Revinex® Flex System

Multi-purpose cementitious waterproofing system

Description

Multi-purpose cementitious waterproofing system

Fields of application

The combination of the **standard** cementitious component (A) with water or with one of the 3 specialized liquid components (B), creates **4 different waterproofing systems** depending on the required properties of each application:

1. **Revinex® Flex** + water: One-component, economical and easy to apply. Ideal for effective waterproofing in basements, walls, shafts, exterior walls to be backfilled etc.
2. **Revinex® Flex + Revinex® Flex FP**: Certified resistance to hydrostatic pressure of 7 bar acc. to DIN 1048-5 and EN 12390-8. Ideal waterproofing solution for basements, water tanks, etc.
3. **Revinex® Flex + Revinex® Flex U360**: Flexible waterproofing system, ideal for terraces, balconies, swimming pools, wet rooms (bathrooms, kitchens, etc.), before applying ceramic tiles.
4. **Revinex® Flex + Revinex® Flex ES:** Elastic waterproofing system with resistance to UV radiation. Ideal for demanding waterproofing applications on terraces and balconies under tiles, as well as on exposed surfaces such as flat roofs, exterior walls etc.

Properties - Advantages

- Excellent adhesion on various substrates
- Water vapour permeable, with crack-bridging properties
- Integrated and adaptable waterproofing system to cover all needs, depending on each project's specific requirements
- Highly durable

Packing

Revinex® Flex
Grey: 25kg & 5kg, bags
(A component)
White: 25kg, bag
(A component)

Revinex® Flex FP
7kg, plastic pail
(B component)

Revinex® Flex U360
10kg, plastic pail
(B component)

Revinex® Flex ES
12kg & 2,4kg, plastic pails
(B component)

Colours

Grey, White

Certificates – Test reports

Revinex® Flex

- CE certification acc. to EN 1504-2
  Certificate of Conformity No. 1922-CPR-0386
- Test reports by the external independent quality control laboratory Geoterra (No. 2015/397 & 2021/229_28)

Revinex® Flex FP

- CE certification acc. to EN 1504-2
  Certificate of Conformity No. 1922-CPR-0386
- Test report for the resistance to water penetration under pressure by the Department of Civil Engineering of Aristotle University of Thessaloniki
  Certified resistance to hydrostatic pressure of 7 bar acc. to DIN 1048-5 and EN 12390-8
- Test reports by the external independent quality control laboratory Geoterra (No. 2015/397 & 2019/341)

Revinex® Flex U360

- CE certification acc. to EN 1504-2
  Certificate of Conformity No. 1922-CPR-0386
- Test reports by the external independent quality control laboratory Geoterra (No. 2019/341 & 2021/229_16)
- Analysis report by the Department of Chemical Engineering of National Technical University of Athens

Revinex® Flex ES

- CE certification acc. to EN 1504-2
  Certificate of Conformity No. 1922-CPR-0386
- Test reports by the external independent quality control laboratory Geoterra (No. 2015/397 & 2019/341)
  Analysis report by the Department of Chemical Engineering of National Technical University of Athens

Technical Characteristics

Revinex® Flex + water	
Mixing ratio (with water, w/w)	25:7
Density of mixture (EN ISO 2811-1)	1,90kg/L (±0,1)
Compressive strength (EN 1015-11)	15,8MPa (±1)
Flexural strength (EN 1015-11)	5,9MPa (±0,5)
Adhesion strength (EN 1542)	≥1,5N/mm^2
Liquid water permeability (EN 1062-3)	<0,1kg/m^{2}h^{0,5}
CO_2 diffusion - Equivalent air layer thickness Sd (EN 1062-6)	>50m

Water-vapour diffusion - Equivalent air layer thickness Sd (EN ISO 7783)	<1m (Class I – permeable)
Consumption: 2-2,5kg/m² for two layers (cementitious surface)	

Revinex® Flex + Revinex® Flex FP	
Mixing ratio A:B (w/w)	25:7
Density of mixture (EN ISO 2811-1)	2,00kg/L (±0,1)
Compressive strength (EN 1015-11)	21,9MPa (±1)
Flexural strength (EN 1015-11)	10,4MPa (±0,5)
Resistance to hydrostatic pressure (DIN 1048-5 / EN 12390-8)	7 bar - Pass
Adhesion strength (EN 1542)	≥1,5N/mm²
Liquid water permeability (EN 1062-3)	<0,1kg/m²h^{0,5}
CO_2 diffusion - Equivalent air layer thickness Sd (EN 1062-6)	>50m
Water-vapour diffusion - Equivalent air layer thickness Sd (EN ISO 7783)	<1m (Class I – permeable)
Consumption: 2-2,5kg/m² for two layers (cementitious surface)	

Revinex® Flex + Revinex® Flex U360	
Mixing ratio A:B (w/w)	25:10
Density of mixture (EN ISO 2811-1)	1,75kg/L (±0,1)
Compressive strength (EN 1015-11)	20,2MPa (±1)
Flexural strength (EN 1015-11)	10,4MPa (±0,5)
Elongation at break (EN ISO 527-1 / EN ISO 527-2)	25% (±5)
Adhesion strength (EN 1542)	≥1,5N/mm²
Liquid water permeability (EN 1062-3)	<0,1kg/m²h^{0,5}
CO_2 diffusion - Equivalent air layer thickness Sd (EN 1062-6)	>50m
Water-vapor diffusion - Equivalent air layer thickness Sd (EN ISO 7783)	<5m (Class I – permeable)
Crack-bridging properties (EN 1062-7)	>0,5mm [Class A3 (+23°C)]
Consumption: 2-2,5kg/m² for two layers (cementitious surface)	

Revinex® Flex + Revinex® Flex ES	
Mixing ratio A:B (w/w)	25:12
Density of mixture (EN ISO 2811-1)	1,70kg/L (±0,1)
Compressive strength (EN 1015-11)	20,3MPa (±1)

Flexural strength (EN 1015-11)	10,1MPa (±0,5)
Elongation at break (EN ISO 527-1 / EN ISO 527-2)	56% (±6)
Adhesion strength (EN 1542)	≥1,5N/mm^2
Liquid water permeability (EN 1062-3)	<0,1kg/m^{2}h^{0,5}
CO_2 diffusion - Equivalent air layer thickness Sd (EN 1062-6)	>50m
Water-vapour diffusion - Equivalent air layer thickness Sd (EN ISO 7783)	<5m (Class I – permeable)
Crack-bridging properties (EN 1062-7)	>0,5mm [Class A3 (+23°C)]
Consumption: 2-2,5kg/m^2 for two layers (cementitious surface)	

Application conditions - Curing details	
Application temperature (ambient - substrate)	+5°C min. / +35°C max.
Pot life (+20°C, RH 50%)	30 minutes
Drying time (+20°C, RH 50%)	8-10 hours (per layer)
**Low temperatures and high humidity during application and/or curing prolong the above times, while high temperatures reduce them*	

Instructions for use

Substrate preparation

The cementitious substrate must be properly prepared mechanically (e.g. grinding, water jetting, shot blasting, milling etc.) to smooth out irregularities, open the pores and create conditions for optimum adhesion. Older coatings and loose friable material must be completely removed by brushing or by the use of a suitable sander and a high suction vacuum cleaner etc.

Repairs to the substrate, filling of joints, blowholes/voids and surface leveling, repairs in areas with tie holes (after being cut and opened at a depth of 3cm) must be carried out using appropriate repairing products, such as the non-shrinking fiber-reinforced cementitious repairing mortar **Neorep®**. Existing construction joints and cracks of width greater than 0,4mm shall be opened longitudinally in V shape at a depth of app. 3cm and then filled as above.

If any oxidized reinforcement is visible, it is recommended, after removing the loose rust, to use the rust converter **Neodur® Metalforce** and then apply the anti-corrosive mortar **Ferrorep®**. These spots shall be also covered later with **Neorep®**.

In spots where there is existing flow of water, **Neostop®** is recommended to be used prior to the application of **Neorep®**.

Prior to the application of **Revinex® Flex System**, the substrate must be stable, clean and free of dust, oil, grease, dirt, moss or any poorly adhering material. The surface must be as flat and smooth as possible.

Priming

The cementitious surface must be moistened thoroughly by water. The application of the waterproofing system shall begin once a saturated surface-dry (SSD) condition is achieved, without any ponding water.
Alternatively, it is recommended to prime the surface by roller with the co-polymer emulsion **Revinex®** diluted with water in a ratio **Revinex®** : water - 1:4.

Application

To the indicated amount of the liquid B component (depending on the system), the respective amount of the powder (component A) of **Revinex® Flex System** is gradually added, stirring the mixture at the same time with a low-speed electric stirrer, until it becomes homogeneous, without any lumps. Then, the mixture is applied initially in all the corners reinforced with the alkali-resistant fiberglass mesh **Gavazzi® 0059-A** ("wet-on-wet" application of two layers with the fiberglass mesh positioned in between) and, at the same time, in one layer over the whole horizontal and/or vertical surfaces by brush or smooth trowel.

As soon as the first layer of cementitious waterproofing has hardened and after slightly saturating it with water, the second waterproofing layer is applied in a vertical or different direction than the previous one.

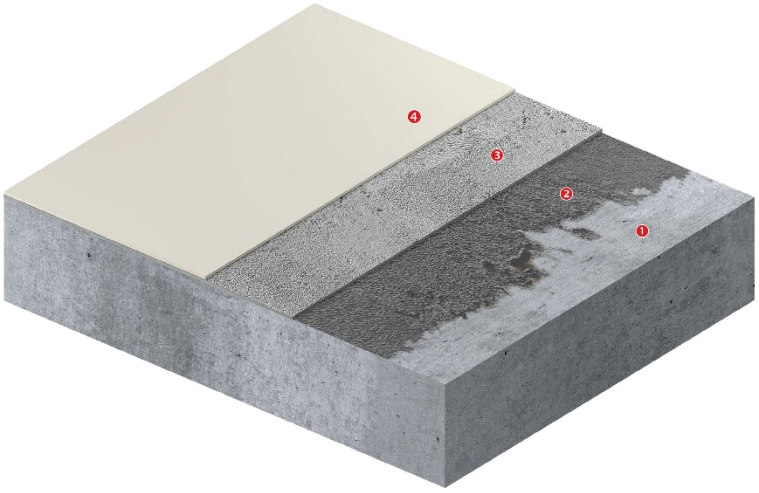
If required, every subsequent layer is applied in the same way. The thickness of each layer should not exceed 1mm of thickness, in order to ensure proper curing of the material. For enhanced tear resistance, it is recommended that the system is thoroughly reinforced with the alkali-resistant fiberglass mesh **N-Thermon® Mesh 90gr** (for the systems **Revinex® Flex** + water or **Revinex® Flex** + **Revinex® Flex FP**) or with **Gavazzi® 0059-A** (for the systems **Revinex® Flex** + **Revinex® Flex U360** or **Revinex® Flex** + **Revinex® Flex ES**).

After the application of the final layer, it is advisable to protect the waterproofing system from the outside weather conditions (direct sunlight, wind, rain, frost) for a time period of 3-5 days.

Special notes

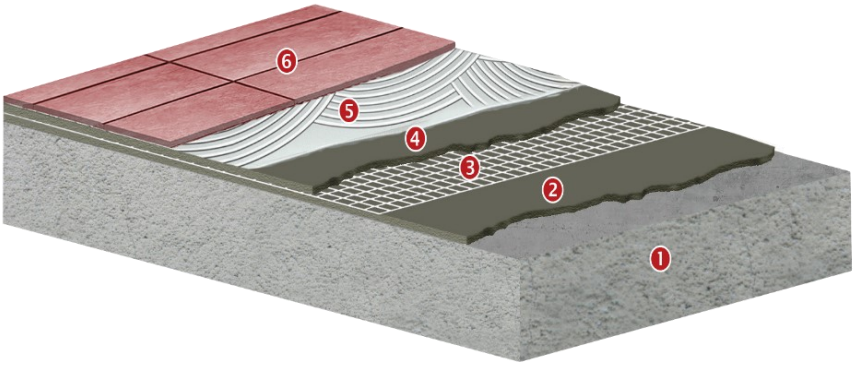
- **Revinex® Flex System** should not be applied under wet conditions, or if wet conditions or rainy weather are expected to prevail during the application or the curing period of the product
- It is recommended to allow **Revinex® Flex System** to cure for 5 to 8 days, before overcoating with tiles or other coatings
- In case of applying tiles on top of **Revinex® Flex System** it is strongly recommended that the tile adhesive has sufficient elasticity (indicative proposed type C2TE S1)
- In case of application in (non-potable) water tanks, they should be filled with water after at least 7-10 days (depending on prevailing atmospheric conditions) have passed from the application of the final layer. The water used for the initial filling of the tank should be disposed
- The durability of the waterproofing system (and especially its resistance to water pressures) is enhanced by the increase of the total dry film thickness, which may be achieved through the application of an additional layer or layers
- The system should not be applied on cementitious substrates that are not sufficiently cured

Indicative systems build-up



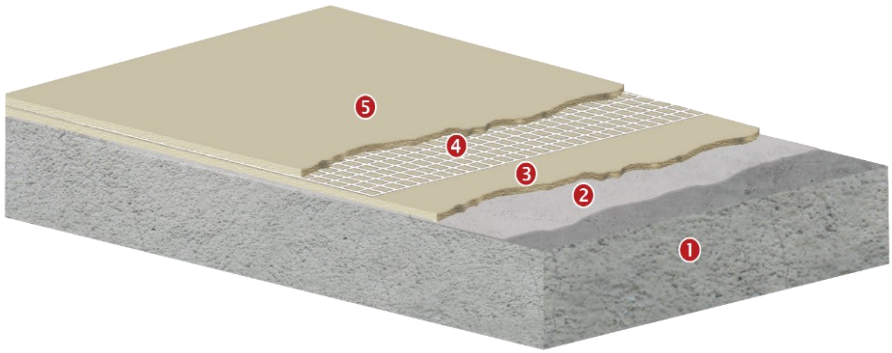
WATERPROOFING OF NON-EXPOSED SURFACES

1. Cementitious substrate ("SSD" condition)
2. *Cementitious waterproofing:* **Revinex® Flex FP** (A+B)
3. *Cementitious waterproofing:* **Revinex® Flex FP** (A+B)
4. Cementitious top coat



WATERPROOFING UNDER TILES ON TERRACES / BALCONIES / BATHROOMS / KITCHENS

1. Cementitious substrate ("SSD" condition)
2. *Cementitious waterproofing:* **Revinex® Flex U360** (A+B)
3. *Fiberglass reinforcement:* **Gavazzi® 0059-A**
4. *Cementitious waterproofing:* **Revinex® Flex U360** (A+B)
5. Elastic tile adhesive
6. Tiles



EXPOSED ROOF WATERPROOFING

1. Cementitious substrate
2. *Primer:* **Revinex®** + water (ratio 1:4)
3. *Cementitious waterproofing:* **Revinex® Flex ES** (A+B)
4. *Fiberglass reinforcement:* **Gavazzi® 0059-A**
5. *Cementitious waterproofing:* **Revinex® Flex ES** (A+B)

Colours	Grey, white
Packing	**Revinex® Flex (Component A):** 25kg & 5 kg in bags (grey), 25kg in bags (white) **Revinex® Flex FP (Component B):** 7kg in plastic pails **Revinex® Flex U360 (Component B):** 10kg in plastic pails **Revinex® Flex ES (Component B):** 12kg & 2,4kg in plastic pails
Cleaning of tools – Stains removal	By water immediately after the application. In case of hardened stains, by mechanical means only.
UFI code	*Revinex® Flex FP (Component B):* KSC0-K0TS-U00X-FUKX *Revinex® Flex U360 (Component B):* DVC0-30H6-500F-4660 *Revinex® Flex ES (Component B):* 3PC0-304D-J00F-TH0V

Storage stability	*Revinex® Flex (Component A):* 12 months, if kept in the original sealed packaging, protected from frost, humidity and exposure to solar radiation. *Revinex® Flex FP/U360/ES (Component B):* 2 years, if kept in the original sealed packaging, protected from frost, humidity and exposure to solar radiation.

CE 1922	
NEOTEX S.A. V.Moira str., P.O. Box 2315 GR 19600 Industrial Area Mandra, Athens, Greece (Production factory 1) 14	
1922-CPR-0386 DoP No.: 4950-8.0 **EN 1504-2** **Revinex® Flex System** Surface protection products Coating	
Water vapour permeability	Class I
Adhesion strength	≥1,5N/mm^2
Capillary absorption and permeability to water	W<0,1Kg/m^{2}h$^{0.5}$
Permeability to CO_2	S_D>50m
Reaction to fire	Euroclass F
Dangerous substances	Complies with 5.3

CE 1922	
NEOTEX S.A. V.Moira str., P.O. Box 2315 GR 19600 Industrial Area Mandra, Athens, Greece 14	
1922-CPR-0386 DoP No.: 4950-8.1 **EN 1504-2** **Revinex® Flex FP** Surface protection products Coating	
Water vapour permeability	Class I
Adhesion strength	≥1,5N/mm^2
Capillary absorption and permeability to water	W<0,1Kg/m^{2}h$^{0.5}$
Permeability to CO_2	S_D>50m
Reaction to fire	Euroclass F
Dangerous substances	Complies with 5.3

CE 1922	
NEOTEX S.A. V.Moira str., P.O. Box 2315 GR 19600 Industrial Area Mandra, Athens, Greece 14	
1922-CPR-0386 DoP No.: 4950-8.2 **EN 1504-2** **Revinex® Flex U360** Surface protection products Coating	
Water vapour permeability	Class I
Adhesion strength	≥1,5N/mm^2
Capillary absorption and permeability to water	W<0,1Kg/m^{2}h$^{0.5}$
Permeability to CO_2	S_D>50m
Reaction to fire	Euroclass F
Dangerous substances	Complies with 5.3

CE 1922	
NEOTEX S.A. V.Moira str., P.O. Box 2315 GR 19600 Industrial Area Mandra, Athens, Greece 14	
1922-CPR-0386 DoP No.: 4950-8.3 **EN 1504-2** **Revinex® Flex ES** Surface protection products Coating	
Water vapour permeability	Class I
Adhesion strength	≥1,5N/mm^2
Capillary absorption and permeability to water	W<0,1Kg/m^{2}h$^{0.5}$
Permeability to CO_2	S_D>50m
Reaction to fire	Euroclass F
Dangerous substances	Complies with 5.3

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