of the underfloor heating system, the entire surface should be well protected against damage that may occur during the next stages of building.

The substrate where EPS Alu system boards are laid should be flat, stable, and level. If it isn't, the boards may shift, break, and detach from the floor during use, causing damage to the floor covering or the underfloor heating pipes. It is not recommended to lay the system boards directly on polystyrene boards or any other material that does not provide sufficient support. The system boards must adhere completely to a flat, even, load-bearing, and hard surface.

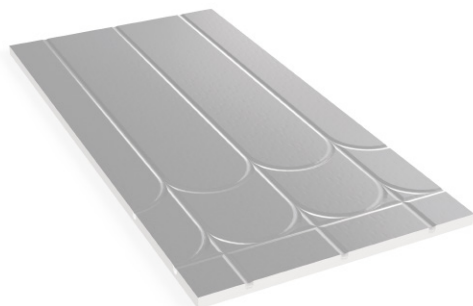
EPS ALU board - Line

1200 x 600 mm



cc 150

system board with 150 mm pipe distance

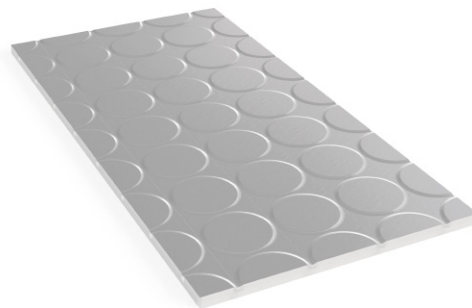


cc 200

system board with 200 mm pipe distance

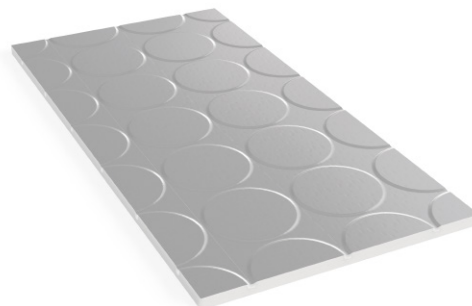
EPS ALU board- Arc

1200 x 600 mm



cc 150

system board with 150 mm pipe distance



cc 200

system board with 200 mm pipe distance

Concrete (mineral) substrate

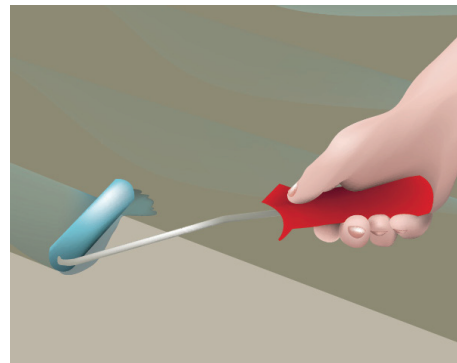
If the substrate is uneven or not level, and there are local indentations or bulges above 5 mm on surface, the entire surface should be leveled using Murexin CA 20 self-leveling compound. If there are uneven areas in the form of point-like holes and indentations not exceeding 5 mm, use Murexin CA85 putty to level them. Before leveling the substrate, apply LF14 priming concentrate according to the producer's recommendations. Any cracks and fissures in the substrate should be repaired by stapling with Murexin 2K SI 60



Filling grooves and irregularities on the substrate Surface

Surface priming

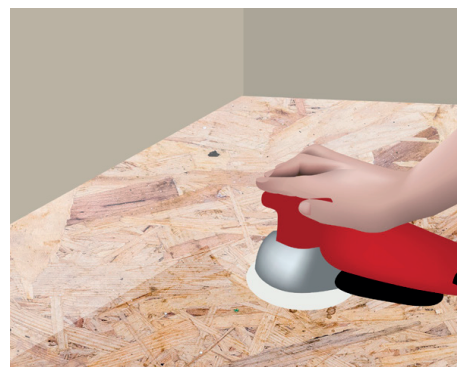
Absorbent surfaces (cement and anhydrite screeds, old concrete) should be primed with Murexin LF 14. Dilution ratios – in manufacturer's documentation. In the case of highly absorbent substrates, double priming is recommended. Non-absorbent surfaces (existing terracotta, ceramic, and terrazzo floors or surfaces coated with resin layers) should be primed with Murexin D4 Rapid primer.



Substrate priming

2. Substrate from wooden boards or wood-based boards (e.g. OSB, MFP etc.)

Wooden or wood-based boards should be mounted evenly and aesthetically (precisely sanded and vacuumed). Wooden boards must be firmly attached and laid with a wall gap, arranged so that the wooden layer can be ventilated.



Sanding irregularities on the wood-based substrate

3. Edge expansion joint – Edge strip

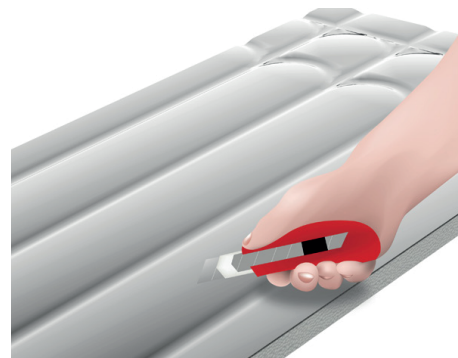
The edge strip should be laid along building partitions, stairs, door frames, and columns. According to EN1264-4, the thickness of the strip should be selected to allow for thermal expansion compensation of at least 5 mm. The edge strip should extend from the load-bearing substrate to the upper edge of the floor covering. Expansion joints dividing room surfaces should be agreed upon with the floor covering installer.



Installation of the edge strip/ EPS board cutting

4. Preparation for adhering EPS system boards

EPS system boards should be adhered flat to a stable, load-bearing, dry, clean, and degreased floor surface. Follow the project instructions, or if not available, think through and sketch the expected layout of the system boards before starting the work. Lay the boards on the floor and analyze the pipeline route before adhering, thus avoiding mistakes and the need for reassembly of the underfloor heating layer. Cut the boards to the desired size using a utility knife. During this process, manage the cut-off pieces, reusing them in further work to minimize waste.



EPS board cutting

5. Adhering EPS system boards

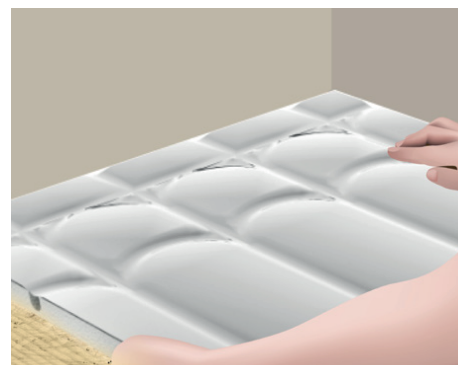
Adhering EPS system boards to concrete (mineral) substrate.

The boards should be adhered over their entire surface to the previously prepared substrate (as per section 1 of this guide, page 8) using Murexin KMG 25 adhesive mortar. Use a notched trowel with a tooth size of 8 mm or larger. Apply the boards to the substrate with a simultaneous sliding motion to ensure proper spreading of adhesive mortar at the interface of the boards and substrate. After appropriately setting the system board, step on it and press down with your body weight.

Sand and vacuum the surface of the wooden or wood-based substrates. Fill the joints between the boards with Murexin MF 4 quick-setting filler. Adhere the system boards using Murexin Hidrostop Flex, which also serves as a waterproofing barrier. Mixing ratio: 4.4 kg of water per 20 kg of product. Apply the adhesive to the substrate using a notched trowel with a 6 mm tooth size. Lay the boards onto the freshly applied adhesive layer and press them firmly onto the substrate. Step on the board and press down with your body weight.



Adhering EPS board to the concrete substrate



Adhering dry underfloor heating boards to wooden or wood-based substrates.

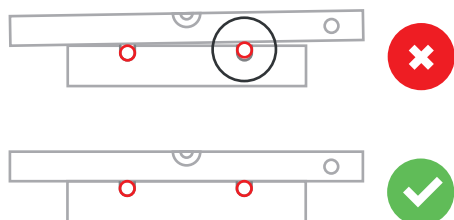
Product	Application	Usage
Murexin KMG 25	Adhering EPS boards to the previously prepared concrete (mineral) substrate	3-3,5 kg/m ²
Murexin Hidrostop Flex	Adhering EPS boards to the previously prepared wooden substrate	2,5-3 kg/m ²

6. Pipeline installation

The boards have grooves to guide the pipeline. However, there may be places where the pipe needs to be moved to another groove. To do this, cut the aluminum radiator with a utility knife at the place where the pipe will be moved. Then detach and peel back the foil. Create a new groove at the pipe path with a depth of about 17 mm using a thermal knife for grooving polystyrene. PERT/EVOH/PERT pipes are recommended for underfloor heating. They are more flexible and fit better into the grooves of the system board.

Additionally, PERT/EVOH/PERT pipes are less sensitive to changes in temperature and do not lose their round cross-section as much as other types of pipes when bent. It is best to uncoil the pipe from a decoiler, which allows the pipe to release the stress, making it easier to lay.

The pipe should not protrude significantly above the surface of the board after laying. A minimal level difference between the top of the pipe and the surface of the board (≤ 1 mm) is acceptable and may occur in 180° bends. This is due to the minimal ovalization of the pipe during bending.



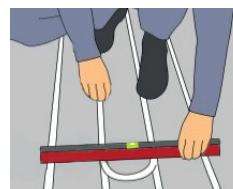
Problems with aligning the top of the pipe with the board (a difference of more than 1 mm) are most often caused by improper uncoiling of the pipe from the coil (pipe twisting).

The consequence of this may be the pipe falling out at 180° bends. If the pipe falls out of the curved groove, cut a piece of the polystyrene board at the bend, and nail the pipe in the remaining gap to the substrate with a mounting hook. Fill the gap with Murexin Flex XL.

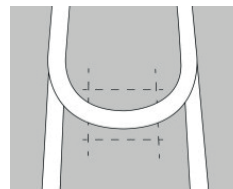
Heating loop pipelines should be attached to the manifold using eurocone fittings. The flow in the loops should be regulated using flow meters located on the supply bar by turning them left or right. It is not recommended to change the set flow in the future

Everywhere there are many pipes (e.g., near the manifold or in narrow passages), you should use a board without grooves and without aluminum radiator. Then, using a thermal knife, carve out grooves along the planned route of the piping. Prefabricated sub-manifold boards are also available, which can be used in special cases.

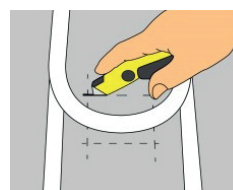
After laying the pipeline, connecting the pipes to the manifold, and filling the system, a leakage test must be performed according to the protocol in Appendix. The leakage test protocol is required to obtain a warranty.



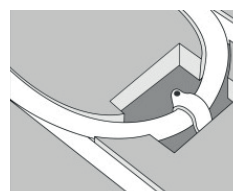
Control of pipe protrusion above the system board surface



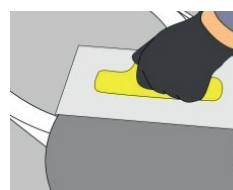
Marking the section to be removed



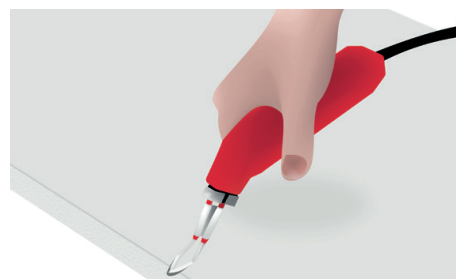
Cutting the marked section



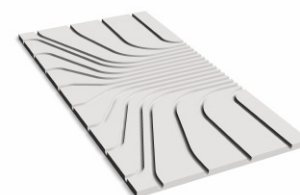
Nail pipe by mounting hook



Filling a gap using Murexin Flex XL



Thermal knife



sub-manifold board

7. Adhering the Thermo Top Alu Mat

After laying the heating pipes and performing leak tests on the hydraulic system, the entire aluminum surface should be degreased using acetone and primed with Murexin D4 Rapid.

- In wet rooms (such as bathrooms, laundries, industrial kitchens, etc.), use Murexin Hidrostop Flex – mixing ratio: 4.4 kg of water per 20 kg of product.
- In dry rooms (such as kitchens, living rooms, bedrooms, hallways, etc.), use Murexin FBS 75 – mixing ratio according to producer's recommendations.

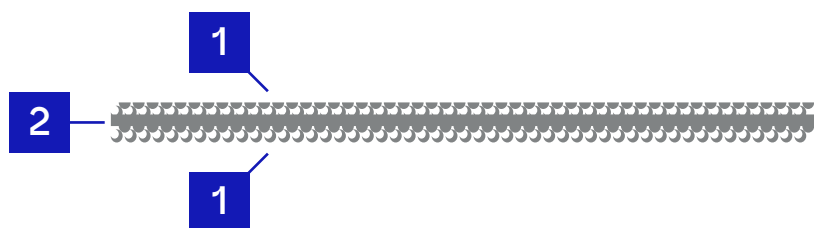
Adhering ThermoTop mats should be done in two stages. Initially, all empty spaces on the surface should be filled with the appropriate compound and left to dry for 24-36 hours. In the second stage, using the same compound, adhere the Thermo Top Alu mats, ensuring that their edges do not align with the edges of the system boards below. The Thermo Top mats should be laid with each row offset by about 1/2 the length of the mat's edge. A level should be used when adhering the mats. After placing the mat on the surface, remove any air bubbles that may form at the junction of the mat and the system board using a wallpaper pressure roller. To spread the compound, use a notched trowel with a 6mm tooth size

Thermo Top Alu

Thermo Top Alu is a layered mat. It has an aluminum core that ensures excellent heat distribution across the surface and makes the mat rigid

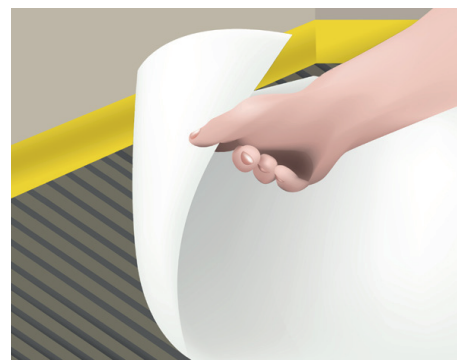
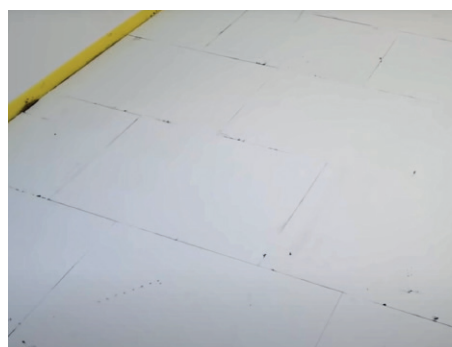
Material	Synthetic fibers with an aluminum core
Dimensions	1200 x 600 mm
Thickness	1,5 mm
Weight	1 kg/m ²

Cross-section of the Thermo Top Alu mat

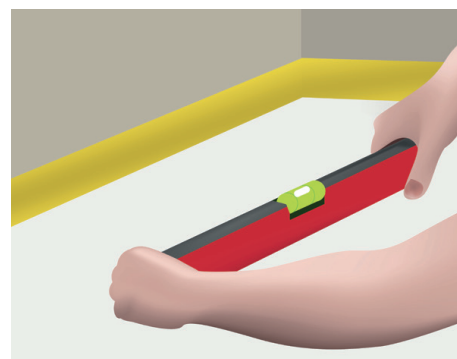


1. Bonding surface
2. Reinforcing and heat-conducting aluminum layer

Real photos from the project where Thermo Top Alu mats were adhered




Adhering Thermo Top board



Level check

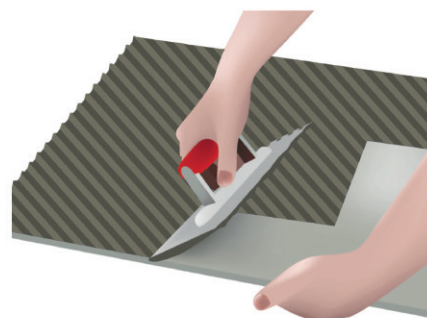


 When adhering the Termo Top mats, special attention should be paid to doing it neatly, horizontally, and evenly, without leaving any gaps – this is especially important if vinyl panels are to be laid on the surface.

Product	Application	Usage
Murexin D 4 Rapid	Priming non-absorbent aluminum surfaces of EPS boards	200 g/m ²
Murexin FB S75	Two-stage process of adhering the Termo Top Alu mat in dry rooms	3-3,5 kg/m ²
Murexin Hidrostop Flex	Two-stage process of adhering the Termo Top Alu mat in wet rooms	3-3,5 kg/m ²

8. Ceramic tiles

Ceramic tiles should be adhered to the Termo Top mat using highly flexible adhesive Murexin Flex XL. The mortar should be spread using a notched trowel (the trowel tooth size should be chosen according to the tile size). After placing the tile, it should be moved diagonally to the edge, enabling even distribution of the adhesive.



Product	Application	Usage
Murexin Flex XL	Adhering tiles to the Termo Top Alu mat	Consumption dependent on the size of the tiles

9. Grouting and expansion joints

When adhering ceramic tiles, a grout joint of at least 3 mm wide should be maintained. After the adhesive has dried properly (after 1-3 days depending on the tile size), the joints should be grouted using flexible grout (preferably Murexin FM 60 Flex mixed with Murexin FE 85 plasticizer). The surface of the ceramic tiles should be divided into sections of approximately 30-35 m², in a shape as close to a square as possible. In the areas where the joints of the divided sections occur, the joints should not be filled with grout, but with a flexible silicone sealant Murexin SIL 60 or a flexible silane sealant Murexin X-Bond MS-D 81. For stone tiles, a neutral sealant SIL 50 should be used. The gap between the tile and the baseboard, as well as all pipe transitions, penetrations, and sanitary fixture connections should be sealed with a flexible sealant.



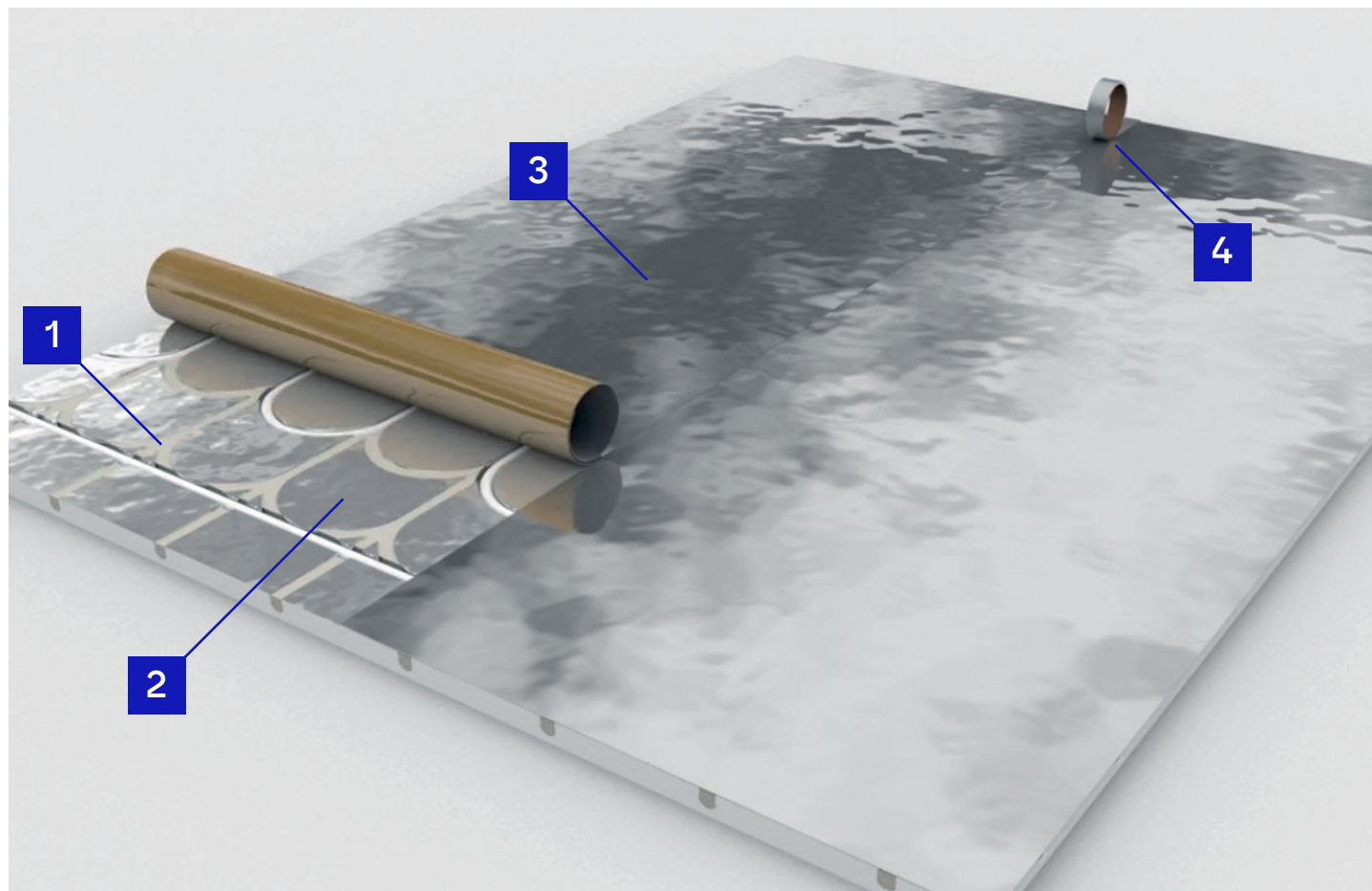
10. Wooden and wood-based coverings

It is not recommended to directly adhere wooden or wood-based flooring on the layer of underfloor heating. For dry underfloor heating system is recommended to install wooden board or laminate MDF panel floors as floating floors. The next page shows a cross-section of such a floor.

The underlay for floating floors can be in the form of sheets or can be unrolled from a roll. If it is in the form of sheets, they should be laid with an offset of at least 1/3 of their length, adhering them to each other along the edges using mounting tape. The same method should be followed when unrolling the underlay from a roll. When selecting an underlay, attention should be paid to acoustic properties and thermal resistance – the lower it is, the better. Usually, producers provide information on the product label about the suitability of the product for underfloor heating.

The rules for laying a floating floor in accordance with the producer's recommendations

Floating floors can be laid both directly on the underfloor heating plates as well as on Termo Top mats (point 7). When laying the floor covering directly on the system boards, it is recommended to fill any depressions and grooves in the system boards where the piping has not been laid, using Murexin Flex XL adhesive. If shrinkage is noticeable after the adhesive dries, the process of filling should be repeated.

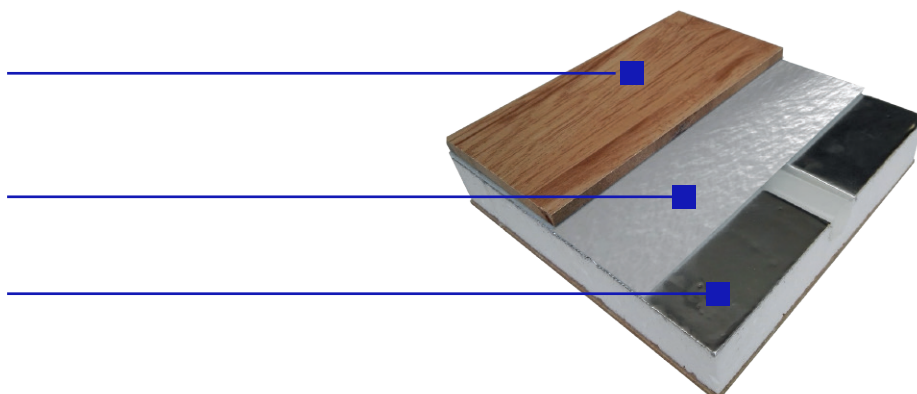


1. Grooves filled with Murexin Flex XL
2. Underfloor heating layer
3. Floating floors underlaye
4. Mounting tape

Floating floor

ENERGY PRO COMFORT
- underlay for floating floors

Underfloor heating layer



Cross-section of a floating floor on dry underfloor heating.

11. LVT (vinyl) panels adhered to the substrate and installed as floating floors

LVT panels adhered to the substrate - recommended solution

Vinyl floors are possible on dry underfloor heating. This requires the use of TermoTop Alu mats in accordance with point 7 of this guide. The purpose of TermoTop Alu is to reduce surface stresses and enhance heat conduction. It is important that the resulting surface is level, even, and that gaps between the mats are kept to a minimum. Any gaps and depressions should be filled with Murexin MF4 quick-setting filler, and the filled areas should then be sanded with sandpaper.

Depending on the intended use of the room, two different products should be used for adhering LVT panels to the substrate:

- In wet rooms (e.g., bathroom, laundry, industrial kitchens, etc.) - Murexin X-Bond MS - K499. Trowel A2
- In dry rooms (e.g., kitchens, rooms, bedrooms, halls, etc.) - Murexin D 495. Trowel A2



Murexin D 495. Spatula A2

Product	Application	Usage
Murexin D 495	Adhering LVT panels to the Termo Top Alu mat in dry rooms	350 g/m ² (Paca A2)
Murexin X-BOND MS-K499	Adhering LVT panels to the Termo Top Alu mat in wet rooms	250 - 300 g/m ² (Paca A1)



Recommends the company's panels:



LVT panels laid as a floating floor - in accordance with the recommendations of the panel producer/supplier.

The tongue and groove LVT panels can be laid directly on the TermoTop Alu mat as a floating floor without the need for additional underlay unless specified otherwise by the panel supplier/producer.

12. Soft floorings (PVC, carpet etc.)

For soft coverings such as linoleum, PVC, carpet, and similar materials, it is recommended to use Fermacell FCEE25 boards (details according to Fermacell's documentation)

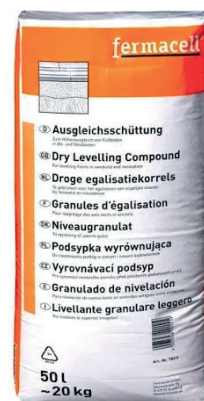
Before proceeding with the installation of Fermacell FCEE25 dry screed, any voids, gaps, or unevenness in the underfloor heating layer should be filled using Fermacell levelling fill

Dry screed also provides a suitable base for ceramic and stone floors with tile sizes up to 120 cm, floating wood and wood-based floors, vinyl panels (LVT), carpet, PVC, and linoleum

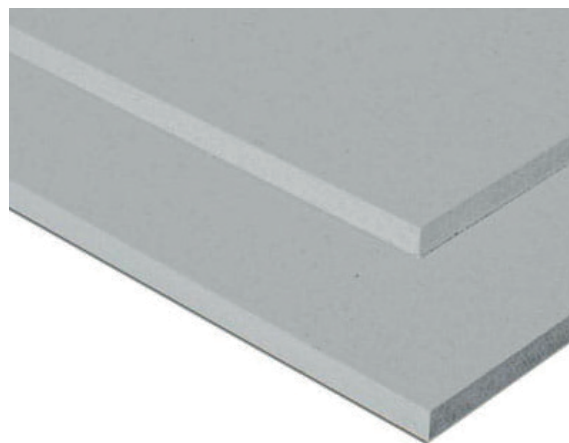
⚠ Attention!

Floor coverings that are not recommended for use with dry-installed underfloor heating:

- Wooden floors adhered to the substrate
- Parquet
- Microcement
- Resin floors
- All other floor finishes not mentioned in this guide



Fermacell levelling fill



Dry screed Fermacell FCEE25

13. Central heating protection

In the case of installations with an individual boiler room serving only the investor's apartment (after a successful tightness test and after finishing the floors) Caleffi conditioning products should be added to the boiler water. This procedure significantly extends the life of the heat source, pumps, valves, flow meters, and other fittings in the central heating system.

Caleffi treatment additives prevent scaling in the installation, the formation of bacterial colonies, and the precipitation of ferromagnetic compounds. If possible, it is also recommended to equip the installations with an appropriate filter-separator, which will allow the safe removal of unwanted impurities from the boiler water. Adding water treatment chemicals to the heating system is essential to obtain a warranty for the underfloor heating system.

New installations - never used before

After filling the installation, add Caleffi C1 INHIBITOR, which protects the installation from corrosion and the formation of impurities, and Caleffi C7 BIOCIDE, which prevents the formation of bacterial and fungal colonies. Dosage: 0.5 liters of each product per 150 liters of water in the installation

Operated installations - requiring cleaning.

After filling the installation, add Caleffi C3 CLEANER, which cleans the installation from impurities, scale, and other deposits. Dosage: 0.5 liters of product per 150 liters of water in the installation. After adding the appropriate amount of C3 CLEANER to the installation, start the circulation pump. The water temperature affects the duration of cleaning.

- Minimum 1 hour for water temperatures above 50°C
- Minimum 3 hours for water temperatures between 30°C and 50°C
- Approximately 7 days for cold water

After the cleaning time has elapsed, the wastewater must be drained, and the installation flushed with clean water. Then, proceed as described in the section ,New Installations.

! Attention!

The use of water treatment chemicals and filters does not apply to shared installations, such as flats in multi-family residential buildings with a communal boiler room or a shared heat substation.



CALEFFI C7 BIOCIDE



CALEFFI C1 INHIBITOR

















CALEFFI DIRTMAG - for installations where it is possible to install this type of device.



CALEFFI XS - do montażu pod kotłem

Summary of Murexin construction chemicals described in the guide.

Product	Application	Drying time	Usage
CA20	Leveling the substrate (for unevenness above 5 mm)	Drying layer 3 mm = 3 days (if conditions are appropriate)	
Murexin CA 85	Leveling the substrate (for unevenness above 5 mm).	2h	
Murexin 2K SI 60	Filling gaps	12h	
Murexin D 4 Rapid	Priming non-absorbent substrates	Depending on the conditions, from 30 minutes to 6 hours	
Murexin LF 14	Priming absorbent substrates	Depending on the conditions, from 30 minutes to 6 hours	
Murexin KMG 25	Adhering EPS boards to the previously prepared mineral substrate	Above 6h	
Murexin MF 4	Putty for filling gaps and defects in wooden floors.	Up to 45 minutes	
Murexin FBS 75	2-step process for adhering Termo Top Alu mat in dry rooms	2x24h	
Murexin Hidrostop Flex	2-step process for adhering Termo Top Alu mat in wet rooms	2x24h	
Flex XL	Adhering tiles to the Termo Top Alu mat.	24h	
Murexin D 495	Adhering vinyl (LVT) panels to the Termo Top Alu mat in dry rooms	24h	
Murexin X-BOND MS-K499	Adhering vinyl (LVT) panels to the Termo Top Alu mat in wet rooms	24h	
Murexin FM 60 Flex + FE 85	Grouting	24h	
Murexin SIL 60, SIL 50	Creating flexible joints between ceramic tiles (SIL60) and stone tiles (SIL50).	24h	

Guide Summary

This guide outlines the main topics related to TiA floor heating, methods of its installation, and a set of instructions for finishing floors with dry underfloor heating.

Before purchasing the desired floor covering, it is necessary to provide this guide to the installer so that they can read it.

TiA is not responsible for refusals to execute the order by contractors and is not obliged to seek alternative installers.

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Installation Leak Test Protocol

Type of heating installation¹⁾: _____

On _____ a leak test of the _____ (type of heating installation) was conducted in the building _____ on the plot _____ in the locality _____ on behalf of the investor _____ The leak test of the installation was carried out under pressure _____ for the duration of _____.

Water leak: Occurred Did not occur

Pressure drop: Detected Not detected

Therefore:

The leak test of the installation is deemed: Positive Negative

The execution of the installation: _____

in the building: _____

is considered: Correct Incorrect

(compliant with the construction project and applicable regulations)

Commission:

1) Specify the type of installation (underfloor heating, wall heating, other)



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