

## WFP Pre-Tec Plus 2

### **Fresh Concrete Laminated Membrane Highly flexible, Double adhesive seam, Perfect adhesion to concrete**

#### **Product description**

WFP Pre-Tec Plus 2 is a unique, specially laminated, highly flexible fresh concrete composite membrane.

WFP Pre-Tec Plus 2 consists of a HDPE membrane with a single sided, pressure sensitive adhesive bed, embedded with a reactive granulate coating. The granulate coating is walkable and weather resistant. Soiling caused by construction site operations does not reduce adhesion. WFP Pre-Tec Plus 2 is equipped with a prefabricated adhesive strip on top and bottom sides. When joining the overlap joint of two Pre-Tec membranes, the adhesive areas meet each other directly and result in a waterproof, secure and permanent bond.

#### **Field of application**

WFP Pre-Tec Plus 2 is used for waterproofing exterior basement walls, foundations, tunnels, underground car parks, floor slabs, etc. WFP Pre-Tec Plus 2 is suitable for vertical and horizontal surfaces. WFP Pre-Tec Plus 2 can be used against high water pressure, on aggressive soils and as a radon barrier.

#### **Properties**

- **Highly flexible**
- **Single side, special granulate coating**
- **Pressure sensitive adhesive layer**
- **Double sided adhesive strip**
- **Continuous thickness**
- **Easy installation**
- **Water pressure tight**
- **High chemical resistance**
- **Perfect adhesion to concrete**
- **Weatherproof**
- **Radon gas tight in the complete system**
- **UV-resistant for more than 60 days**
- **Accessible**
- **Crack bridging**
- **Harmless to ground water (no PVC)**

## Specification

Base:	flexible HDPE membrane
Self adhesive coating:	polymer resin with granulate
Color:	white
Processing temperature:	> + 5°C to + 40°C
Weight:	approx. 1550 g/sqm
Thickness:	approx. 1.5 mm
Length according to DIN EN 1848-2:	20 m
Width according to DIN EN 1848-2:	1000 mm
Reaction in exposure to fire according to DIN EN 13501-1:	Class E
Water migration:	0.7 MPa, 7 bar: no migration
Tensile strength according to DIN EN 12311-2:	≥ 7 N/mm <sup>2</sup> (Procedure B)
Elongation according to DIN EN 12311-2:	≥ 500 % (Procedure B)
Resistance to static loading according to DIN EN 12730:	> 20 kg (Procedure A/B)
Dimensional stability after warm storage according to DIN EN 1107-2:	" ≤ 2 %
Foldability at low temperatures according to DIN EN 495-5:	≤ -25 °C
Tensile property	
Max tensile force (N/50mm):	≥600N
Tear strength around steel bars (N):	≥400N
Shock resistance:	Diameter (10±0.1) mm, no leakage
Puncture resistance:	>850 N
Thermal resistance:	70°C, 2h, no displacement, flow or dripping

### Peeling strength of bonding to poured concrete (N/mm<sup>2</sup>)

Clean surface:	≥ 2.0
Contaminated surface with cement powder:	≥ 1.5
Contaminated surface with mud and sand:	≥ 1.5
UV aging:	≥ 1.5
Aging test:	≥ 1.5
Peeling strength of bonding to poured concrete (after being submerged in water) (N/mm):	≥ 1.5
Heat aging (70°C/168h)	
Tensile retention rate %:	≥ 90
Elongation retention rate %:	≥ 80
Stability after heating	
Appearance:	No crease, flow or dripping
Dimensional variation %:	≤ 2.0
Sd-value	861 m

	WFP GmbH Drescherstr. 49 D-71277 Rutesheim  16 EN 13967 Unique identification code of the product-type WFP-1401 EN 13967:2012 Flexible sheets for waterproofing – plastic and rubber damp proof sheets including plastic and rubber basement tanking sheet – definitions and characteristics																									
	<table border="0"> <tr><td>Water tightness</td><td>Pass</td></tr> <tr><td>Resistance to impact</td><td>0.7 m</td></tr> <tr><td>Durability - Against ageing</td><td>Pass</td></tr> <tr><td>Durability - Against chemicals</td><td>Pass</td></tr> <tr><td>Tear resistance – longitudinal direction</td><td>&gt;550 N</td></tr> <tr><td>Tear resistance – transverse direction</td><td>&gt;700 N</td></tr> <tr><td>Joint shear resistance</td><td>&gt;700 N/50 mm</td></tr> <tr><td>Resistance to static loading</td><td>20 kg</td></tr> <tr><td>Tensile strength in longitudinal direction</td><td>&gt;900 N/50 mm</td></tr> <tr><td>Tensile strength in transverse direction</td><td>&gt;900 N/50 mm</td></tr> <tr><td>Elongation at rupture – longitudinal direction</td><td>&gt;500%</td></tr> <tr><td>Elongation at rupture – transverse direction</td><td>&gt;400%</td></tr> <tr><td>Reaction to fire</td><td>Class E</td></tr> </table>	Water tightness	Pass	Resistance to impact	0.7 m	Durability - Against ageing	Pass	Durability - Against chemicals	Pass	Tear resistance – longitudinal direction	>550 N	Tear resistance – transverse direction	>700 N	Joint shear resistance	>700 N/50 mm	Resistance to static loading	20 kg	Tensile strength in longitudinal direction	>900 N/50 mm	Tensile strength in transverse direction	>900 N/50 mm	Elongation at rupture – longitudinal direction	>500%	Elongation at rupture – transverse direction	>400%	Reaction to fire
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#### **Delivery form**

WFP Pre-Tec Plus 2  
 Rolls á 1 m x 20 m  
 WFP Pre-Tec Tape  
 Rolls á 15 cm x 20 m  
 WFP Pre-Tec S-Tape  
 Rolls á 10 cm x 20 m  
 WFP Pre-Tec DS Tape  
 Rolls á 10 cm x 10 m

#### **Storage**

24 months (cool and dry in the original packaging)

#### **Application**

##### **Preparation of the surface**

The substrate must be load-bearing, level, solid and clean. The surface to be coated must not have any projections, gaps, gaps or joints. Ideally, it should be laid horizontally on a sash-smoothed clean layer (lean concrete) and vertically on formwork or smoothed shotcrete. Perimeter insulation is a very suitable substrate, vertically or horizontally. Movements at penetrations, such as pipe penetrations for water or electricity, must be prevented during installation of the WFP Pre-Tec Plus 2 and during concreting.

##### **Material application**

###### **- Horizontal application**

WFP Pre-Tec Plus 2 is laid with the granulate coating facing upwards. The white, uncoated side faces the substrate.

The lateral overlapping area of the WFP Pre-Tec Plus 2 is 75 mm. Before removing the protective films from the upper and lower self-adhesive strip in the overlap area of the WFP Pre-Tec Plus 2, make sure that the overlap area is correctly positioned. Adhesion is achieved by simultaneously removing the upper and lower protective adhesive films. Complete bonding is achieved by subsequent rolling with a heavy pressure roller in the overlap area. The 1,5 mm thick HDPE membrane webs are thus bonded together so that they are watertight under pressure. The protective film-strips of further Pre-Tec Plus 2 membranes are then continuously removed and joined together by pressure.

The WFP Pre-Tec Tape is used in the overlap area of the web ends. For this purpose, the 15 cm wide tape is pushed 7.5 cm under the WFP Pre-Tec Plus 2 waterproofing membrane so that the two-part protective foil faces upwards. Before removing the first part of the protective film, the sheet and the tape must be aligned exactly once again. While the first half of the protective film is removed, the WFP Pre-Tec Plus 2 geomembrane is simultaneously pressed on firmly. The next geomembrane is laid over the remaining second part of the WFP Pre-Tec tape, fixed by removing the protective film and firmly bonded to the pressure roller.

#### **- Vertical application**

WFP Pre-Tec Plus 2 is fixed to the substrate with mechanical fasteners. The fasteners used must have a low profile so that the HDPE membrane webs are not damaged. The fasteners are preferably placed at the top of WFP Pre-Tec Plus 2 or alternatively in the overlap area. The next WFP Pre-Tec Plus 2 membrane is connected only after this.

The overlap area of the HDPE membrane is 75 mm. Before removing the protective films in the overlap area from the self-adhesive strip, ensure that the overlap area has been positioned correctly. By removing the protective films in the overlap area and then applying the adhesive, the HDPE membranes are joined together so that they are watertight under pressure. Complete adhesion is achieved by rolling the overlap area with a heavy pressure roller. In this way, the protective film strips of other HDPE membranes are continuously removed and joined together by pressure..

The WFP Pre-Tec DS tape is used in the overlap area of the web ends.

The granulated surface of the WFP Pre-Tec Plus 2 is freed from the granulate coating in the bonding area (10 cm edge strip) using a hot air dryer and spatula. The 10 cm wide WFP Pre-Tec DS-Tape is then bonded exactly to the exposed area. The following waterproofing WFP Pre-Tec Plus 2 membrane is laid with a 10 cm overlap, the protective film of WFP Pre-Tec DS-Tape is removed by pulling it out and at the same time the WFP Pre-Tec Plus 2 is pressed firmly into place. This joint is additionally secured with WFP Pre-Tec S-Tape.

All detail seals, e.g. for pipe penetrations, are additionally sealed with WFP PU-Flex or WFP Rubberflex 1K, as are bored pile heads (ask for details).

#### **Illustrated processing instructions are available and can be requested**

#### **Repairs before concrete placement**

In the event of damage to the WFP Pre-Tec Plus 2, e.g. during formwork work or the laying of reinforcement, it is necessary to repair the damage before concreting. All incisions or punctures <10 mm are covered with WFP Pre-Tec S-Tape for at least 100 mm. For larger repairs, a collar is cut out of the WFP Pre-Tec Plus 2, which is cut to fit the area to be repaired. The collar must overlap the damaged area by at least 150 mm. Then secure the collar at all ends with WFP Pre-Tec S-Tape.

#### **Concreting**

The concrete must be poured within 60 days after installation of the WFP Pre-Tec Sealing Sheet Plus. Do not damage the geomembranes during concreting!  
Ensure in advance that all overlaps are sealed and the protective film strip has been removed in these areas.

#### **Formwork removal**

The formwork must not be removed until sufficient concrete compressive strength has been achieved, which is necessary to achieve sufficient adhesion between concrete and WFP Pre-Tec Plus 2. Removing the formwork too early can lead to displacement and peeling of the WFP Pre-Tec Plus 2

and cause permanent damage. A minimum concrete compressive strength of 10 N/mm<sup>2</sup> before removing the formwork is strongly recommended. This is within the normal temperature range after 2 days.

#### **Disclaimer**

The figures reflect the current state of development. They make no claim to completeness. A professional and thus successful processing of the products is not subject to our control. A warranty can therefore only be given for the quality of the products, but not for the processing. It is the responsibility of the user to determine the suitability of our products for his purpose.