

## Kimicover DUO

ST4-0619

*Two-component elastic waterproofing cementitious mortar for balconies and terraces and for anti-carbonation skim coating of r.c. buildings.*



### DESCRIPTION

**Kimicover DUO** is a two-component waterproofing cementitious system, based on cements modified with special alkali-resistant polymers (HSR Technology) which can be applied both horizontally and vertically, with excellent resistance to chemical aggression from sulphates, de-icing salts, acid rain, chlorides. It meets the requirements defined in EN 14891 and is CE marked according to EN 1504-2, it is used for the principles of use PI (protection against entrance through coating), MC (protection against humidity through coating) and IR (increase of resistivity).

### ADVANTAGES

- **Performing:** it can be applied even on substrates without joints (surfaces < 25 m<sup>2</sup>).
- **Versatile:** changing the mixing ratio, it can be used for applications with specific needs.
- **Easy to apply:** excellent workability and easy to apply (manual or mechanised).

### USES

- Mixed with 33% (by weight) of component B, it is used to skim plaster and concrete structures and to waterproof bathrooms, shower trays, planters, balconies and small terraces.
- Mixed with 50% (by weight) of component B, it is used to waterproof joints, lapels and medium-sized terraces for which fractionation/expansion joints are necessary.

### WORKS

- Waterproofing and tiling of balconies (already tiled too) of small dimensions (<25 sqm), without joints, even if subject to dynamic stresses (**SA17**).
- Waterproofing and tiling of balconies and terraces with joints (joints distance <3 m), already tiled too, with elastic cement systems (**SA16**).
- Cortical restoration and protection of degraded reinforced concrete structures with exposed metal

reinforcement (**SA65**).

### APPLICATION

	Roller, brush or push broom application		Complete hardening time: 7 days
	Mechanical device application		
	Max. thickness per coat: 2 mm for horizontal applications; 2 mm for vertical applications; Max total thickness : 4 mm		

The substrates must be clean and mechanically consistent, any holes or irregularities in the substrate must be previously repaired with suitable Kimia products. In case of waterproofing of already tiled surfaces, remove the first row of wall tiles for a height of about 20 cm, perform an acid washing of the surface with **Soluzione P**.

In case of degraded concrete substrates it will be necessary to check the depth of the degradation and proceed with a proper cortical restoration cycle.

Between 8 and 24 hours prior to the start of operations, the screeds must be treated with a coat of Kimicover FIX MV primer.

The points of contact between the screed and the collection wells, once the tiles have been removed, the external edges of the joints have been cleaned and possibly rebuilt, will be waterproofed by applying **Kimicover JOINT P** and **Kimicover DUO** reinforced with **Kimitech 120** mesh.

The joints between the wall and the floor will be waterproofed by applying **Kimicover JOINT** and **Kimicover DUO** reinforced with **Kimitech 120** mesh.

The joints will be waterproofed by laying Ethafoam, sealed with **Tecnoseal 130** or **Tecnoseal 88** (which must cure at least 24 hours) before laying **Kimicover JOINT** elastic strip. The distance between the joints must be evaluated on a case-by-case basis, depending on the type of substrate and the expected stresses.

Pour the liquid (component B) into a suitable clean container and slowly add the powder (component A), according to one of the two selected ratios, taking care to mix it slowly and carefully with a mechanical stirrer for a few minute until you get a homogeneous mixture absolutely free of lumps or dust particles not dispersed both in the bottom and in the walls of the container.

Apply a first coat of **Kimicover DUO** reinforced with **Kimitech 350** mesh.

Once hardened and in any case not before 24 hours, apply a further coat of **Kimicover DUO**.

When laying the product do not exceed 2 mm per coat and do not make overall thicknesses greater than 4 mm.

After a minimum of 7 days bond the ceramic tiles, using **Aderflex KR** powder adhesive for tiles.

Any expansion joints on the substrate will be respected in the covering, which will then be sealed with **Tecnoseal 88** or **Tecnoseal 130** sealant.

## CONSUMPTION

1,5-1,7 Kg/m<sup>2</sup>/mm (component A+B) depending on the mixing ratio chosen.

## PACKAGING

Component A (powder):

Multilayer paper bags 25 Kg

Pallet 60x25 – 1500 Kg

Component B (liquid):

- Plastic tanks 25 kg  
Pallet 24x25 – 600 Kg
- Plastic tanks 8,5  
Pallet 60x8,5 – 510Kg

## STORAGE

The product fears humidity; store in a dry and sheltered place: in these conditions and stored in hermetic containers the product stability is 12 months.

Characteristics	Component A (average value)	Component B (average value)
Mixing ratio:	A : B = 3 : 1 A : B = 2 : 1	
Appearance	Powder	Liquid
Color	Grey	White
Apparent specific weight UNI 9446	1,4 ± 0,1 g/cm <sup>3</sup>	1,03 ± 0,2 g/cm <sup>3</sup>
Hazard classification 1999/45/CE e 67/548/CEE	Irritant	Irritant
pH	11,5 ± 0,5	6,5 ± 0,5
Solid residue	100 %	51-53 %
Max dimension of the aggregate UNI EN 1015-1	0,5 mm	
Viscosity type Brookfield (300 r.p.m. and 25°C) UNI 8490-3		40-80 mPa·s
Application temperature	+2°C - +30 °C	+2°C ~ +30 °C

System properties	A:B=3:1 (average value)	A:B=2:1 (average value)
Appearance	Grey	Grey

Consistency	Plastic	Fluid
Density	1500 Kg/m <sup>3</sup>	1420 Kg/m <sup>3</sup>

Characteristics	Limits EN 1504-2	Typical value for 33% and 50% system
Concrete adhesion (EN 1542) [MPa]	Flexible systems with trafficking >0,8 MPa; without trafficking >1,5 MPa. Rigid systems with trafficking >1 MPa; without trafficking >2 MPa.	0,85
Concrete adhesion after water immersion [MPa]		1,21
Permeability EN ISO 7783-2	Class I Sd < 5 m	Class I Sd 2,8 m
Water impermeability (EN 1062-3) [Kg/m <sup>2</sup> ·h <sup>1/2</sup> ]	< 0,1	0,04
Permeability to carbon dioxide UNI EN 1062-6	Sd > 50 m	75 m
Fire reaction class	-	F

## WARNING

Product for professional use.

Given the possibility that different supplies of the same raw materials have slightly discordant colors, including a lot of production and the other may be minor color variations that do not affect in any way the technical performance of the products supplied.

Before using, check bags have not been damaged, and do not use the product if there are any lumps.

The equipment used for the application of the product can be cleaned with water before hardening.

Avoid the application of the product at temperatures below + 2°C.

Take all necessary precautions for a good curing of the product.

If the application is carried out in conditions of low relative humidity, wind and sun, it is advisable to protect the treated surfaces with protective sheets.

The treated surfaces must be protected from rain, fog or contact with water for at least 24 hours after laying.

The technical specifications and application methods recommended herein are based on our current knowledge and experience and do not represent any form of guarantee of the final results obtainable with the product.

It is the customer's responsibility to check that this data sheet is still effective and has not been replaced with a more recent version, and that the product is suitable for the intended use.

## TECHNICAL SPECIFICATIONS

**SK17** - Waterproofing and tiling of balconies (already tiled too) of small dimensions (<25 sqm), without joints, even if subject to dynamic stresses;

**SK16** - Waterproofing and tiling of balconies and terraces with joints (joints distance <3 m), already tiled too, with elastic cement systems.

(SK17) This type of work can be carried out in the case of balconies and small terraces, meaning "small" terraces that, given their small size, are not subject to dynamic cracks and do not require joints. All joints must be properly calculated by the designer and/or the contractor considering the technical characteristics of the adjacent building materials, the exposure of the building and the construction method adopted. In general, the maximum dimensions above which it is necessary to make fractionation and expansion joints (for which it is therefore appropriate to apply the 50% bicomponent cementitious system) are: 10 square meters in case of adherent screeds; at least every 15 square meters for floating screeds on rough concrete; at least every 20 square meters for floating screeds on plain concrete or desolidization sheets.

Cleaning (aimed at the total elimination of dust, grease, old varnishes, inconsistent parts, in detachment, not having sufficient mechanical characteristics and any other material that could affect the good anchoring) and possible cortical restoration/skimming of the substrate, preliminary treatment of joints, fittings and waterproofing with **Kimicover DUO** two-component mortar (mixing ratio A: B = 3: 1) by Kimia SpA or similar product (consumption of A + B not less than 3.5 kg/sqm), reinforced with Kimitech 350 mesh.

(SK16) This type of work is necessary for balconies and terraces subject to dynamic cracks or for which deformations such as to require the construction of joints have been foreseen during curing and/or operation. If the surface is characterized by the presence of "natural" joints with an irregular pattern or has a ceramic coating without joints/with joints not correctly aligned with the underlying joints, contact the Technical Dpt.

Cleaning (aimed at the total elimination of dust, grease, old varnishes, inconsistent parts, in detachment, not having sufficient mechanical characteristics and any other material that could affect the good anchoring) and possible cortical restoration/skimming of the substrate, preliminary treatment of joints and fittings and waterproofing with **Kimicover DUO** two-component mortar (mixing ratio A: B = 2: 1) by Kimia SpA or similar product (consumption of A + B not less than 3.5 kg/sqm), reinforced with Kimitech 350 mesh.

The two-component waterproofing and elastic mortar will be prepared and applied scrupulously following the instructions on the technical data sheets provided by the manufacturer and must have the following characteristics:

With mixing ratio A: B = 3: 1:

- Elongation at failure at 7 days (20 ° C-60% U.R.):> 13;
- Elongation at failure at 28 days (7 days 20°C-60% U.R + 21 days in water):> 9%;
- Adhesion to the substrate at 28 days (7 days 20 ° C-60% U.R + 21 gg in water):> 0.6 N/mm<sup>2</sup>;
- Adhesion to the substrate at 7 days (20 ° C-60% U.R.):> 0.6 N / mm<sup>2</sup>;
- Water tightness UNI 8202-21: 1000 mm of H2O (Waterproof after 24 hours) N / mm<sup>2</sup>.

With mixing ratio: A (powder): B (liquid) = 2: 1.

- Elongation at failure at 7 days (20 ° C-60% U.R.):> 13%;
- Elongation at failure at 28 days (7 days 20 ° C-60% U.R + 21 days in water):> 9%;
- Adhesion to the substrate at 28 days (7 days 20 ° C-60% U.R + 21 days in water):> 0.85 N/mm<sup>2</sup>;
- Adhesion to the substrate after immersion in water:> 0.8 N/mm<sup>2</sup>;
- Water impermeability (EN 1062-3) [Kg / m<sup>2</sup> · h<sup>1/2</sup>] <0.1;
- Permeability to carbon dioxide EN 1062-6: Sd> 50 m;

The product will be CE marked as a type C second protective coating according to EN 1504-2, principles of intervention PI, MC and IR.

For tiling (to be carried out at the end of the waterproofing curing, in any case not before 7 days) use Aderflex KR by Kimia S.p.A. or similar product. Material consumption will vary between 3 kg/m<sup>2</sup> and 5 kg/m<sup>2</sup> depending on the size of the tile.

**SK65** - Ripristino corticale e protezione di strutture in cemento armato degradato con armatura metallica a vista

(SK65)(SK65) Accurate removal of degraded and inconsistent concrete by hammering until you see a compact substrate.

Remove concrete from the exposed metal reinforcements in contact with them using a needle gun.

Laying of the new collaborative metal reinforcement in case of noticeable oxidation of existing irons with a strong reduction of the section and grouting with special epoxy resins.

Sandblasting or hydro-sandblasting of concrete and metal reinforcement. SSD and remove stagnant water at the time of casting.

For the treatment of the reinforcement, use Betonfix KIMIFER mortar by Kimia S.p.A. or similar product. The product will be applied by brush in a double coat with a total consumption of about 0.5 Kg/m<sup>2</sup>. The first coat will be spread on the metal reinforcement to be protected, the second coat will be applied, as an adhesive bridge, even on the concrete to be restored.

For the cortical restoration, Betonfix FB mortar by Kimia S.p.A. or similar product. Apply Kimicover DUO (mixing ratio A:B=3:1) by Kimia S.p.A. or a similar product applied in a double coat by brush, roller or spray respecting a total consumption (A+B) not lower than 3.5 kg/m<sup>2</sup>.

The two-component elastic waterproofing mortar will be prepared and applied scrupulously following the instructions on the technical data sheets provided by the manufacturer and must have the following features:

With mixing ratio A:B=3:1:

- Elongation at failure at 7 days (20°C-60%U.R.): >13;
  - Elongation at failure at 28 days (7 days 20°C-60% U.R.+21 days in water): >9 %;
  - Adhesion to substrate at 28 days (7 days 20°C-60%U.R.+21 days in water): >0.6 N/mm<sup>2</sup>;
  - Adhesion to substrate at 7 days (20°C-60%U.R.): >0.6 N/mm<sup>2</sup>;
  - Water impermeability UNI 8202-21: 1000 mm di H2O (Impermeable after 24 hours) N/mm<sup>2</sup>.
- With mixing ratio: A(powder):B(liquid)=2:1.
- Elongation at failure at 7 days (20°C-60%U.R.): >13 %;
  - Elongation at failure at 28 days (7 days 20°C-60%U.R.+21 days in water): >9 %;
  - Adhesion to substrate at 28 days (7 days 20°C-60%U.R.+21 days in water): >0.85 N/mm<sup>2</sup>;
  - Adhesion to substrate after water immersion: >0.8 N/mm<sup>2</sup>;
  - Water impermeability (EN 1062-3) [Kg/m<sup>2</sup>·h<sup>1/2</sup>] < 0,1;
  - Permeability to carbon dioxide EN 1062-6: Sd > 50 m;

The product will be CE marked as a protective coating type C according to EN 1504-2, principles of intervention PI, MC and IR.