



PRODESO[®] HEAT SYSTEM

North America Installation Manual

Underfloor Electric Heating System
with uncoupling technology.



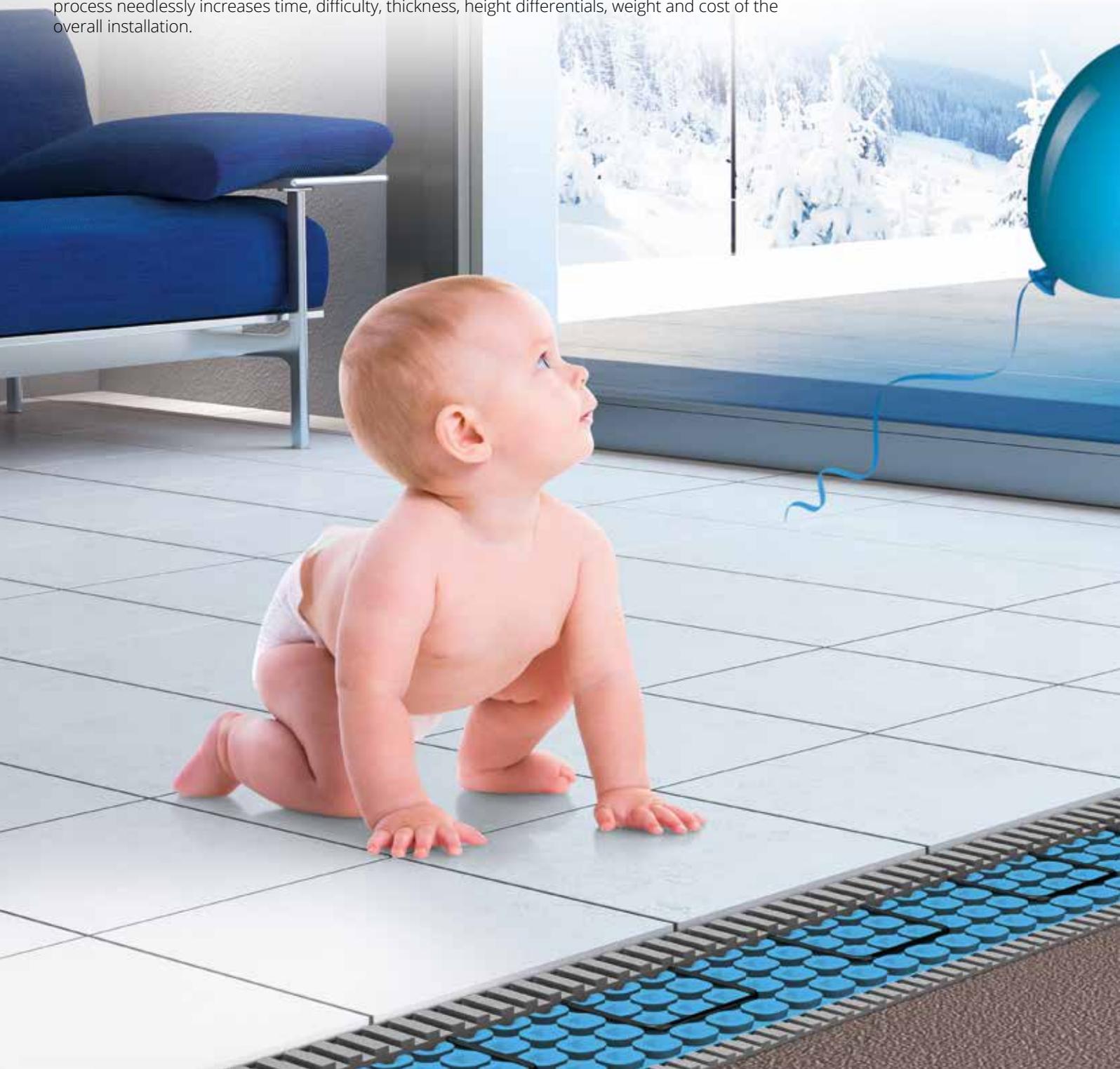


Underfloor Electric Heating System with Uncoupling Technology.

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 tiles 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.

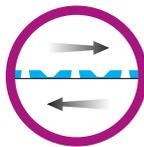
Traditionally most electric floor heating, and anti-fracturing membrane manufacturers have recommended covering the electrical heating cables with a self-leveling cement layer or a thin-set layer followed by an uncoupling crack isolating membrane and then finally installing the tiles. This process needlessly 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 a channel specially designed to embed and hold the **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.



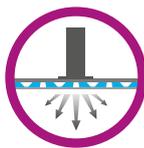
VAPOUR MANAGEMENT

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 (doublesided Polypropylene foil tape) and modified (ANSI A118.11) or unmodified (ANSI 118.1) thin sets. (please consult with your thin set manufacturer for proper thin set selection and proper curing time for your specific installation).



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.



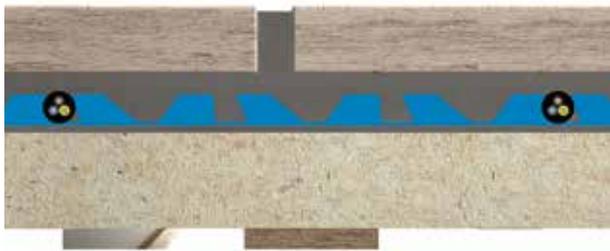
The advantages of a radiant heat floor system have long been known but the **PRODESO® HEAT SYSTEM** has game changing advantages



- Thanks to the uncoupling and crack isolating properties of the **PRODESO® HEAT MEMBRANE**, it's possible to install tile and floor heating over a variety of difficult substrates such as Plywood, Cement Slabs etc.

- Thanks to the uncoupling and crack isolating properties of **PRODESO® HEAT MEMBRANE**, it's possible to eliminate some of the otherwise necessary expansion joints in your installation.

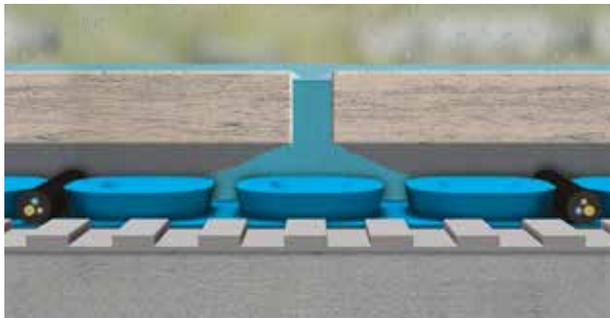
- With its low profile design, the height of the membrane is only 5,5 mm (¼ inch) **PRODESO® HEAT MEMBRANE** is the perfect solution for remodeling projects where the new floor needs to transition over an existing surface.



- The low overall weight of the system makes it the perfect choice for applications when load bearing capacity of the subfloor is a limitation.

- Low thermal inertia. Tiles are installed directly on top of the heating cable. The heat will transfer rapidly and efficiently to the above tile for instant comfort and enjoyment.

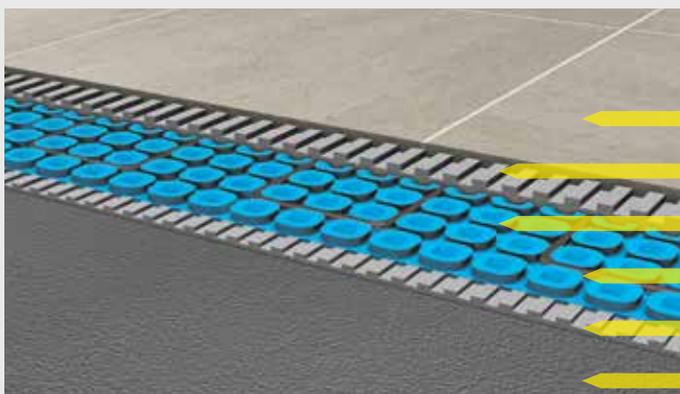
- The benefit of choosing exactly where to install your heat areas will allow you to maximize your return on investment. Heat where you want it, when you want it, reducing the operating cost of the overall system while increasing the comfort and value of your home.



- Cost effective/time saving installation, coupled with the efficiency and safety of electric radiant heat make **PRODESO® HEAT SYSTEM** the obvious choice.

- **PRODESO® HEAT SYSTEM** does not require any maintenance over time.

LAYING'S SECTION OF **PRODESO® HEAT SYSTEM**



- 1 Ceramic, Porcelain or Natural Stone Tiles
- 2 Modified (ANSI A118.11) or Unmodified (ANSI 118.1) thin sets
- 3 PRODESO HEAT MEMBRANE
- 4 Electrical Radiant Heat Cable
- 5 Modified (ANSI A118.11) or Unmodified (ANSI 118.1) thin sets
- 6 Subfloor Cement, Plywood, OSB etc.

U.S. Patent N.: U.S. 9,416,979 B2 / U.S. 8,176,694 B2 / U.S. 9,188,348 B2 / U.S. 9,518,746 B2 / + patent pending

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Wood

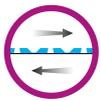
Wood subfloor considerations and installation details

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 deformation 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 16.

LOAD DISTRIBUTION

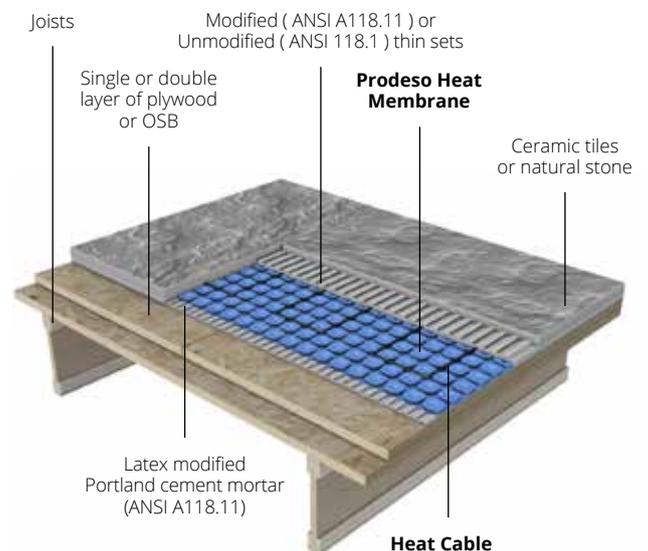


PRODESO HEAT MEMBRANE unique and patented designs allows loads to be evenly distributed from the tile covering to the subfloor. Each rounded square relief has a central cavity shaped like an inverted pyramid. When filled with thin-set this inverted pyramid becomes an incompressible structure. These cavities 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 Joist/i-beam / floor trusses	Osby plywood layers	Tile type	Min. Tile size	Minimum subfloor thickness
16.0" OC OSB OR PLYWOOD	Single	Ceramic/porcelain	2" x 2"	19/32" 5/8" Nominal with 1/8" gap
19.2" OC OSB OR PLYWOOD	Single	Ceramic/porcelain	2" x 2"	23/32" or 3/4" Nominal with 1/8" gap
24.0" OC OSB OR PLYWOOD	Double	Ceramic/porcelain	2" x 2"	23/32" or 3/4" Nominal with 1/8" gap
16.0" OC OSB OR PLYWOOD	Double	Natural stone	2" x 2"	19/32" 5/8" Nominal with 1/8" gap
19.2" OC OSB OR PLYWOOD	Double	Natural stone	2" x 2"	23/32" or 3/4" Nominal with 1/8" gap
24.0" OC OSB OR PLYWOOD	Double	Natural stone	2" x 2"	23/32" or 3/4" Nominal with 1/8" gap

- Minimum thickness for additional underlayment 3/8" or 10mm.
- Underlayment: APA C-C PLUGGED EXTERIOR.
- Additional Underlayment is required for Joist/I-Beam /Floor Trusses spaced more than 19.2" for any type of tile.
- Additional Underlayment is required for all types of natural stone regardless of Joist/I beam/Floor trusses spacing.
- Underlayment 1/2" (13mm) or thinner: Fasteners Spacing 4" (102mm) around the perimeter and 6" (152mm) in the field.
- Underlayment thicker than 1/2" (13mm): Fasteners spacing 6" (152mm) around the perimeter and 6" in the field.
- Seams, perimeters, and corners need to be sealed with Proband 150/250 when water migration is expected.
- Seams, perimeters, and corners need to be sealed with Proband 150/250 when a waterproof installation is necessary.

TEST PROCEDURE: ASTM C627: "STANDARD TEST METHOD FOR EVALUATING CERAMIC FLOOR TILE INSTALLATION SYSTEMS USING THE ROBINSON-TYPE FLOOR TESTER"				
Report Number	Substrate	Tile	Joist Spacing	Achieved Rating
TCNA-772-14	Concrete	12 x 12 Porcelain Tile	Not Applicable	Extra Heavy
TCNA-773-14	OSB/plywood	12 x 12 Porcelain Tile	19.2"	Extra Heavy

WOOD SUBFLOORS (OSB OR PLYWOOD) SETTING AND GROUTING MATERIALS	
Adhesive to fix PRODESOS HEAT MEMBRANE to subfloor	Latex Modified Portland Cement Mortar (ANSI A118.11)
Adhesive to fix Tiles to PRODESOS HEAT MEMBRANE	Modified (ANSI A118.11) or Unmodified (ANSI 118.1) thin sets
GROUT	Polymer-modified cement grout (ANSI A118.3, A118.6, A118.7, A118.8) *

* (please consult with your thin set manufacturer for proper thin set selection and proper curing time for your specific installation).

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

EXPANSION JOINTS:

PRODESOS 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 **PRODESOS HEAT MEMBRANE**.
 Remove all exposed nails, screws, fasteners, and debris.



Cement

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 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 16.

LOAD DISTRIBUTION

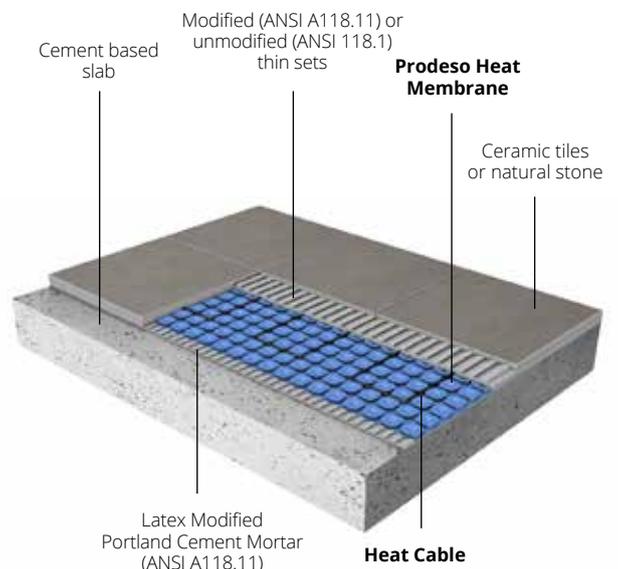


PRODESO HEAT MEMBRANE unique and patented designs allows loads to be evenly distributed from the tile covering to the subfloor. Each rounded square relief has a central cavity shaped like an inverted pyramid. When filled with thin-set this inverted pyramid becomes an incompressible structure. These cavities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

PRODESO HEAT 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	modified (ANSI A118.11) or unmodified (ANSI 118.1) thin sets
GROUT	Polymer-modified cement grout (ANSI A118.3 A118.6, A118.7, A118.8) *

* (please consult with your thin set manufacturer for proper thin set selection and proper curing time for your specific installation).

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 2" x 2" (50mm x 50mm)
- Seams, perimeters, and corners need to be sealed with Proband 150/250 when water migration is expected.
- Seams, perimeters, and corners need to be sealed with Proband 150/250 when a waterproof installation is necessary.

EXPANSION JOINTS:

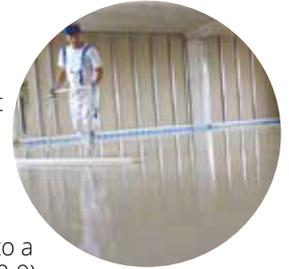
PRODESIO-HEAT does NOT eliminate the need for movement joints, including perimeter joints, within the tiled surface. Movement joints must be installed in accordance with industry standards and norms TCNA EJ171, and TTMAC 301 MJ.



Gypsum based underlayment

PRODESO HEAT SYSTEM installed over Gypsum based underlayment

Gypsum based underlayment or more properly gypsum based substrate present many advantages, but also a few challenges to the tile installer. CaSO₄ calcium sulfate is the component of gypsum 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. Gypsum based underlayment needs 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 gypsum based underlayment. Gypsum based underlayment needs to be applied to a structural subfloor (Cement based subfloor or wood based subfloor. For subfloor preparation see page 6-7-8-9)



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 gypsum based underlayment and the possible damages to the tile floor.
- LOAD DISTRIBUTION**

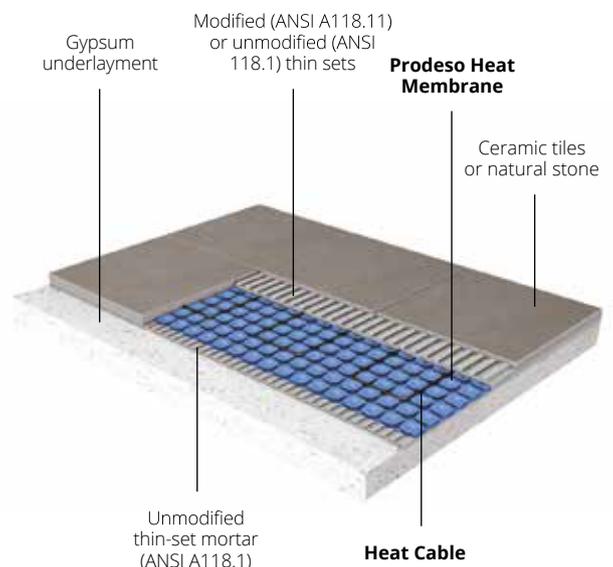


PRODESO HEAT MEMBRANE unique designs allows to evenly distribute load from the floor to the subfloor. Each rounded square relief has a central cavity shaped like an inverted pyramid. When filled with thin set this inverted pyramid become an incompressible structure that like pillars will evenly distribute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

GYPHUM BASED UNDERLAYMENT



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 floors need to be secured and flat removed).
- If foam or any under cushioning mat had previously been installed under the vinyl floor the vinyl floor needs to be removed entirely and **PRODESO HEAT MEMBRANE** will be fixed directly to the subfloor.
- Vinyl floor needs to be clean of debris, dust, 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.

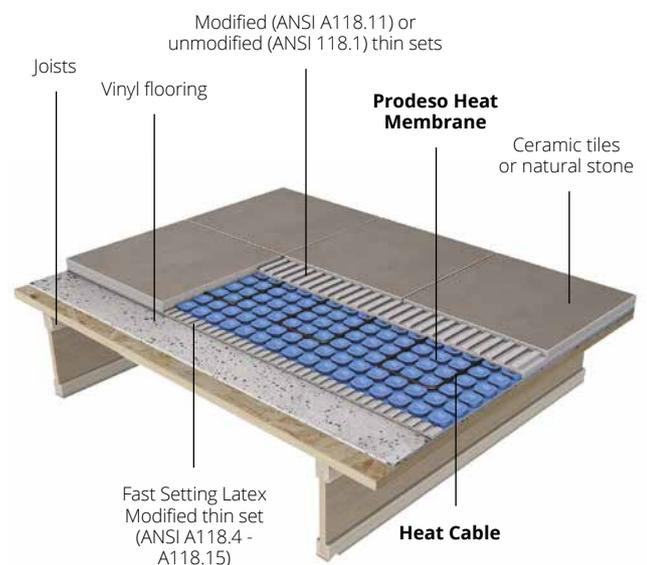
OVER EXISTING VINYL FLOOR SETTING AND GROUTING MATERIALS	
Adhesive to fix PRODESO HEAT MEMBRANE to subfloor	Fast Setting Latex Modified thin set (ANSI A118.4 - A118.15)
Adhesive to fix Tiles to PRODESO HEAT MEMBRANE	Modified (ANSI A118.11) or unmodified (ANSI 118.1) thin sets
GROUT	Polymer-modified cement grout (ANSI A118.3 A118.6, A118.7, A118.8) *

* (please consult with your thin set manufacturer for proper thin set selection and proper curing time for your specific installation).

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

- Minimum Tile Size 2" x 2" (50mm x 50mm)
- Seams, perimeters, and corners need to be sealed with Proband 150/250 when water migration is expected.
- Seams, perimeters, and corners need to be sealed with Proband 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 TCNA EJ171, and TTMAC 301 MJ.

EXISTING VINYL FLOOR





Waterproofing - Movement/Expansion joints

Waterproofing

Tile surfaces (Ceramic and Natural Stone) are preferred and chosen because of their Beauty, Color, Design, Finish, and Texture. Tile surfaces are used for both floor and walls in a variety of project from residential, commercial, hospitality, institutional, health care and industrial. The use of tile has become so extensive that tile installers find themselves facing new challenge every day. Water penetration can cause extensive damages to the tile assembly itself as well the subfloor and the floors underneath the tile assemblies. Waterproofing is required under and around tubs and showers. It's also recommended to waterproof tile assemblies that can possibly be exposed to considerable amount of water because of flooding. Waterproofing the tile assembly is cheaper and safer than repairing water damages.



PRODESO HEAT MEMBRANE, is a Polypropylene membrane and as such is naturally waterproof. For indoor installations in areas that are prone to water damage, the corners and seams of the **PRODESO HEAT MEMBRANE** need to be waterproofed utilizing **PROBAND 150/250** waterproofing foil tape (doublesided Polypropylene foil tape) and modified (ANSI A118.11) or unmodified (ANSI 118.1) thin sets.

Movement/Expansion joints

Any tile surface assembly cross section is made of several different materials, Tiles, Wood, Screw, Cement, Gypsum, Adhesives, Beams and more. All these different materials contract and expand in different ways when temperature, moisture and load change, causing stress in the overall tile assembly and ultimately cracks and possibly delamination of the tiles. Ceramic and Natural Stone Tiles are rigid and are not capable to compensate for movements. 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 TCNA EJ171, and TTMAC 301 MJ.



Expansion/Movement Joint Placement

- Perimeter Joint need to be installed around the entire installation perimeter.
- Surface Joint: 16'-20' (4.9meters - 6.1meter) in both direction.
Reduce separation by 25% if exposed to direct sunlight, heating cable or moisture.
- Surface joint near any structural element (columns, beams, stairways), doorways.
- Structural joint when 2 separate supporting structure meet under the tile or the underlayment.
- Areas enclosed within joint should be a rectangle with ratio between each dimension not to exceed 1:1.5.

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 gypsum based underlayment verify that the moisture content is less than 2%.

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

50lbs (22.70Kg) for 100ft² (9.3 m²) using 1/4" x 3/8" (6 mm x 10 mm) square or U-notched trowel.

Laying the membrane



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



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



Press the membrane 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** taking care 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.

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 the same type of adhesive used for tiling along the joints between two adjacent sheets with the flat side of the trowel, 4" (100 mm) 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 the same type of adhesive used for tiling 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 the same type of adhesive used for tiling to the corner (wall and floor) with a 3/16"X 3/16" (4 mm x 4 mm) notched trowel to a width of about 4" (100 mm).



Fix **PROBAND 150/250** tape to the same type of adhesive used for tiling 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 19. Using a flat trowel apply strong and even pressure along **PROBAND 150/250** to ensure sealing.



Apply the same type of adhesive used for tiling along the perimeter floor with the flat side of the trowel, to a width of about 4" (100 mm). 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 same type of adhesive used for tiling to the perimeter wall with a 3/16" x 3/16" (4 mm x 4 mm) notched trowel to a width of about 4" (100 mm).



Fix **PROBAND 150/250** tape to the same type of adhesive used for tiling 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 the same type of adhesive used for tiling for non-cement based substrates.

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.**

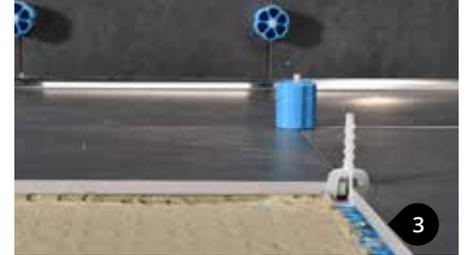
50 lbs (22.70 Kg) for 40/50 ft² (3.7 m² / 4.6 m²) using 1/4" x 3/8" (6 mm x 10 mm) square or U-Notched trowel 50 lbs (22.70 Kg) for 30/40 ft² (2.8 f²/ 3.7m²) using ." X ." (12.5 mm X 12.5 mm) square or U-Notched trowel.



Tiles can be immediately laid after the installation of the heating cables is completed. Using the flat side of the trowel fill with thin set mortar the cavities of the membrane. Apply additional of the same mortar with a notched trowel over according to the tile size. Both modified (ANSI A118.11) or unmodified (ANSI 118.1) thin sets can be used when installing tiles to Prodeso Heat Membrane. (please consult with your thin set manufacturer for proper thin set selection and proper curing time for your specific installation).



Apply the thin set to the back of the tiles with a notched trowel and lay them on the layer of thin set previously applied. Occasionally remove and check some tiles, to ensure full back coverage.



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

Warnings:

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 12" x 12" and larger is recommended to double spread each tile before laying them.

Products

PROBAND 150/250

ROLLS IN HDPE E PP

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

AREA OF USE

• Us

Construction of perimeter joints and between adjacent sheets of **PRODESO HEAT SYSTEM**.

• Don't us

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

WARNINGS

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 - 1/64" in

PROBAND 150/250			
SKU	Roll width H mm x L LM	H in. x L ft.	Rolls/Pack
TC-MEM- BL-BND- 0624	150 x 7.3	6" x 24'	1



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 **PRODESIO HEAT SYSTEM**.

• Don't us

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

WARNINGS

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	H x L in.	
PRBI (internal)	150 X 150	6" x 6"	
PRBE (external)	150 X 150	6" x 6"	



EXTERNAL CORNER



INTERNAL CORNER



Pcs/Pack
10
10



Warranty

Progress Profiles Prodeso Heat System 10 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 ten (10) 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 January 1, 2014.

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 ppa@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 CANADA: CAN/CSA-C22.2 No. 130-03 USA UL 1673 and ANSI/IEEE 515.1-2005

Thermostats must be compliant with following standards CANADA: C22.2 No. 24-93 USA UL 873

Use 2 ½" or 3 ¾" wire spacing. Do NOT exceed under any circumstances 12watt/square foot. INDOOR APPLICATIONS ONLY

Progress Profiles PRODESO HEAT MEMBRANE 10 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 North America Claims shall be sent to:

Progress Profiles America Inc.
Attention: Warranty Claim Department
4 Middlebury Boulevard (Unit 14)
Randolph, New Jersey 07869
U.S.A

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

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





2018



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WarmlyYours

Be Connected.

Be Warm. Be Radiant.

Prodeso Cable Installation Membrane Addendum

Installation Tips

- Unroll the membrane the day before installation to flatten it and avoid any potential 'memory' due to environmental conditions.
- Install membrane over entire floor first, then heating cable, THEN do the tiles 1 or 2 at a time. NEVER cover the Prodeso entirely with thin set first. Only apply as much thin set as needed to lay a couple of tiles at a time.
- When laying rolls adjacent to each other, align the square relief pegs for the later heating element cable runs.
- Prodeso does not eliminate the need for expansion joints (adhere to local codes).
- Waterproofing is recommended under and around tubs/showers. It's also recommended wherever the tile could possibly be exposed to considerable amounts of water. Prodeso is naturally waterproof, but the corners and seams need to be treated with waterproofing tape and thin set. (Use Pro WP Waterproofing Band 5" - Soft polyethylene tape – to seal seams.)
- NOT a good choice for mosaic tile work, Prodeso requires 2" x 2" or larger tiles.
- The sensor should be placed at least 6" into an open cable loop, so that it is right in the middle of two straight runs. This way the sensor won't sense the set temp until the tile is evenly heated.
- Self-Leveling (SLC) Cement is not recommended for use over Prodeso. Contact WarmlyYours if self-leveling underlayment is required.
- This sheet is not a substitute for the Installation Manual. Please read the Installation Manual before installing Prodeso.