



# HIDROFLEX

**READY-TO-USE FLEXIBLE LIQUID MEMBRANE IN WATER DISPERSION FOR WATERPROOFING DAMP INTERIOR AREAS. COMPLIANT WITH CLASS DMO1 IN ACCORDANCE WITH EN 14891 AND STANDARD ETAG022 Part 1 and Part 2. PRODUCT WITH ULTRA-LOW EMISSIONS OF VOLATILE ORGANIC COMPOUNDS.**



## DESCRIPTION

HIDROFLEX is a liquid membrane used for waterproofing substrates in indoor wet areas prior to the application of ceramic material. The HIDROFLEX liquid membrane is part of two waterproofing kits compliant with Standard ETAG022 Part 1 and Part 2 and is classified as a product with ultra-low emissions of volatile organic compounds EC1<sup>PLUS</sup>. The product has a fast drying time and is easily applied to the floor and wall with a roller or brush. It is also suitable for heated floors.

## ADVANTAGES

- Product with ultra-low emissions of volatile organic compounds EC1-R<sup>plus</sup> GEV-EMICODE – Classe A+ in compliance with French Regulations
- Ready-to-use product that requires no preparation.
- Reusable product. Any left-over material, if closed in the original packaging and stored at temperatures between +5°C to +35°C, can be reused even after a few months, thereby avoiding unnecessary waste.

## EN 14891 CLASSIFICATION

HIDROFLEX conforms to the DMO1 class, a product that is waterproof to the applied liquid in dispersion with improved crack-bridging ability at low temperature (-5°C) in accordance with the EU standard EN 14891 on waterproofing products applied in liquid form to be used under ceramic tiles glued with adhesives. The compliance of the product with the EN 14891 harmonised standard is reported in the Declaration of Performance CPR-IT506 according to the European Regulation for construction products (CPR - Construction Products Regulation No.: 305/2011/EU) and tested by a notified European body according to system 3 certification for that which concerns water impermeability.

## PACKAGING

- 5 kg plastic buckets - 720 kg standard pallet
- 10 kg plastic buckets - 480 kg standard pallet
- 20 kg plastic buckets - 480 kg standard pallet

## INTENDED USE

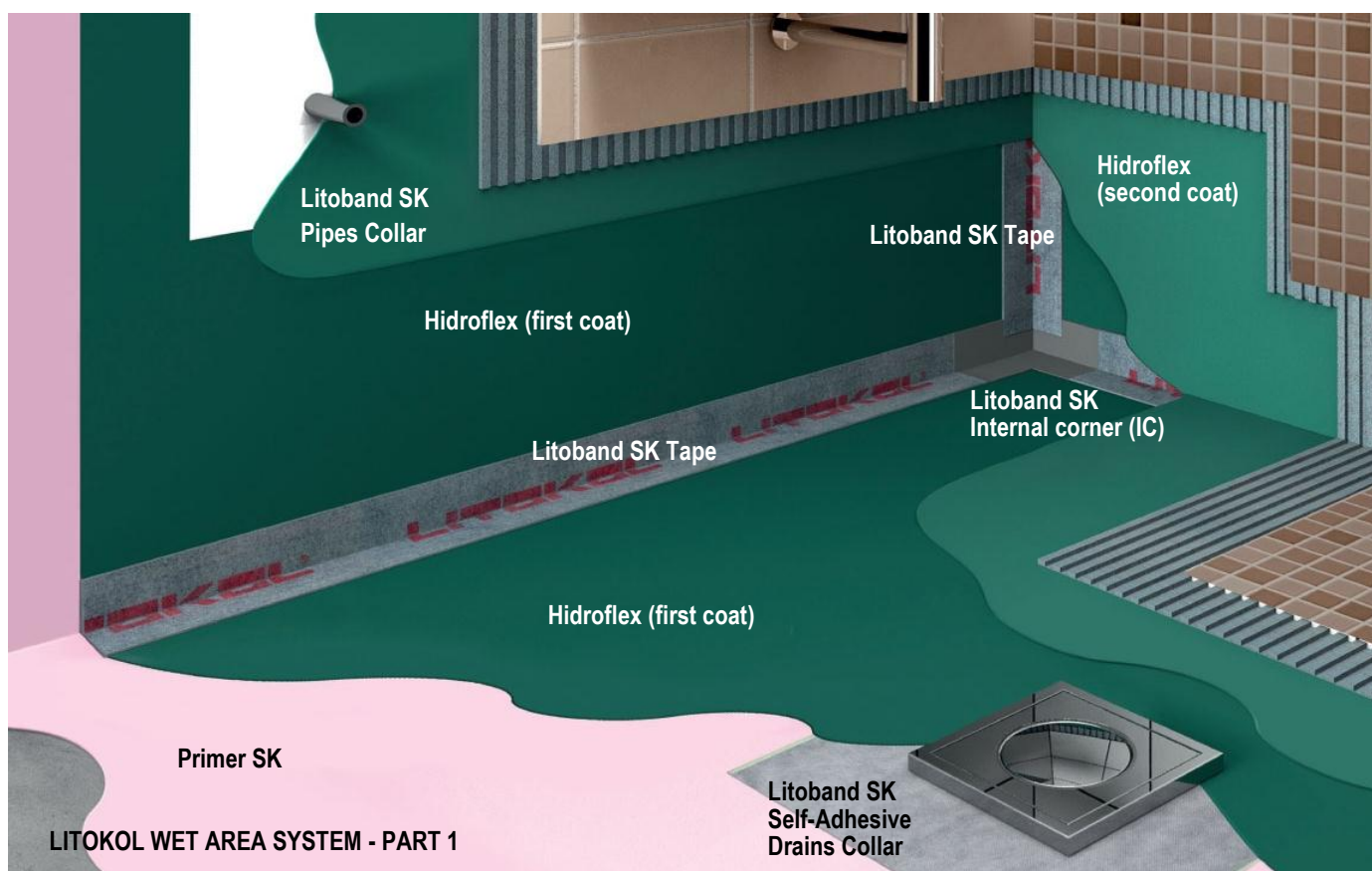
The HIDROFLEX liquid membrane must be used together with the LITOBAND SK and LITOBAND SK2 specific products and accessories for each waterproofing kit to ensure a perfect seal in damp areas, such as bathrooms, shower cubicles, showers in public sports facilities or schools, etc. follow the instructions in the "Litokol wet areas system" flyer.

## CHECKING THE SUBSTRATES

Substrates must be absorbing, smooth, clean, dry and free from dust or loose fragments. Residue of cement, plaster or old adhesives must be mechanically removed by sanding, abrading or other suitable techniques. Any sinking or superficial imperfection can be adjusted and smoothed with suitable Litoliv Extra 15, Litoliv S40 ECO Litoliv Express, Litoplan Rapid or Litoplan Smart type of levelling or self-levelling cement. Any crack (not subject to movement) can be filled and corrected with the two-component epoxy mortar Decor Primer Fondo by covering the surface with dry sand while the product is still fresh. Consult the technical specifications for correct application. It is not allowed to apply waterproofing kits on rough walls or floors that are not level or surfaces that are subject to rising damp. The table below indicates the maximum humidity values allowed and the ageing time of the main substrates

	SUBSTRATES	AGEING TIME	MAXIMUM HUMIDITY
WALLS	Concrete walls	3 months	≤ 2% CM
	Cement plaster measured on site	1 week per cm of thickness	≤ 2% CM
	Premixed cement plaster	According to the manufacturer's instructions	≤ 2% CM
	Litoplan Rapid or Litoplan Smart based levelling	24 hours	≤ 2% CM
	Gypsum-based plaster	According to the manufacturer's instructions	≤ 0.5% CM
	Gypsum panels	According to the manufacturer's instructions	dry
	Wood panels	According to the manufacturer's instructions	dry
	Fibre cement panels	According to the manufacturer's instructions	dry
	Lightweight extruded polystyrene panels with coated surfaces	According to the manufacturer's instructions	dry
FLOORS	Concrete slab	3 months	≤ 2% CM
	Cementitious screed	28 days	≤ 2% CM
	LITOCER based cementitious screed	2 weeks	≤ 2% CM
	Anhydrite screed	According to the manufacturer's instructions	≤ 0.5% CM
	Litoliv Extra 15, Litoliv S40 ECO, Litoliv Express, Litoplan Rapid, Litoplan Smart based levelling	24 hours	≤ 2% CM

CM - Carbide hygrometer.



## APPLICATION

1 - Firstly, make sure the site weather conditions are suitable for the product to be applied. In particular, the temperature must be between +10°C and +25°C. Avoid applying the products in environments where the atmospheric humidity is too high as it will take longer to dry. Also check that there are no favourable conditions for condensation to form on the substrates.

2 - Shake the packaging and apply two coats of Primer SK directly on the substrate to be waterproofed using a roller or a brush, consuming 150 g/m<sup>2</sup> per coat. The second coat must be applied once the first is dry i.e., after approximately 30 minutes depending on the temperature conditions. Resistance to water vapour diffusion  $S_d > 1 \times 10^{-6}$  s/m is achieved with this amount of applied Primer SK, together with the Hidroflex liquid membrane.

3 - After the second coat of Primer SK is completely dry (about 2 hours at +23°C), apply the Hidroflex liquid membrane with a brush at the corners and apply the internal and external Litoband SK corners for IC internal and EC external corners exerting a strong pressure on the fresh layer of membrane, preventing the formation of air bubbles or creases.

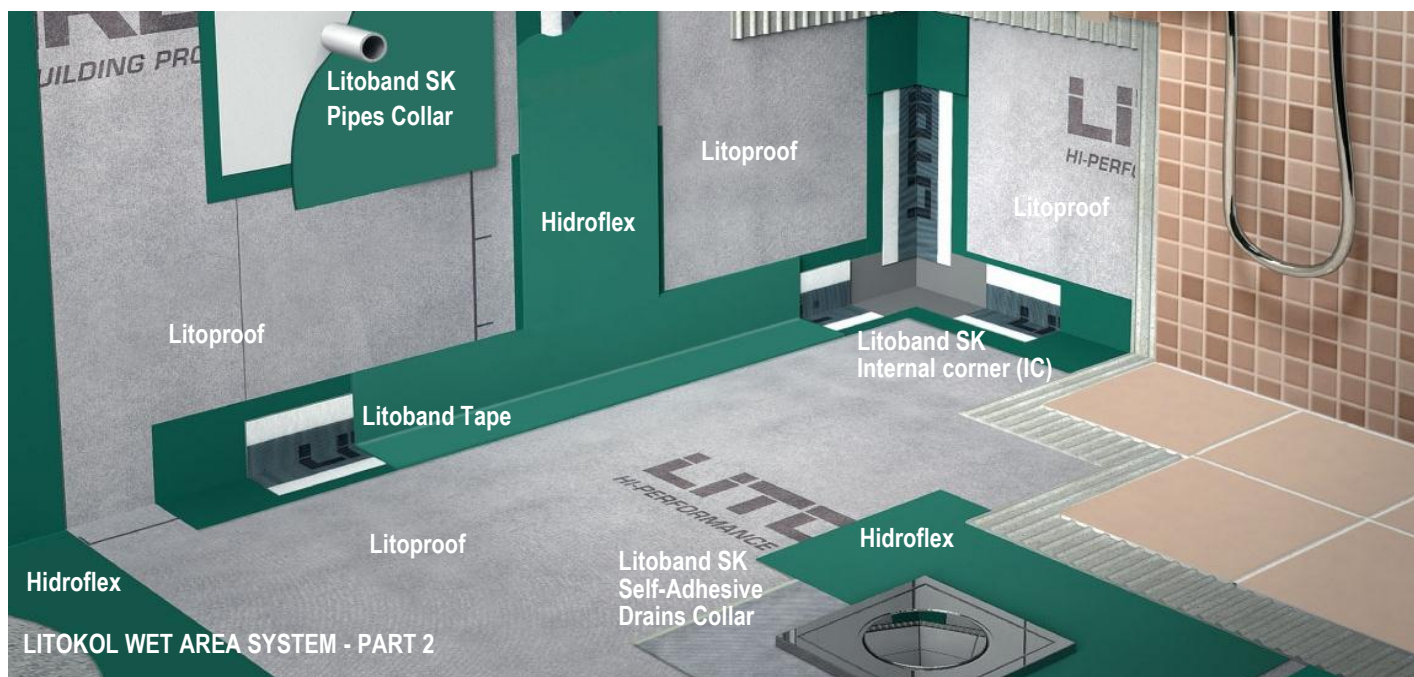
4 - Similarly, apply the sealing tape Litoband SK Tape, previously cut to size, on the fresh layer of Hidroflex at all corners between the wall/wall and wall/floor overlapping a few centimetres on the previously applied Litoband SK corners for IC and EC corners. Exert good pressure to prevent the formation of air bubbles or creases.

5 - Seal the floor and wall pipes by installing Litoband SK Pipes Collar accessories of adequate diameter on a fresh layer of Hidroflex and applying good pressure to prevent the formation of air bubbles or creases.

6 - The floor drains must be sealed with a butyl Litoband SK Self-Adhesive Drains Collar sheet adhered directly on to the layer of Primer SK after having made a central hole of adequate diameter using a cutter for the size to be drained. If necessary, use the cutter provided by certain drain manufacturers to make the hole. The butyl self-adhesive sheet must be folded into the drain as shown in the figure. Prevent the formation of air bubbles or creases here too.

7 - Apply a first coat of 1.15 kg/m<sup>2</sup> Hidroflex with a roller or brush on the substrate, previously treated with Primer SK, covering the area that is to be waterproofed completely including the previously applied Litoband SK accessories.

8 - After the first coat of Hidroflex has dried (about 2 hours in favourable temperature and humidity conditions), apply a second coat using the same amount, thereby resulting in a total consumption of 2.3 kg/m<sup>2</sup>. With this amount the final thickness of dry Hidroflex is equal to 1 mm. Wait for the second coat to dry completely before applying ceramic tiles. For a final thickness of 1 mm, the total drying time at +23°C is about 16 hours.



1 - Firstly, make sure the site weather conditions are suitable for the product to be applied. In particular, the temperature must be between +5°C and +30°C. Avoid applying the products in environments where the atmospheric humidity is too high as it will take longer to dry. Also check that there are no favourable conditions for condensation not to form on the substrates.

2 - Cut the waterproofing Litoproof fabric beforehand according to the length of the areas that are to be waterproofed (wall and floor).

3 - Use a roller to apply the Hidroflex liquid membrane on the substrate that is to be waterproofed, approx. 1 kg/m<sup>2</sup> and immediately lay the Litoproof sheet before the membrane forms the superficial film. Take great care when applying the sheet and avoid forming creases. Use a smooth trowel to help the sheet adhere completely to the liquid membrane by releasing the air.

4 - During the application, the Litoproof sheets must be placed one next to the other.

5 - Cut the diameter of the Litoproof sheet as required at the drains and pipe passages.

6 - Apply the Hidroflex liquid membrane with a brush at the corners and apply the internal and external Litoband SK corners for IC internal and EC external corners exerting a strong pressure on the fresh layer of membrane, preventing the formation of air bubbles or creases.

7 - Similarly, apply the sealing tape Litoband Tape, previously cut to size, on the fresh layer of Hidroflex at all corners between the wall/wall and wall/floor overlapping a few centimetres on the previously applied Litoband SK corners for IC internal and EC external corners. Exert good pressure to prevent the formation of air bubbles or creases.

8 - Seal the joints between the laid Litoproof sheets by applying a layer of Hidroflex on the joints that is at least 14 cm and overlapping the Litoband Tape. Exert good pressure to prevent the formation of air bubbles or creases.

9 - Seal the floor and wall pipes by installing Litoband SK Pipes Collar accessories of adequate diameter on a fresh layer of Hidroflex and applying good pressure to prevent the formation of air bubbles or creases.

10 - The floor drains must be sealed with a butyl Litoband SK Self-Adhesive Drains Collar sheet glued directly on to the Litoproof sheet after having made a central hole of adequate diameter using a cutter for the size to be drained. If necessary, use the cutter provided by certain drain manufacturers to make the hole. The butyl self-adhesive sheet must be folded into the drain. Prevent the formation of air bubbles or creases here too.

11 - Apply a layer of Hidroflex liquid membrane with a brush or roller at the corners, pipe passages, drains and joints between the sheets for all the Litoband SK accessories to sink in. The Hidroflex liquid membrane must cover an area that is a few centimetres wider than the accessories. Wait for the Hidroflex liquid membrane to dry completely before applying ceramic tiles (about 16 hours at +23°C).

### INSTALLATION OF THE TILES

The table below shows the adhesives for ceramic tiles, natural stone and glass mosaics to be applied, which are suitable for floor and wall applications on both waterproofing kits. The adhesive is chosen considering the longer side of the elements that are to be installed.

PRODUCTS	Litokol X11/X12	Litoflex K80	Litoflex K80 Export	Litoplus K55	Superflex K77	Litofast K86	Litostone K99	Cementkol K21/K22 + Latexkol diluted 1:1 with water	Cementkol K21/KK2 + Latexkol	Litoelastic
Classes	C2TE	C2E	C2TE	C2TE	C2TE S1	C2FT	C2FE	C2 S1	C2 S2	R2T
Ceramic tiles	≤ 30	≤ 60	≤ 60	≤ 30	≤ 120	≤ 60	≤ 60	≤ 120	> 120	> 120
Stable natural stone for humidity	≤ 30	≤ 60	≤ 60	≤ 30	≤ 120	≤ 60	≤ 60	≤ 120	> 120	> 120
Average stable natural stone for humidity						≤ 60	≤ 60			> 120
Artificial marble or natural stone highly unstable to humidity										> 120
Glass mosaics and ceramics				•	•					•

• Recommended product.



## GROUTING

Any plastic spacers are to be removed before grouting. The joints between the tiles may be sealed 24 hours after laying the ceramics. Cementitious grouts such as LITOCROM 1-6, LITOCROM 3-15 can be used for grouting or with two-component epoxy mortars EPOXYSTUK X90 and STARLIKE®.

## SEALING

All horizontal and vertical corners between the wall and floor and between the wall and wall, as well as any vents or exhaust ducts must be sealed with OTTOSEAL S100/S105 in the case of ceramic tiles or OTTOSEAL S70 in the case of natural stone and resin-based composites.

## WARNINGS

- Do not add lime, cement or other foreign materials to the product.
- Do not dilute the product with water
- Apply at temperatures between +5°C and +35°C.
- Do not apply the product on plastic or metal materials.
- Do not apply the product on non-absorbent substrates such old ceramic tiles, marble tiles or natural stone.
- Do not apply the product on surfaces subject to rising humidity.

## APPLICATION DATA

Application	Roller, brush or smooth steel trowel
Admitted application temperatures	From +5°C to +35°C
Total thickness to be applied in two subsequent coats	1 mm
Drying time at t=+23°C	1st coat: 2 hours – 2nd coat: 16 hours
Cleaning	The equipment must be cleaned from product residue with water before the product hardens. Once it is dry, only mechanically.
Consumption	1.15 kg/m <sup>2</sup> per coat
Waiting time before laying of ceramics	At least 16 hours after applying the second coat.

## PERFORMANCE

Resistant to water under positive pressure in accordance with EN 14891-A7 (150 kPa for 7 days)	No penetration and weight gain < 20 grams
Initial tensile strength adhesion in accordance with EN 14891-A.6.2	≥ 0.5 N/mm <sup>2</sup>
Tensile strength adhesion after immersion in water in accordance with EN 14891-A.6.3	≥ 0.5 N/mm <sup>2</sup>
Tensile strength adhesion after thermal ageing in accordance with EN 14891-A.6.5	≥ 0.5 N/mm <sup>2</sup>
Tensile strength adhesion after frost-melting cycles in accordance with EN 14891-A.6.6	≥ 0.5 N/mm <sup>2</sup>
Tensile strength adhesion after contact with lime water in accordance with EN 14891-A.6.9	≥ 0.5 N/mm <sup>2</sup>
Crack-bridging capacity under normal conditions in accordance with EN 14891-A8.2	≥ 0.75 mm
Crack-bridging capacity at low temperature (-5°C) in accordance with EN 14891-A.8.3	≥ 0.75 mm
Temperature of use	From -10°C to +90°C

The values in the table were determined with PRIMER SK and HIDROFLEX and the adhesion with C2 class cementitious adhesive in accordance with EN 12004

Although the information in this technical chart is from our best experience, it is merely indicative.

Each specific case must be subjected to practical preliminary tests by the user who undertakes the responsibility for the final work result.

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