



PRODESO HEAT SYSTEM

Underfloor electric heating system
with uncoupling technology.



Underfloor Electric Heating System with Uncoupling Technology.

Underfloor Electric Heating System with uncoupling/vapor management/load distribution and waterproof properties.

Advances in tile manufacturing in the past few decades have improved the quality and choices available to the consumer. New colors, new materials, larger format, thinner tiles and digital printing have all contributed to a steady growth of the use of tile as a surface. When compared to other flooring options such as carpeting and wood floors, tiles are normally preferred because they are easy to clean, resilient, and hygienic. Unfortunately ceramic tile and natural stone, if not installed properly, are subject to cracking, delamination, and are cold to the touch. Use of electrical floor heating can minimize the cold, but submits the tile assembly to additional stress that can lead to cracking and delamination.

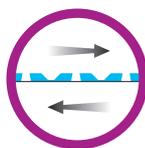
Traditionally most electric floor heating, and anti-fracturing membrane manufacturers have recommended covering the electrical heating cables with a self-leveling cement layer or a thin-set layer followed by an uncoupling crack isolating membrane and then finally installing the tiles. This process needlessly increases time, difficulty, thickness, height differentials, weight, and cost of the overall installation.



The patented **PRODESO HEAT SYSTEM** by Progress Profiles combines the benefit of an underlayment membrane with the comfort and convenience of electrical floor heating. The Prodeso Heat Membrane can be installed over the entire subfloor as an uncoupling, crack isolating and waterproofing membrane. The Prodeso Heat Cable is then installed in the areas where heat is desired. Once the Prodeso Heat Cable is installed you can begin tiling immediately, no waiting is necessary.

PRODESO HEAT MEMBRANE is a polypropylene uncoupling, crack isolation, waterproofing membrane, with rounded square shaped reliefs. These reliefs form channels specially designed to embed and hold the **PRODESO HEAT CABLE**. **PRODESO HEAT MEMBRANE** has a polypropylene thermo welded woven underneath to increase the bond between the subfloor and the membrane.

PRODESO HEAT MEMBRANE ADVANTAGES



UNCOUPLING

Uncoupling: PRODESO HEAT MEMBRANE compensates for the longitudinal movement between the subfloor and the tile preventing breakage and making it possible to install underfloor electric heating even on problematic substrates such as wood and cracked substrates.



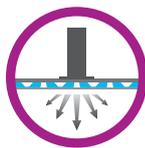
VAPOUR MANAGEMENT

Vapor Management: PRODESO HEAT MEMBRANE unique and patented design allows for air pockets to form between the subfloor and the membrane itself. Excess moisture from the substrate will find its way to these air pockets and create a vapor cycle. This vapor cycle will balance the vapor content of the substrate, protecting the tile from potential damage and making it possible to install underfloor electric heating even on substrates that are not perfectly cured or are moisture sensitive such as wood, concrete, and gypsum based subfloors.



WATERPROOFING

Waterproofing: PRODESO HEAT MEMBRANE is a Polypropylene membrane and as such is naturally waterproof. For indoor installations in areas that are prone to water damage such as bathrooms and kitchens, the perimeter, corners, and seams of the **PRODESO HEAT MEMBRANE** need to be waterproofed utilizing **PROBAND 150/250** waterproofing foil tape (double-sided Polypropylene foil tape) and **Unmodified Thin-Set ANSI A118.1**

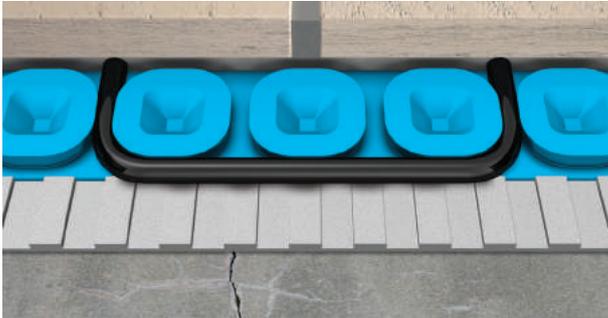


LOAD DISTRIBUTION

Load distribution: PRODESO HEAT MEMBRANE unique and patented designs allows loads to be evenly distributed from the tile covering to the subfloor. Each rounded square relief has a central cavity shaped like an inverted pyramid. When filled with thin-set this inverted pyramid becomes an incompressible structure. These cavities act like pillars in a building support structure, evenly distributing and transferring the load from the tile floor to the subfloor below.

Electrical Floor Heating cables need to be installed by qualified and licensed installers in accordance with this manual PLUS local and national codes. ALL electrical connection need to be executed by a licensed electrician in accordance with local and national codes.

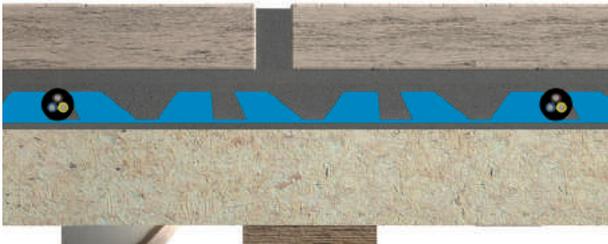
The benefit of underfloor heating systems have been known for many years but the PRODESO HEAT SYSTEM has additional advantages:



- **PRODESO HEAT MEMBRANE** uncoupling properties make it possible to install under-tile electrical heat over plywood and other problematic subfloors.

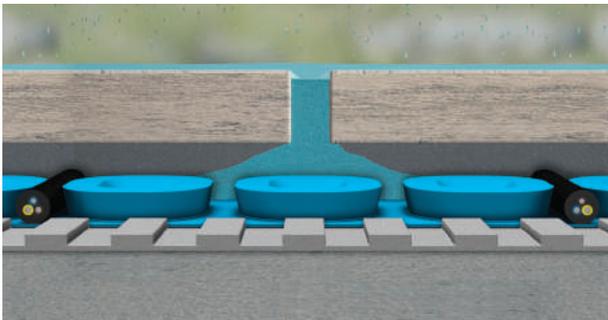
- Thanks to the thinness of the **PRODESO HEAT MEMBRANE** (5.5 mm) it's the ideal choice when the new tile floor meets an existing surface and height difference is a concern.

- The lightweight system assembly makes it the perfect choice when the load limits of the subfloor are a concern.



- Low thermal inertia guarantees the heat is rapidly and efficiently transferred to the tiles above for immediate warmth and comfort.

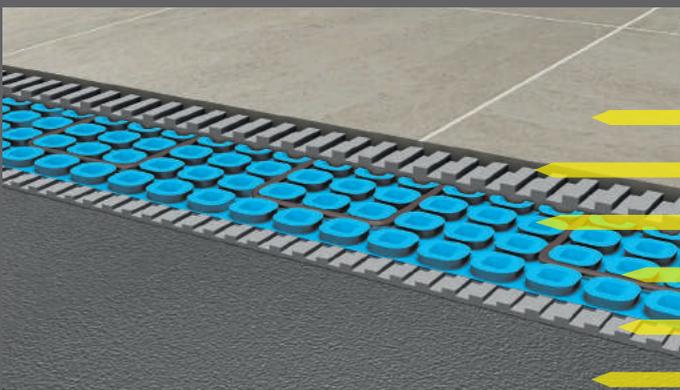
- Being able to customize the exact area where to install the heating cable optimizes your comfort while minimizing the overall cost.



- Drastic savings in installation time, effort and cost, combined with the comfort of electric radiant heat makes the **PRODESO HEAT SYSTEM** the obvious choice for any new or remodeling project.

- **PRODESO HEAT SYSTEM** is durable and requires NO maintenance.

PRODESO HEAT SYSTEM SECTION



- 1 Tiles (Ceramic or natural stone)
- 2 Adhesive
- 3 PRODESO HEAT MEMBRANE
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- 5 Adhesive
- 6 Subfloor

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Wood subfloor considerations and installation details

Wood and its derivatives are commonly used in today's construction. All wood materials expand, contract, bend, and flex with changes in temperature, humidity, and load in the surrounding environment. These deformations can be seasonal or due to an isolated incident such as a plumbing accident, and will naturally occur over the life of a building structure.



PRODESO HEAT SYSTEM properties provide a solution for these challenges.

UNCOUPLING



PRODESO HEAT MEMBRANE will compensate for relative longitudinal movement between the Sub-floor and the tiles eliminating the major cause of tile cracking and delamination making it possible to install underfloor electric heating on wood substrates. **PRODESO HEAT MEMBRANE** eliminates the need for the second layer of Plywood with the exception of Natural Stone tile installations.

VAPOR MANAGEMENT



Wood is particular sensitive to relative moisture changes in their environment. **PRODESO HEAT MEMBRANE** unique and patented design allows for air pockets to form between the subfloor and the membrane itself. These air pockets allow for a vapor cycle to form and balance the vapor content of the subfloor assembly, increasing the mechanical and structural property of the wood subfloor.

WATERPROOFING



Wood structures are particularly sensitive to variation in humidity in their environment. **PRODESO HEAT MEMBRANE** is made of polypropylene, a completely waterproof substance, that will protect the wood subfloor from water damages to ensure a long lasting installation. For areas prone to flood please follow the waterproofing instructions on page 17.

LOAD DISTRIBUTION

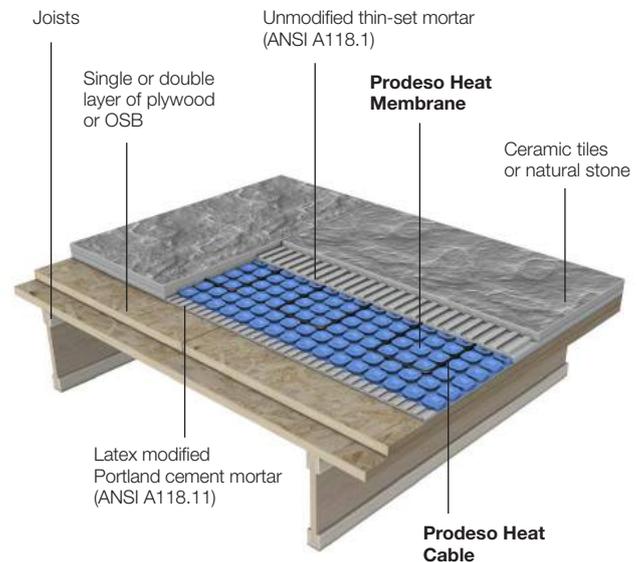


PRODESO HEAT MEMBRANE unique and patented designs allows loads to be evenly distributed from the tile covering to the subfloor. Each rounded square relief has a central cavity shaped like an inverted pyramid. When filled with thin-set this inverted pyramid becomes an incompressible structure. These cavities act like pillars in a building support structure, evenly distributing and transferring the load from the tile floor to the subfloor below.

PRODESO HEAT MEMBRANE

The uncoupling membrane is laid directly over the entire surface intended for tile installation. The heating cable is then installed in the areas where heat is desired using the channels formed between the rounded square reliefs. It's NOT necessary to use self-leveling cement to cover and protect the wire before starting tile installation. This results in significant savings of material, time, cost and overall weight. Tile installation can start immediately after installing the heated cable.

WOOD STRUCTURE



WOOD SUBFLOORS (OSB OR PLYWOOD)				
SPACING (cm) Joist/i-beam /floor trusses	OsB plywood layers	Tile type	Min. Tile size (cm)	Minimum subfloor thickness (cm)
40.6 OC OSB OR PLYWOOD	Single	Ceramic/Porcelain	5 x 5	1.51 1.58 Nominal with 0.32 gap
48.7 OC OSB OR PLYWOOD	Single	Ceramic/Porcelain	5 x 5	1.82 or 1.9 Nominal with 0.32 gap
60.9 OC OSB OR PLYWOOD	Single	Ceramic/Porcelain	5 x 5	1.82 or 1.9 Nominal with 0.32 gap
40.6 OC OSB OR PLYWOOD	Double	Natural Stone	5 x 5	1.51 1.58 Nominal with 0.32 gap
48.7 OC OSB OR PLYWOOD	Double	Natural Stone	5 x 5	1.82 or 1.9 Nominal with 0.32 gap
60.9 OC OSB OR PLYWOOD	Double	Natural Stone	5 x 5	1.82 or 1.9 Nominal with 0.32 gap

- Minimum thickness for additional underlayment 10mm.
- Underlayment: APA C-C PLUGGED EXTERIOR
- Additional Underlayment is required for Joist/I-Beam /Floor Trusses spaced more than 488 mm for any type of tile.
- Additional Underlayment is required for all types of natural stone regardless of Joist/I beam/Floor trusses spacing.
- Underlayment 13 mm or thinner: Fasteners Spacing 102 mm around the perimeter and 152 mm in the field. •
- Underlayment thicker than 13 mm: Fasteners spacing 152 mm around the perimeter and 152 mm in the field.
- Seams, perimeters, and corners need to be sealed with Pro Band 150/250 when water migration is expected.
- Seams, perimeters, and corners need to be sealed with Pro Band 150/250 when a waterproof installation is necessary.

WOOD SUBFLOORS (OSB OR PLYWOOD) SETTING AND GROUTING MATERIALS	
Adhesive to fix PRODESIO HEAT MEMBRANE to subfloor	Latex Modified Portland Cement Mortar (ANSI A118.11)
Adhesive to fix Tiles to PRODESIO HEAT MEMBRANE	Unmodified thin-set mortar – (ANSI A118.1)
GROUT	Polymer-modified cement grout (ANSI A118.3 A118.6, A118.7, A118.8)

WOOD SUBFLOORS (OSB OR PLYWOOD) ANSI INSTALLATION SPECIFICATION	
TILE FIXING	ANSI (108.5)
GROUTING	ANSI (A108.6 A108.9 A108.10)

EXPANSION JOINTS:

PRODESIO HEAT does NOT eliminate the need for movement joints, including perimeter joints, within the tiled surface. Movement joints must be installed in accordance with industry standards and norms TCNA EJ171, and TTMAC 301 MJ.

SUBSTRATE PREPARATION

Wood panels need to be properly fastened and secured to framing structure.

Wood panels need to be clean of dust, residue, wax, oil, and grease.

Wood panels need to be levelled before the installation of **PRODESIO HEAT MEMBRANE**.

Remove all exposed nails, screws, fasteners, and debris.

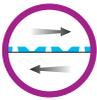
Cement based subfloor considerations and installation details

Thermal expansion, shrinkage, and any other relative movement between a cement based screed and the tiles assembly above will subject the tile assembly to stress. This stress can ultimately cause cracking and delamination. Tile installers cannot always be certain of the curing stage of the cement based subfloor in addition cracks may be already present or develop over time.



PRODESO HEAT SYSTEM properties below provide a solution for these challenges.

UNCOUPLING



The unique and patented design of **PRODESO HEAT MEMBRANE** allows for uncoupling and crack isolation to take place in the tile assembly while embedding the heating cable for radiant floor heating. **PRODESO HEAT MEMBRANE** compensates for the longitudinal movement between the subfloor and the tile preventing breakage and making it possible to install underfloor electric heating even on cracked or not completely cured cement screeds.

VAPOR MANAGEMENT



PRODESO HEAT MEMBRANE design allows for air pockets to be formed between the subfloor and the membrane itself. Excess moisture from the substrate will find its way to these pockets and create a vapor cycle. This vapor cycle will balance the vapor content of the substrate protecting the tile surface and the substrate from undesired damages and allows for tile installation immediately after the slabs is ready for foot traffic.

WATERPROOFING



PRODESO HEAT MEMBRANE is made of polypropylene, a completely waterproof substance, that will protect the cement subfloor from water damages to ensure a long lasting installation. waterproof properties has 2 major functions.

1. Slow-down the curing of the fresh cement slab preventing cracking and curling.
2. Prevent water and other substances from reaching the cement subfloor and the possible damages to the screed and the tile floor.

For areas prone to flood please follow the waterproofing instructions on page 17.

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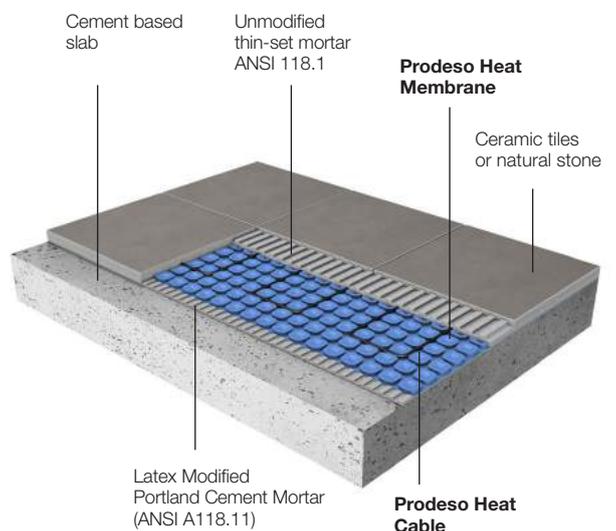


PRODESO HEAT MEMBRANE unique and patented designs allows loads to be evenly distributed from the tile covering to the subfloor. Each rounded square relief has a central cavity shaped like an inverted pyramid. When filled with thin-set this inverted pyramid becomes an incompressible structure. These cavities act like pillars in a building support structure, evenly distributing and transferring the load from the tile floor to the subfloor below.

PRODESO HEAT SYSTEM is the ideal solution to install ceramic and natural stone tiles on cement slabs even not perfectly cured or cracked.

PRODESO HEAT MEMBRANE uncoupling membrane is laid directly over the entire surface intended for tile installation, the heating cable is then installed in the areas where heat is desired using the channels formed between the rounded square reliefs. It's NOT necessary to use self-leveling cement based to cover/protect the wire before starting tile installation. This results in saving material/weight/time/cost. Tile installation can start immediately after installing the heated cable.

CEMENT BASED SLAB



Installing tiles on a cement based subfloor presents many challenges. The following table illustrates the difference in thermal expansion between a cement subfloor and the tiles surface...

TILE SURFACE MATERIAL	THERMAL EXPANSION RATIO
Ceramic	6 times the thermal expansion of cement
Marble	7 times the thermal expansion of cement
Granite	9 times the thermal expansion of cement

CEMENT SUBFLOOR SETTING AND GROUTING MATERIALS	
Adhesive to fix PRODESIO HEAT MEMBRANE to subfloor	Latex Modified Portland Cement Mortar (ANSI A118.11)
Adhesive to fix Tiles to PRODESIO HEAT MEMBRANE	Unmodified thin-set mortar - (ANSI A118.1)
GROUT	Polymer-modified cement grout (ANSI A118.3 A118.6, A118.7, A118.8)

CEMENT SUBFLOOR ANSI INSTALLATION SPECIFICATION	
TILE FIXING	ANSI (108.5)
GROUTING	ANSI (A108.6 A108.9 A108.10)

- Cement Based Substrate must be compact and structurally sound
- Cracks and Fissure in the substrate need to present only longitudinal movement (NO VERTICAL MOVEMENT)
- Debris, dust, wax, grease, and oil residue must be removed or abraded/scored to offer better bond to the thin set.
- Minimum Tile Size 50mm x 50mm
- Seams, perimeters, and corners need to be sealed with Pro Band 150/250 when water migration is expected.
- Seams, perimeters, and corners need to be sealed with Pro Band 150/250 when a waterproof installation is necessary.

EXPANSION JOINTS:

PRODESIO-HEAT does NOT eliminate the need for movement joints, including perimeter joints, within the tiled surface. Movement joints must be installed in accordance with industry standards and norms TCNA EJ171, and TTMAC 301 MJ.

Gypsum based underlayment

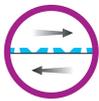
PRODESO HEAT SYSTEM installed over Gypsum based underlayment

Gypsum based underlayment or more properly anhydrite based substrate present many advantages, but also a few challenges to the tile installer. CaSO₄ calcium sulfate is the component of anhydrite based underlayment and when in contact with water could lead to the formation of ettringite (hydrate calcium aluminium sulfate), which could cause an increase in volume. Anhydrite based underlayment need to be waterproofed if any exposure to water or moisture throughout the life of the installation is possible. Please follow underlayment manufacture direction for proper preparation and primer application before fixing **PRODESO HEAT MEMBRANE** to the anhydrite based underlayment. Anhydrite based underlayment need to be applied to a structural subfloor (Cement based subfloor or wood based subfloor. For subfloor preparation see page 9-10).



PRODESO HEAT SYSTEM properties below provide a solution for these challenges.

UNCOUPLING



The unique and patented design of **PRODESO HEAT MEMBRANE** allows for uncoupling and crack isolation to take place in the tile assembly while embedding the heating cable for radiant floor heating. **PRODESO HEAT MEMBRANE** compensates for the longitudinal movement between the subfloor and the tile preventing cracking and delamination even on Gypsum based subfloor.

VAPOR MANAGEMENT



PRODESO HEAT MEMBRANE unique and patented design allows for air pockets to be formed between the subfloor and the membrane itself. Excess moisture from the substrate will find its way to these pockets and create a vapor cycle. This vapor cycle will balance the vapor content of the substrate protecting the tile surface and the substrate from undesired damages.

WATERPROOFING



Gypsum based subfloor are particularly sensitive to variation in humidity in their environment. It is particularly important to prevent reintroducing moisture into a gypsum based substrate. **PRODESO HEAT MEMBRANE** waterproof properties prevents water and other substances from reaching the anhydrite based underlayment and the possible damages to the tile floor.

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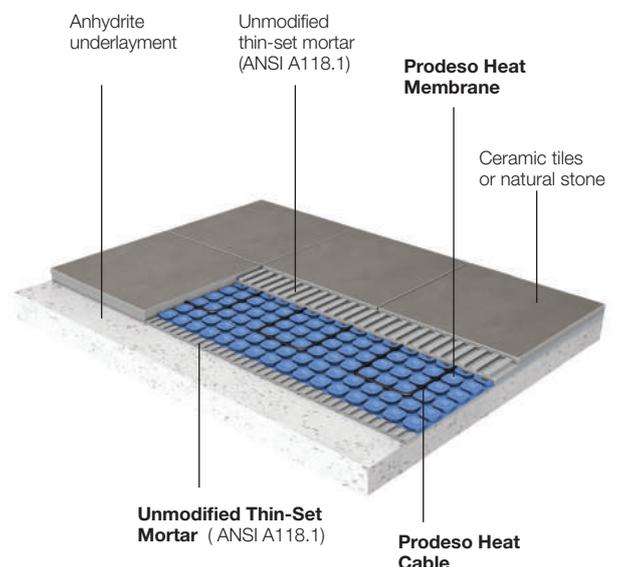


PRODESO HEAT MEMBRANE unique designs allows to evenly distribute load from the floor to the subfloor. Each rounded square relief has a central cavity shaped like an inverted pyramid. When filled with thin set this inverted pyramid become an incompressible structure that like pillars will evenly distribute and transfer the load from the tile floor to the subfloor.

PRODESO HEAT SYSTEM is the ideal solution to install ceramic and natural stone tiles on anhydrite based underlayment.

PRODESO HEAT MEMBRANE uncoupling membrane is laid directly over the entire surface intended for tile installation, the heating cable is then installed in the areas where heat is desired using the channels formed between the rounded square reliefs. It's NOT necessary to use self-leveling cement based to cover/protect the wire before starting tile installation. This results in saving material/weight/time/cost. Tile installation can start immediately after installing the heated cable.

GYPSUM BASED UNDERLAYMENT



ANHYDRITE BASED UNDERLAYMENT SETTING AND GROUTING MATERIALS	
Adhesive to fix PRODESIO HEAT MEMBRANE to subfloor	Unmodified thin-set mortar - (ANSI A118.1)
Adhesive to fix Tiles to PRODESIO HEAT MEMBRANE	Unmodified thin-set mortar - (ANSI A118.1)
GROUT	Polymer-modified cement grout (ANSI A118.3 A118.6, A118.7, A118.8)

ANHYDRITE BASED UNDERLAYMENT ANSI INSTALLATION SPECIFICATION	
TILE FIXING	ANSI (108.5)
GROUTING	ANSI (A108.6 A108.9 A108.10)

Anhydrite based underlayment must be installed over a compact and structurally sound subfloor

- Gypsum underlayment maximum relative humidity must be 2% or less.
- Follow gypsum manufacturer installation instructions, requirements and warnings.
- Debris dust and oil residue must be removed or abraded/scored to offer better bond to the thin set.
- Minimum Tile Size 50mm x 50mm
- Seams, perimeters, and corners need to be sealed with Pro Band 150/250 when water migration is expected.
- Seams, perimeters, and corners need to be sealed with Pro Band 150/250 when a waterproof installation is necessary.
- PRODESIO-HEAT does NOT eliminate the need for movement joints, including perimeter joints, within the tiled surface. Movement joints must be installed in accordance with industry standards and norms TCNA EJ171, and TTMAC 301 MJ.

Existing vinyl floor

Indoor tile floor installation of ceramic or natural stone over an existing structurally sound vinyl floor

Vinyl floor tiles are a non-supporting layer over a supporting subfloor typically wood or cement. Supporting subfloor preparation and consideration are identical as per application without the Vinyl floor.



ADDITIONAL CONSIDERATIONS INSTALLATION OVER EXISTING VINYL FLOOR:

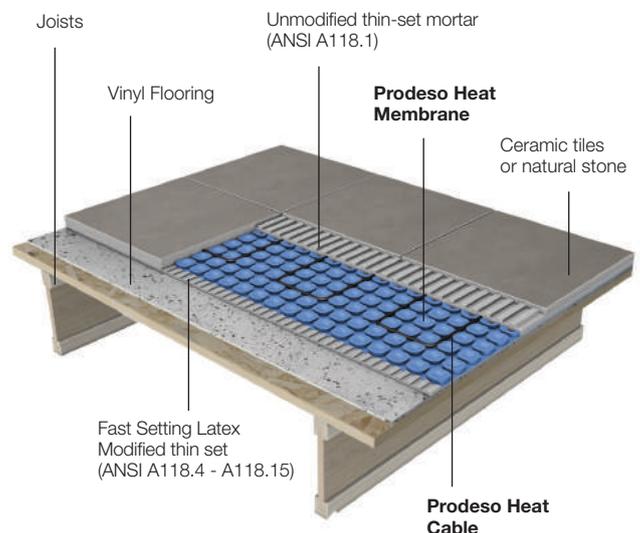
- Vinyl floor needs to be secured and flat over the entire surface.
- Single vinyl floor ONLY (Multiple layer of vinyl floor need to be removed)
- If foam or any cushioning mat had previously been installed, the vinyl floor needs to be removed entirely and **PRODESO HEAT MEMBRANE** will be fixed directly to the subfloor.
- Vinyl floor need to be clean of debris, dust, oil, grease, and wax substance.
- Outside perimeter secured vinyl flooring is NOT acceptable for direct installation of **PRODESO HEAT MEMBRANE** as it may cause undesired stress to the tile assembly.
- To adhere **PRODESO HEAT MEMBRANE** to existing vinyl floor please use Fast-setting latex modified thin set. ANSI A118.4 or A118.15
- **PRODESO-HEAT** does NOT eliminate the need for movement joints, including perimeter joints, within the tiled surface. Movement joints must be installed in accordance with industry standards and norms TCNA EJ171, and TTMAC 301 MJ.

OVER EXISTING VINYL FLOOR SETTING AND GROUTING MATERIALS	
Adhesive to fix PRODESO HEAT MEMBRANE to subfloor	Fast Setting Latex Modified thin set (ANSI A118.4 - A118.15)
Adhesive to fix Tiles to PRODESO HEAT MEMBRANE	Unmodified thin-set mortar (ANSI A118.1)
GROUT	Polymer-modified cement grout (ANSI A118.3 A118.6, A118.7, A118.8)

OVER EXISTING VINYL FLOOR ANSI INSTALLATION SPECIFICATION	
TILE FIXING	ANSI (108.5)
GROUTING	ANSI (A108.6 A108.9 A108.10)

- Minimum Tile Size 50mm x 50mm
- Seams, perimeters, and corners need to be sealed with Pro Band 150/250 when water migration is expected.
- Seams, perimeters, and corners need to be sealed with Pro Band 150/250 when a waterproof installation is necessary.
- PRODESO-HEAT does NOT eliminate the need for movement joints, including perimeter joints, within the tiled surface. Movement joints must be installed in accordance with industry standards and norms AS3958.1 & 2, TCNA EJ171 and TTMAC 301 MJ.

EXISTING VINYL FLOOR



Today's construction methods, which include the use of lightweight and moisture-sensitive materials, such as plywood, OSB, and anhydrite-based screed, have made installation of hard surface coverings, such as ceramic (gres) and natural stone subject to damage. If wood or cement-based screed substrates are exposed to moisture, the tile layer above can be damaged as a result.



Typical areas that require waterproofing, as they are often in direct contact with water, include bath tub surrounds and showers. There are also environments, where dishwashers, freezers, washing machines and similar are installed, that could occasionally come in contact with significant amounts of water as a result of breakage. The waterproofing of these environments could prevent the detachment or cracking of the tile coverings in the event of water loss.

After laying **PRODESO HEAT MEMBRANE** it is possible to obtain a good waterproofing under tile, with a minimal cost increase. This purpose can be achieved by simply gluing with **PROBAND KOLL**, a sealant with high workability, the waterproof polyethylene tape **PROBAND 150**, coated on both sides with a non woven polypropylene sheet, along the joints between the adjacent sheets, along the floor-wall joints and where the membrane was cut to ensure the laying of the floor heating cable connection (pag. 13).

Indoor ceramic and natural stone floors laid over a waterproof membrane

Areas of use

- > On any structurally sound substrate where waterproofing is desired

Limitations

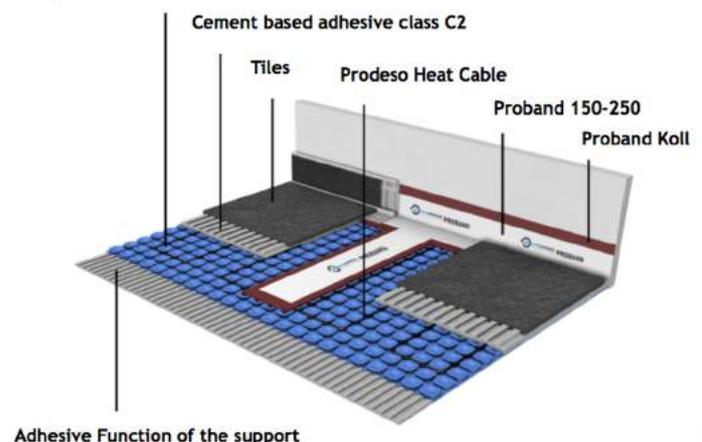
- > Minimum 50 x 50 mm tile size
- > Outdoor as waterproof system

Other considerations

- > Sealing between adjacent sheets of Prodeso Heat Membrane and along the floor-wall joints with Proband 150 and glued with Proband Koll, can be useful in environments where freezers, washing machines and similar are installed, which could lose large quantities of water and then damage the moisture-sensitive substrates.
- > In some cases, walls on which to glue Proband 150 with Proband Koll, are not compatible with cement-based adhesives; in this case, to obtain waterproofing, it is necessary to glue Proband 150 with Proband FIX.
- > In some cases it is necessary to connect Prodeso Heat membrane to a Proshower system. So, after laying Proshower Base L, it is possible to connect it with Prodeso Heat Membrane using the Profoil section, glued with Proband Koll.

WATERPROOFING

Prodeso Heat Membrane



Movement/Expansion joints

Problems

Every time you lay tiles on a support, you bind together materials (tiles, support and adhesive) that have different physical characteristics such as porosity, specific gravity and coefficient thermal expansion. These different materials expand and contract, due to changes of temperature, humidity variation and occasional or permanent loads, with different speeds and intensities. Resulting in tension inside and on the surface of the materials. Also, the presence of structural elements such as perimeter walls, columns and steps reduce these movements causing tension to increase inside them. Using appropriate joints in the tile - glue - screed system, allows you to neutralize movements mentioned above to avoid tiles cracking and detachment. Consequently, we can easily understand that expansion joints are necessary to prevent damage to floors.



An expansion /movement joint is the part of the assembly designed to absorb the stress on the assembly by allowing movement. PRODESO HEAT MEMBRANE does not eliminate the need for expansion / movement joints, including perimeter joints, within the tiled surface. Movement joints must be installed in accordance with industry standards and norms AS3958.1 & 2, TCNA EJ171, and TTMAC 301 MJ.

Solutions

Expansion joints must be provided:

1. on tiled surfaces
2. along thresholds
3. around perimeters
4. near any structural element

The purpose of these joints is to neutralize tensions that could damage the tile - adhesive - screed system. Progress Profiles has a wide range of prefabricated expansion joints, easy to install, without maintenance, that protect the edges of the tile and reduce the propagation of acoustic waves. These joints, made of different materials such as stainless steel, brass, aluminum and non-toxic vinyl resin, are available in different heights and colours to meet all jobsite requests.

Considerations

The current trend in the ceramic world is to offer increasingly larger sizes, even in low thickness, rectified tiles to be laid with small joints, also with dark colours, therefore more sensitive to changes in temperature. Following this trend, Progress Profiles recommends to lay joints according with the intervals indicated below.

- Laying tiles without underfloor heating up to 6 linear meters in both directions.
- Laying tiles with underfloor heating or in case of direct sunlight up to 5 linear meters in both directions.
- Place joints at transition to floor and wall.
- Place joints along the thresholds.
- Place joints at transition to floor and structural elements such as columns and steps.
- Fields should be as square as possible. The ratio between the length and width must not be greater than 2 and less than 1.

Installation

Preparation

- Before laying **PRODESO HEAT MEMBRANE** make sure that the substrate is load bearing, compact, flat and free of oils, greases and waxes which could prevent proper adhesion.
- Before laying **PRODESO HEAT MEMBRANE** make sure that the substrate is in accordance with local and national building codes and norms.
- In case of a wood based substrate check that the panels are properly secured.
- In the case of vinyl flooring, make sure that the underlying structure is sound and suitable for the intended use and that the vinyl flooring is securely attached.
- In case of anhydrite based underlayment verify that the moisture content is less than 2%.

Mortar Required for fixing **PRODESO HEAT MEMBRANE** to substrate.
22.70Kg for 9.3 m2 using 6mm x 10mm square or U-notched trowel

Laying the membrane



Apply a compatible adhesive to the substrate using a suitable trowel.



Apply **PRODESO HEAT MEMBRANE**, previously cut, on the adhesive.



Press the membrane evenly with a roller or a plastic flat trowel.



Check coverage of **PRODESO HEAT MEMBRANE**; in case of partial coverage, increase the amount of adhesive or its fluidity.



Lay the next sheet of **PRODESO HEAT MEMBRANE** making sure to align it with the previous one, without overlapping. Align the square reliefs to facilitate the installation of the heating cables.

Warning:

If heavy mechanical loads are foreseen (frequent passages), it is recommended to protect the laid membrane with wooden planks to ensure proper bonding.

Heating cables

Warnings

Before installation, the user and/or installer must read, understand and adhere strictly to the instructions below.

- Any deviation from the instruction below will completely void the manufacturer warranty and liability.
- The instruction below are intended to avoid personal injury and/or property damage.
- The Heating Cable must be installed by qualified personnel and all electrical connections must be performed by a qualified electrician according to local and national building codes and norms.
- A dedicated circuit must be used to power Electric Heating Cable. Dedicated circuit breaker need to be clearly identified and labeled on the circuit breaker panel.
- The heating cables must be grounded in accordance with local and national electric codes.
- Any modification or tampering of the heating cable will completely void the manufacturer warranty and liability.
- Do not energize the cable when on the spool; this could damage the cable and cause a fire.
- The hot section of the heating cable must be installed entirely below the flooring.
- Use heating cables only for electric underfloor tile heating.
- Compliance with following standard is mandatory UL 1673, NFPA 70 and ANSI/IEEE 515.1-2005 • Thermostat must be compliant with following standard UL 873, NFPA 70, AS/NZS 3008.1.1:2009
- Lay the cables with a spacing not less than minimum spacing suggested and recommended by the cable manufacturer and in any case not to exceed 12watt/0.1 square meter. Lower spacing may cause a fire or damage the flooring.
- NEVER use a cable designed for 208V/220V/240V with 110V/120V power.
- Never cut/shorten/modify the heating cable; it will change the electrical characteristics of the cables and possibly cause overheating and a fire.
- Avoid bending the heating cable with a radius of curvature less than 3.5 times its outside diameter otherwise you may damage the insulation and integrity of the wire.
- Do not lay heating cables under walls.
- The minimum application temperature of the cable is 5 ° C.

PRODESO HEAT CABLE tests

For other heating cable manufacturers please follow each specific manufacture testing procedures.

Before installing the electric heating cable you need to perform a series of tests, to ensure that the heating cable is working and will performed as specified by the manufacturer. These tests must be repeated after installation of the cable and again after installation of the flooring. This is to ensure that the electrical heating cables has not been damaged during the installation.

To run the tests you need to have a multimeter and a megohmmeter.

Test 1: Electric heating cable resistance measurement

To measure the electrical resistance of the heating cable, you must connect a multimeter to its two power leads and set it for resistance measurement. If the measured resistance in ohms varies significantly (over 10%) from the resistance value printed on the spool, it may mean that:

- a) the cable is damaged
- b) the measuring instrument is not set or set incorrectly

The value of resistance in ohms measured must be logged in the "Test Log "(page 23).

Test 2: Continuity between the ground cable and the two conductors

The two power leads are separated from the ground cable by an insulator that prevents any contact with them. To verify that there is no contact between the ground cable and the two conductors, you must perform a continuity test; using a multimeter set to the function for continuity, connect the ground cable to a conductor. The measured value must be recorded in the "Test Log "(page 22).

Test 3: Insulation resistance Measurement between power leads and ground cable

This test is designed to detect very small "holes" in the insulating layer that separates the power leads from the ground cable. These small holes are often not detected during the continuity test because they are not necessarily short circuits between the cable conductors and ground cable. Although these holes are very small, they may cause current leakage to ground, which detected by the ground fault circuit interrupter, located in the thermostat or panel mount, thus disabling the floor heating system. To measure the insulation resistance between the power leads and the ground cable, you must connect a megohmmeter, calibrated to 1000 V, to a cable conductor and ground cable. If there is no current leakage, insulation resistance between the power leads and the ground cable must be equal to or greater than 1 Gigohms (1 Gigohms = 1 G ohms = 1000 M ohms = 1000 Mega ohms). The measured value must be logged in the "Test Log" (page 23).

Floor temperature sensor testing

Connect a multimeter, calibrated to 10 K Ω + / - 2 set for current reading, to the two conductors of the floor temperature sensor and measure its resistance at room temperature. The resistance of the floor temperature sensor varies depending on the ambient temperature in an inversely proportional way or the lower the temperature, the greater the resistance of the floor temperature sensor. Record the value of the testing obtained in the " Test Log ", making sure is in compliance with the values indicated in this manual (page 23).



Installation

Laying the heating cables

Warnings: Do not run the heating cables under walls, cabinets, furniture, and appliances.



Before removing the cable from the spool, you need to conduct the first set of tests required and write the values obtained in the "Test Log" (page 23).



Insert the cold heating cable and floor temperature sensors inside a corrugated pipe from the base of the wall to the thermostat electrical box.



Insert the heating cable in the membrane using minimum spacing suggested by cable manufacturer.
Two reliefs spacing will result in a heating cable spacing of 63.5 mm
Three reliefs spacing will result in a heating cable spacing of 95 mm
Smaller spacing would cause overheating, which may damage the assembly structure.



Be careful not to damage the cables, particularly during installation.



Install the floor temperature sensors exactly in the center between two cables and at a distance of at least 60cm from the wall. Do not cross sensor cables with heating cables. It is recommended to install a second temperature sensor as a backup in case the primary fails throughout the life of the installation. Record the exact position of the sensors.



After installation of heating cables, repeat all the tests and record the values obtained in the "Test Log" (page 23).



NEVER exceed 15 watts per 0.1 square meter



NEVER cross heating cables

Warnings:

- During installation of the heating cables, leave space for the placement of the floor temperature sensors.
- The maximum length of a straight line run for each individual path is 3m.
- The cable must be installed at a minimum distance of 20cm from other heat sources (fireplaces) and 15cm from waist drains.

Waterproofing

The following steps are required only in case waterproofing is necessary:

Warning: Be careful not to damage the heating cable with the notched trowel while applying the adhesive to the membrane.



Apply **Unmodified Thin-Set ANSI A118.1** along the joints between two adjacent sheets with the flat side of the trowel, 100mm each side of the joint), making sure to fill the cavities of the membrane, leaving a thin layer of adhesive on top of the reliefs.



Fix **PROBAND 150/250** tape to **Unmodified Thin-Set ANSI A118.1** following the joint. Using a flat trowel apply strong and even pressure along **PROBAND 150/250** to ensure sealing. Smooth over to avoiding and eliminate bends and folds.



Apply the **Unmodified Thin-Set ANSI A118.1** to the corner (wall and floor) with a 4 mm x 4 mm notched trowel to a width of about 100mm.



Fix **PROBAND 150/250** tape to **Unmodified Thin-Set ANSI A118.1** following the perimeter joint. Inside and outside corners can be cut from **PROBAND 150/250** tape, but pre-cut corners (**PRBI** and **PRBE**) are also available on page 20. Using a flat trowel apply strong and even pressure along **PROBAND 150/250** to ensure sealing.



Apply **Unmodified Thin-Set ANSI A118.1** along the perimeter floor with the flat side of the trowel, to a width of about 100mm. Particular attention must be paid to fill the cavities of the Prodeso Heat membrane and leaving a thin layer of adhesive on top of the reliefs. Apply the **Unmodified Thin-Set ANSI A118.1** to the perimeter wall with a 4mm x 4mm notched trowel to a width of about 100mm.



Fix **PROBAND 150/250** tape to **Unmodified Thin-Set ANSI A118.1** following the perimeter joint.



Using a flat trowel apply strong and even pressure along **PROBAND 150/250** to ensure sealing. Smooth over to avoiding and eliminate bends and folds.

Warning:

When using **PROBAND 150/250**, **PROBAND FIX** is to be used in the place of **Unmodified Thin-Set ANSI A118.1** for non-cement based substrates.

Installation

Laying the tiles

Warning: Be careful while applying the adhesive on the membrane not to damage the heating cable with the flat/notched trowel.

Mortar Required for fixing Tile to **PRODESO HEAT MEMBRANE.**

22.70Kg for 3.7 m² / 4.6 m² using 6 mm x 10 mm square or U-Notched trowel 22.70Kg for 2.8 m²/ 3.7m² using ." X ." 12.5mm x 12.5mm square or U-Notched trowel.



Tiles can be immediately laid after the installation of the heating cables is completed. Using the flat side of the trowel fill with Unmodified thin set mortar (ANSI A118.1) the cavities of the membrane. Apply additional of the same mortar with a notched trowel over according to the tile size.



Carefully lay the tiles and press them on the layer of adhesive. If a layer of skin has formed, remove it and apply it again.



Occasionally remove and check some tiles, to ensure full back coverage. Verify that according to building norms you have an adhesive thickness above the heating cable of at least 5 mm.

Warning:

Full back coverage may vary depending on the consistency of the adhesive, the angle of inclination of the notched trowel and the flatness of the substrate. If full back coverage is not achieved, remove the tile and apply new adhesive paying attention to the consistency of the Thin set and its application. In case of large format tiles 30cm x 30cm and larger is recommended to back butter each tile before laying them.



After laying the tiles, repeat all the tests and record the values obtained in the "Test Log" (page 23).

Products

PRODESO HEAT MEMBRANE

Is a polypropylene membrane, with rounded square shaped reliefs, that form channels specially designed to embed and hold the electric heating cable. The down facing side has a polypropylene thermo-welded woven layer to increase its bond to the subfloor.

- Flexible heating zone selection
- Cost and time saving installation
- Waterproofing
- Uncoupling
- Vapor management
- Support load distribution
- Small height increase 5.5mm

WARNING: Store in a cool and dry place avoiding direct sunlight and heat sources. Read the technical details prior to application; in the case of special applications, we recommend you consult our technical department.

PRODESO HEAT CABLE

Is an electric heating cable especially designed for Prodeso Heat Membrane.
Cable separation of 6.2cm & 9.3cm.



UNCOUPLING WATERPROOFING MEMBRANE FOR ELECTRIC HEATING - 15/5 M2

PRODESO HEAT MEMBRANE			
Article		Width. roll L x H ML	Tot. m2
PDESH 151/A	PRODESO HEAT MEMBRANE	1 m x 15 m	15
PDESH 051/A	PRODESO HEAT MEMBRANE	1 m x 5 m	5

* = Upon request



PRODESO® HEAT CABLE

Article	Cable length lm	Heated surface with a cable distance of 6,2 cm	Heated surface with a cable distance of 9,3 cm	Total Power W	Total electric resistance Ω	Current intensity I
230 Volts						
PDHCB 12	12,07 ml	0,70 m ²	1,1 m ²	150	352,67	0,65
PDHCB 17	17,66 ml	1,00 m ²	1,6 m ²	225	235,11	0,98
PDHCB 23	23,77 ml	1,40 m ²	2,2 m ²	300	176,33	1,30
PDHCB 29	29,87 ml	1,80 m ²	2,7 m ²	375	141,07	1,63
PDHCB 35	35,97 ml	2,20 m ²	3,3 m ²	450	117,56	1,96
PDHCB 41	41,56 ml	2,50 m ²	3,8 m ²	525	100,76	2,28
PDHCB 47	47,67 ml	2,90 m ²	4,4 m ²	600	88,17	2,61
PDHCB 53	53,77 ml	3,30 m ²	5,0 m ²	675	78,37	2,93
PDHCB 59	59,87 ml	3,70 m ²	5,5 m ²	750	70,53	3,26
PDHCB 71	71,57 ml	4,40 m ²	6,6 m ²	900	58,78	3,91
PDHCB 83	83,77 ml	5,10 m ²	7,7 m ²	1050	50,38	4,57
PDHCB 95	95,47 ml	5,90 m ²	8,8 m ²	1200	44,08	5,22
PDHCB 107	107,67 ml	6,60 m ²	10,0 m ²	1350	39,19	5,87
PDHCB 119	119,37 ml	7,40 m ²	11,1 m ²	1500	35,27	6,52
PDHCB 143	143,27 ml	8,80 m ²	13,3 m ²	1800	29,39	7,83
PDHCB 179	179,37 ml	11,1 m ²	16,6 m ²	2250	23,51	9,78

PRODESO HEAT THERMOSTAT KIT

Consists of a programmable digital thermostat, recessed box, corrugated tube, metal cap for temperature sensor and two floor temperature sensors.

PRODESO HEAT THERMOSTAT KIT

Article	
PDHTSK 230V	PRODESO HEAT THERMOSTAT KIT INCLUDING ACCSSORIES



Products

PROBAND 150/250 ROLLS IN HDPE E PP

PROBAND 150/250 is a waterproof polyethylene tape with a non woven fleece sheet on both sides, which ensures adhesion.

AREA OF USE

• Use

Construction of perimeter joints and between adjacent sheets of

PRODESO HEAT SYSTEM.

• Don't use

On bituminous coverings, for waterproofing walking and exposed surfaces, on inverted roof insulation made of insulating panels or lightened screeds. With adhesives containing solvents.

WARNING

Store in a cool and dry place avoiding direct sunlight and heat sources. Read the technical details prior to application; in the case of special applications, we recommend you consult our technical department. Interior and exterior preformed polyethylene corners with a non woven sheet on both sides, which ensures adhesion.

Rolls in HDPE and PP – thickness 0,4 mm

PROBAND 150/250		
Article	Roll width H mm x L LM	Rolls/Pack
PRBPE 1505	150 x 5	10
PRBPE 1530	150 x 30	6
PRBPE 2505	250 x 5	5
PRBPE 2530	250 x 30	3



PREFORMED CORNERS

Interior and exterior preformed polyethylene corners with a non woven sheet on both sides, which ensures adhesion.

AREA OF USE

• Use

Internal and external for PRODESO HEAT SYSTEM.

• Don't use

On bituminous coverings, for waterproofing walking and exposed surfaces, on inverted roof insulation made of insulating panels or lightened screeds. With adhesives containing solvents.

WARNING

Store in a cool and dry place avoiding direct sunlight and heat sources. Read the technical details prior to application; in the case of special applications, we recommend you consult our technical department.

Preformed corners in HDPE and PP thickness 0,40 mm

PREFORMED CORNERS		
Article	H x L mm	Pcs/Pack
PRBI (internal)	150 X 150	10
PRBE (external)	150 X 150	10



EXTERNAL CORNER



INTERNAL CORNER



PROBAND BU BUTYLE TAPE

Is a butyl adhesive tape coated on one side with a woven polypropylene sheet, alkali resistant which ensures high adhesion.

AREA OF USE

• Use

Construction of perimeter joints with the **PRODESO HEAT SYSTEM** in case of non cement based supports.

• Don't use

On dirty, loose and wet surfaces.

WARNING

Store in a cool and dry place avoiding direct sunlight and heat sources. Read the technical details prior to application; in the case of special applications, we recommend you consult our technical department.

PROBAND FIX WATERPROOF MONOCOMPONENT SEALANT

PROBAND FIX is a moisture-curing sealant for waterproof sealing with high adhesion and elasticity for PROBAND 150 / 250 tape with non cement based supports.

AREA OF USE

• Use

Balconies, terraces, bathrooms, kitchens, saunas, swimming pools and exterior surfaces.

Suggestions for installation:

Cement surfaces must be cleaned from dust oil and grease, dry and free from any rising moisture, free of loose or imperfectly fixed residues such as cement, lime and paint, which must be totally removed. In case of contact with eyes, rinse immediately with water and consult a doctor. Avoid contact with skin and keep out of reach of children.

WARNING

Store in a cool and dry place avoiding direct sunlight and heat sources. Read the technical details prior to application; in the case of special applications, we recommend you consult our technical department.

PROBAND FIX

Technical data

Appearance	White or gray thixotropic paste
Temperature range for application	+ 5 °C / + 40 °C
Temperature range	- 40 °C / + 90 °C
Curing	≈ 2 MM / 24 H
Commissioning	≈ 7 Days

Thickness: 1 mm - 1/32" in.

PROBAND BU

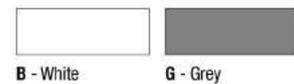
Article	H: Roll (mm)	L: Roll (LM)	Rolls/ Pack
PRBBU 7515	75	15	2



Pack of 12 cartridges

PROBAND FIX

Article	Colour	Cartridge
PRBFXB	White	290
PRBFXG	Grey	290



Warranty

Progress Profiles Prodeso Heat System 12 Year Limited Warranty

COVERAGE AND CONDITIONS: Subject to the conditions and limitations as stated hereinafter, **Progress Profiles*** warrants that **Progress Profiles – PRODESO HEAT SYSTEM (The “Product”)**** will meet all composition and performance criteria for a period of twelve (12) years from the date of purchase only when the Product is used and installed in accordance with the terms and conditions of the PRODESO HEAT Installation Handbook and industry standard guidelines that are not in conflict with the Handbook in effect at the time of installation. Efflorescence is a natural occurrence with cementations setting materials and is therefore not considered to be a defective condition and is not covered by this warranty. Tile/Grout cracking due to structural movement or failure, excessive deflection or other failure in the substrate is also not covered by this warranty. Progress Profiles will consider this warranty null and void and will refuse any claim if:

1. Unsuitable/faulty/damaged building materials were used for the any part of the overall construction and installation. It is the responsibility of owner/builders/installers to select suitable and appropriate building materials in accordance with all state and local building codes.
2. Supporting structure and/or subfloor fail.
3. ANY PRODESO HEAT Component was subjected to misuse/abuse or was improperly stored or maintained.
4. ANY Prodeso Heat Component was NOT installed in accordance with this manual and local/state codes.
5. ANY PRODESO HEAT Component was altered or modified.
6. ANY PRODESO HEAT Component was used in an application other than that for which the product was intended, including outdoor applications.
7. If the identifying tag on the heating cable has been removed.
8. If the owner fail to present a proof of purchase with cost of installation and date.
9. If owner fails to identify all installers of allegedly failed assembly.
10. If the owner fails to present an accurate and complete test log (Heating Cable and Temperature Sensor) completed by the installer at time of installation.

RESOLUTION: If the Product fails to meet this warranty Progress Profiles, at its election may choose to

- a) Reinstall or replace the failed portion of the floor covering assembly.
- b) Pay an amount not to exceed the original square foot cost of the installation of the floor covering assembly verified to be defective. Floor covering assembly is defined to include all Prodeso Heat materials (e.g. matting and heating cables), non-reusable flooring surfaces, and the appropriate setting and grouting materials. Due to conditions beyond the control of PROGRESS PROFILES, PROGRESS PROFILES cannot guarantee or warrant an exact match to the remaining/existing tile, stone, or other covering materials used in the installation. (e.g., color and shade availability, discontinuation, normal wear and tear of the tile covering). In such events, at PROGRESS PROFILES election, substantially similar materials may be substituted. This warranty does not cover scratches, dents, corrosion or discoloration caused by excessive heat, chemical cleaning products and abrasive agents. This warranty does not cover the cost of disconnection or installation.

DISCLAIMER: THE ABOVE WARRANTY CONSTITUTES PROGRESS PROFILES EXCLUSIVE WARRANTY. THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF **MERCHANTABILITY** OR FITNESS FOR A PARTICULAR PURPOSE. PROGRESS PROFILES EXCLUDES AND IN NO EVENT SHALL HAVE ANY LIABILITY FOR LOST PROFITS OR ANY OTHER INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, EXEMPLARY, OR CONSEQUENTIAL DAMAGES, ARISING OUT OF OR OTHERWISE CONNECTED TO FAILURE OF THE PRODUCTS OR FLOORING SYSTEM OF WHICH THEY ARE PART, NOR MISUSE OF THE PRODUCTS OR FLOORING SYSTEM, REGARDLESS OF ANY STRICT LIABILITY, ACTIVE OR PASSIVE NEGLIGENCE OF PROGRESS PROFILES, AND REGARDLESS OF THE LEGAL THEORY (CONTRACT OR TORT OR EXTRA CONTRACTUAL OR OTHER), NOR FROM ACTS OF WAR, TERRORISM, OVERVOLTAGE, FAULTY AND NEGLIGENT PENETRATION OF THE SYSTEM, FIRES, EXPLOSIONS, ACTS OF GOD, INTENTIONAL ACTS OF DESTRUCTION OR ANY LOSSES DUE TO STRUCTURAL FAILURE OR OTHER CAUSES UNRELATED TO THE PRODUCTS OR DELAYS, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES. THIS WARRANTY IS GIVEN IN LIEU OF ANY OTHER WARRANTY EXPRESSED OR IMPLIED. THE REMEDIES CONTAINED HEREIN ARE THE ONLY REMEDIES AVAILABLE FOR BREACH THIS WARRANTY. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS; SOME STATES AND PROVINCES DO NOT ALLOW DISCLAIMERS OR OTHER RESTRICTIONS OF IMPLIED WARRANTIES SO SOME OF THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

TRANSFERABILITY: This limited warranty extends ONLY to the original end-user (OWNER) and is not assignable or transferable, unless approved in writing by an Officer of Progress Profiles.

MODIFICATION TO WARRANTY: The above warranty may not be changed or modified except in writing, signed by an officer of PROGRESS PROFILES. This written warranty is your exclusive warranty from PROGRESS PROFILES and represents the SOLE REMEDY available to any owner of PRODESO HEAT SYSTEM. This limited warranty is effective for PROGRESS PROFILES PRODESO HEAT SYSTEM installed after August 1, 2016.

CLAIMS ON THIS LIMITED WARRANTY: Under this Limited Warranty, the Owner/End User must notify in writing of a claim Progress Profiles within 30 days of any alleged defect in the Product covered by this Limited Warranty. Original Owner/End User must provide proof of purchase including cost of installation and the contact information of all installers in order for the claim to be accepted. Progress Profiles reserves the rights to inspect verify proper installation as per this handbook and alleged failed and defective conditions.

APPROVED HEATING CABLES: PRODESO HEAT MEMBRANE can be used with other heating cables NOT manufactured by Progress Profiles. Please contact Progress Profiles at ppo@progressprofiles.com or visit our website www.progressprofiles.com for an updated list of approved heating cables and related manufacturers.

. RESTRICTIONS FOR APPROVED HEATING CABLES:

ALL approved Heating Cables MUST be installed as per cable manufacturer instructions non in conflict with the latest version of the PRODESO HEAT SYSTEM

HANDBOOK. Compliance with following standards is mandatory UL 1673, NFPA 70 and ANSI/IEEE 515.1-2005

Thermostats must be compliant with following standards UL 873, NFPA 70, AS/NZS 3008.1.1:2009

Use 6.2 cm or 9.3 cm wire spacing. Do NOT exceed under any circumstances 15watt / 0.1 square m. Maximum continuous operating wire temperature not to exceed 38.8°C. INDOOR APPLICATIONS ONLY

Progress Profiles PRODESO HEAT MEMBRANE 12 Year Limited Warranty.

WARRANTY FOR PRODESO HEAT MEMBRANE INSTALLED WITH APPROVED HEATING CABLES (NON PRODESO HEAT CABLE).

In case a owner/installer decides to install PRODESO HEAT MEMBRANE with an heating cable other that PRODESO HEAT CABLE, Progress Profiles LIMITED WARRANTY for the PRODESO HEAT SYSTEM above will apply only to the PRODESO HEAT MEMBRANE properties and performance of, UNCOUPLING, VAPOR MANAGEMENT, WATERPROOFING and LOAD DISTRIBUTION. At NO time and under NO circumstances Progress Profiles will be liable or responsible for any failures caused by the electrical heat cable itself or any components sold by another manufacturer other than Progress Profiles.

All Australia and New eland Claims shall be sent to:

Progress Profiles Oceania Pty Ltd
Attention: Warranty Claim Department
21 / 25-37 Huntingdale Rr.
Burwood, VIC 3125
AUSTRALIA

*For the purpose of this warranty **Progress Profiles** shall provide the warranty for the Product for end users located in Australia and in New Zealand. This warranty is limited to sales and use of the Product in Australia and New Zealand.

****Progress Profiles** - PRODESO HEAT SYSTEM (the “Product”) is defined to include: PRODESO HEAT MEMBRANE, PRODESO HEAT CABLE, PRODESO HEAT THERMOSTAT KIT, PROBAND, PROBAND KOLL.

