

**PREBOND - FULLY BONDED FPO SHEET MEMBRANE WATERPROOFING SYSTEM**

**Description**

Prebond 05/-08/-12 is a fully and permanently bonded, self-adhesive, composite sheet membrane waterproofing system for reinforced concrete of the main structure. It consists of an embossed polyolefin (FPO) membrane laminated with a sealant grid and a non-woven fleece. Prebond 05/-08/-12 is coldapplied and pre-applied, as it is installed without heat or open-flames, and before the steel reinforcement is fixed and the concrete is poured.

**Uses**

Damp-proofing, concrete protection and waterproofing for basements and other below ground concrete structures against ground water ingress:

- Below ground reinforced concrete slabs
- Below ground reinforced concrete walls with both single and double -faced formwork
- Extensions and reconstruction works
- For prefabricated constructions

**Key Benefits**

- Cold- applied and self-adhesive (no heat or open flames required) and pre-applied, before the reinforcement is fixed and the concrete is poured
- Fully and permanently bonded to the reinforced concrete structure
- No lateral water underflow or migration between the concrete structure and the membrane system
- High watertightness tested according to many standards
- Easy to install with fully adhered joints (no welding required)
- Temporarily resistant to weathering and UV-light during construction
- Resistant to aging
- High flexibility and crack-bridging abilities
- Resistant to aggressive mediums in natural ground water and soil

**Product Data**

**Appearance / Colour**

Light yellow sheet membrane, laminated with a fleece layer

**Packaging**

Prebond 05/-08/-12 rolls are wrapped individually in a yellow PE-foil.

Prebond 05 W: 1 m and 2 m L: 30 m

Prebond 08 W: 1 m and 2 m L: 25 m

Prebond 12 W: 1 m and L: 2 m 20 m

**Shelf Life**

Prebond 05/-08/-12 membrane rolls have a shelf-life of 18 months from date of production if stored properly in unopened, undamaged, original packaging, in a horizontal position, in dry conditions and at temperatures between +5°C and +30°C. They must be protected from direct sunlight, rain, snow and ice, etc. Do not stack pallets of the rolls on top of each other, or under pallets of any other materials during transport or storage.

**Technical Data**

**Chemical Base:**

Membrane Layer: Flexible Polyolefin (FPO)  
 Sealant/adhesive: Polyolefin (PO)  
 Fleece Layer: Polypropylene (PP)

**Mass per unit area:**

Prebond 05 0.85 kg/m<sup>2</sup> (-5 /+10%)  
 Prebond 08 1.15 kg/m<sup>2</sup> (-5 /+10%)  
 Prebond 12 1.50 kg/m<sup>2</sup> (-5 /+10%)

**Resistance to Impact:**

Prebond 05 ≥ 150 mm  
 Prebond 08 ≥ 250 mm  
 Prebond 12 ≥ 350 mm

**Product Declaration:**

EN 13967,  
 mandatory for European countries

EN 1849-2

EN 12691

**Thickness**

Prebond 05: Total Thickness (=deff) 1.10 mm  
 Master Membrane thickness 0.50 mm (-5 /+10%)

**Visible Defects:**

Pass / EN 1850-2

Prebond 08: Total Thickness 1.35 mm Master  
 Membrane thickness 0.80 mm (-5 /+10%)

**Straightness:**

< 50mm / 10m / EN 1848-2

Prebond 12: Total Thickness 1.70 mm Master  
 Membrane thickness 1.20 mm (-5 /+10%)

**Watertightness to Liquid Water**

Pass / EN 1928 B (24 h/60 kPa)

EN 1849-2

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**Technical Data**

**Resistance to Tear - Nail Shank (Machine direction):**

Prebond 05 ≥ 375 N  
 Prebond 08 ≥ 400 N  
 Prebond 12 ≥ 550 N  
 EN 12310-1

**Resistance to Tear - Nail Shank (Cross direction):**

Prebond 05 ≥ 400 N  
 Prebond 08 ≥ 450 N  
 Prebond 12 ≥ 600 N  
 EN 12310-1

**Joint strength**

Prebond 05 ≥ 125 N / 50 mm  
 Prebond 08 ≥ 200 N / 50 mm  
 Prebond 12 ≥ 300 N / 50 mm  
 EN 12317-2

**Tensile Strength (Machine Direction):**

Prebond 05 ≥ 400 N / 50 mm  
 Prebond 08 ≥ 450 N / 50 mm  
 Prebond 12 ≥ 700 N / 50 mm  
 EN 12311-1

**Tensile Strength (Cross Direction):**

Prebond 05 ≥ 300 N / 50 mm  
 Prebond 08 ≥ 450 N / 50 mm  
 Prebond 12 ≥ 700 N / 50 mm  
 EN 12311-1

**Elongation (Machine Direction):**

Prebond 05 ≥ 550 %  
 Prebond 08 ≥ 700 %  
 Prebond 12 ≥ 900 %  
 EN 12311-1

**Elongation (Cross Direction):**

Prebond 05 ≥ 900 %  
 Prebond 08 ≥ 1000 %  
 Prebond 12 ≥ 1150 %  
 EN 12311-1

**Water Vapour Transmission:**

Prebond 05 0.63 g/m<sup>2</sup> x 24 h  
 m = 57'000 (+23°C / 75% r.h.)  
 Sd = 63 m  
 (- /+20%)

Prebond 08 0.51 g/m<sup>2</sup> x 24 h  
 m = 58'000  
 Sd = 78 m  
 (- /+20%)

Prebond 12 0.35 g/m<sup>2</sup> x 24 h  
 m = 67'000  
 Sd = 114 m  
 (- /+20%)

EN 1931

**Resistance to Static Load:**

≥ 20 kg  
 EN 12730 (Method B, 24 h/20 kg)

**Reaction to Fire:**

Class E  
 EN 13501-1:2000

**Durability of Watertightness against Ageing:**

Pass  
 EN 1296 ( 12 weeks)  
 EN 1928 B (24h / 60 kPa)

**Durability of Watertightness against Chemicals:**

Pass  
 EN 1847 (26 d/+23 °C)  
 EN 1928 B (24h / 60 kPa)

**Accelerated Ageing in an Alkaline Environment Tensile Strength:**

Pass  
 EN 1847 (28 d/+23 °C)  
 EN 1928 B (24 h / 60 kPa)

**Additional Data (Not CE Relevant)**

**Water resistance to lateral water underflow of membrane system:**

Prebond 08 Pass up to 7.0 bar  
 Prebond 12 Pass up to 7.0 bar  
 ASTM D 5385 mod.

**Radon Gas Diffusion Coefficient:**

Prebond 08 (2.0 +/- 0.3) x 10-12 m<sup>2</sup>/s  
 Certificate E-214/2011

Prebond 12 (5.3 +/- 0.7) x 10-12 m<sup>2</sup>/s  
 Certificate E-215/2011

Prebond 08 joints (6.1 +/- 1.1) x 10-12 m<sup>2</sup>/s  
 Certificate E-225/2012

**Methane Gas Permeability:**

Prebond 08 140 ml / m<sup>2</sup> x d  
 (- /+10%)

Prebond 08 joints 180 ml / m<sup>2</sup> x d  
 (- /+10%)

ISO 7229

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**ASTM DATA**

**Hydrostatic Pressure**

Prebond 05 / Pass  
 Prebond 08 / Pass  
 Prebond 12 / Pass  
 ASTM D 5385  
 (100 psi)

**Low Temperature Flexibility**

Prebond 05 / Pass  
 Prebond 08 / Pass  
 Prebond 12 / Pass  
 ASTM D 1970  
 (-20 °F)

**Crack Cycling**

Prebond 05 / Pass  
 Prebond 08 / Pass  
 Prebond 12 / Pass  
 ASTM C 836  
 (-15°F, 10 cycles)

**Tensile Strength**

Prebond 05 ≥ 1'125 psi  
 Prebond 08 ≥ 1'125 psi  
 Prebond 12 ≥ 1'255 psi  
 ASTM D 412

**Elongation**

Prebond 05 ≥ 650 %  
 Prebond 08 ≥ 685 %  
 Prebond 12 ≥ 725%  
 ASTM D 412

**Puncture Resistance**

Prebond 05 ≥ 125 lbs  
 Prebond 08 ≥ 140 lbs  
 Prebond 12 ≥ 180 lbs  
 ASTM E 154

**Peel Adhesion to Concrete**

Prebond 05 ≥ 42 lbs/in  
 Prebond 08 ≥ 48 lbs/in  
 Prebond 12 ≥ 50 lbs/in  
 ASTM D 903

**Lap peel adhesion**

Prebond 05 ≥ 40 lbs/in  
 Prebond 08 ≥ 40 lbs/in  
 Prebond 12 ≥ 40 lbs/in  
 ASTM D 1876

**Water Vapor Transmission**

Prebond 05 ≥ 0.40 perms (- /+20%)  
 Prebond 08 ≥ 0.35 perms (- /+20%)  
 Prebond 12 ≥ 0.25 perms (- /+20%)  
 ASTM E 96

**Water Absorption**

Prebond 05 ≥ 2.2 %(- /+20%)  
 Prebond 08 ≥ 2.2 % (- /+20%)  
 Prebond 12 ≥ 1.2 %(- /+20%)  
 ASTM D 570

**Application**

**Bonding Surface Temperature**

+5°C min. / + 35°C

**Bonding Surface Moisture**

Dry, respect the dew point

**Ambient Air Temperature**

+5°C min. / + 35 °C

**Substrate Quality:**

The substrate for the Prebond 05/08/12 membrane needs sufficient stability to avoid movement during the construction works.

A smooth, uniform and clean substrate surface is essential to prevent membrane damage. Large gaps and voids (> 12-15 mm) be closed before installation of the

Prebond 05/08/12 membrane system. The substrate can be damp or slightly wet, but ponding water must be avoided.

Suitable substrates to fix the Prebond 05/08/12 membrane system onto are:

- Concrete blinding
- Formwork
- Rigid thermal insulation
- Geotextile
- Compacted soil/fill with geotextile (only for low requirements)
- Plywood