

Kimitech ECF

Three-component thixotropic epoxy-cement system for resin-flooring and coating



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DESCRIPTION

Kimitech ECF is a three-component epoxy-cement system consisting of the two-component epoxy resin Kimitech EC (part A + part B) and a dry mix of hydraulic binders and additives (Kimifill K12), with a trowelable plastic consistency, optimized for mechanized application. It can also be pigmented on site to guarantee different aesthetic finishes (spatulated, cloudy effects etc.).

ADVANTAGES

- Applicable indoors thanks to the use of water-based solvents; rapid development of mechanical performances; excellent adhesion on wet substrates; no shrinkage for thicknesses up to 5 mm; good resistance to chemicals
- easy to apply: initial rheology and pot-life of the mixture optimized for application with airless pump without excessive dilution.

USES

- Kimitech ECF is used for spray waterproofing of walls against the ground.
- It is used, after priming with Kimicover FIX MV, to regularize (in terms of absorption and flatness) tiled substrates on which to apply Kimifloor decorative cycles.
- Kimitech ECF is used to create cycles, even decorative ones, with a more or less material appearance and in view of the realization of the pore-dye skimming preparatory to the self-leveling systems.

The water in the screed can move inside the screed, concentrating punctually, for an osmotic process, in areas with higher salt contents than the surrounding ones. In case of damp substrates (due to pipe leaks, because they are free of vapor barrier and subject to large rising phenomena, etc.) and characterized by the simultaneous presence of a high content of salts (for instance screeds on sea-front structures), with low original mechanical performance and/or which cannot be adequately prepared,

if a perfectly waterproof coating is made, any rising damp from the screed is blocked under it, and these accumulations of water cause, even after months, swells full of water (even under pressure) concentrated:

- under the epoxy-cement system (in case of an original mechanical inadequacy of the substrate or of its not perfect cleaning or preparation);
- between the epoxy-cement system and the thickness coating above it (if the minimum thicknesses of application of the epoxy-cement system are not respected or during the operational phase, the appropriate measures are not taken to ensure optimal adhesion between the epoxy-cement system and the thick coatings).

In order to prevent the formation of osmotic branding, therefore, in case of wet substrates characterized by the simultaneous presence of a high content of salts (for instance screeds on structures facing the sea), with low original mechanical performance and/or which can be adequately prepared, it is preferable to avoid applying thick coatings (such as, for example, Kimitech HLA) over Kimitech ECF. Rather, it is advisable to conclude the cycles by applying any colored varnishes and providing a final polyurethane protection.

CERTIFICATIONS

It is CE marked as a protective coating according to 1504-2 (MC and IR intervention principles)



APPLICATION

	Manual application		Complete hardening time: 7 days
	Mechanical device application		Setting time: 20 - 40 min Workability time changes according to the external temperature
	Thickness per coat: 1-1,5mm for horizontal application 1-1,5 mm for vertical application (depending on the load percentage)		

In case of counter-thrust structures to be waterproofed and plastered or tiled, Kimitech ECF can be applied directly on the surface (as long as there are no water leaks) manually or mechanically (airless pump).

Roughen the last fresh coat of Kimitech ECF by freshly dusting of Kimifill MP.

After its complete hardening (7 days), use the adhesion promoter Kimitech EP-RG; to lay ceramic tiles, use Aderflex RP adhesive mixed with Kimitech ELASTOFIX.

Particular attention must be paid to the preparation of the substrates in case of resin floors and coatings.

Existing coatings must be checked, cleaned and mechanically prepared until a solid and adherent substrate is reached. In case of bad adhesion to the substrate, they must be removed.

Any holes or irregularities in the substrate must be previously repaired with suitable Kimia products.

On tiled floors, perform a proper shot peening and water cleaning (any excess water following the operation must be removed with a liquid vacuum).

Properly cured concrete substrates must be structurally sound (the pull-off tensile strength of the concrete must be > 1.5 MPa).

Any part that is detached and does not have sufficient mechanical characteristics must be removed.

To eliminate dust deposits, pre-existing coatings, traces of grease, rust, release agents, paints and varnishes, cement mortars and any other substance or material that could affect the adhesion of coatings, carefully prepare the substrate by shot peening, milling, bush hammering, staking.

Then carry out a high pressure cleaner.

To prepare the mixture, pour component "B" (hardener) into component "A" (resin) of Kimitech EC and mix with a low speed drill (200-300 per minute) until you get a perfect mixture, having care not to incorporate air during mixing. Add the Kimifill K12 and continue stirring until you get a homogeneous mixture.

For valuable aesthetic effects, the mixture can be added

with pigments, oxides, glitters or neutral water-based coloring pastes.

Apply the product on substrates previously primed with Kimicover FIX by placing the Kimitech 350 reinforcing mesh between the two coats in case of application on tiled substrates.

CONSUMPTION

1,8 Kg (A+B+C)/m²/mm

PACKAGING

The products of the system are sold in a metal package containing:

- Kimitech EC in 6 kg metal containers (A+B).
- Kimifill K12 in 12 Kg bags

STORAGE

Kimitech EC: in hermetically sealed containers, in a sheltered and dry place, its stability is 24 months.

Kimifill K12: fears moisture, store in a dry and sheltered place; In these conditions and in tightly closed containers, it maintains its stability for 12 months.

CHARACTERISTICS	APPLICATION DATA (A+B+C)
Mixing ratio	6 Kg (Kimitech EC) 12 Kg (Kimifill K12)
Density	1,8 kg/dmc
Pot life	55 mins
Concrete adhesion	> 3 mpa at concrete failure
Compressive strength	@ 1 day: 40 MPa @ 7 days: 50 MPa

CHARACTERISTICS	LIMITS EN 1504-2 COATING C, MC E IR PRINCIPLES	TYPICAL VALUE
Concrete adhesion EN 1542	Flexible systems without trafficking >0,8 Mpa; with trafficking >1,5 Mpa. Rigid systems without trafficking >1 Mpa; with trafficking >2 MPa.	> 2 N/mm ²
Permeability EN ISO 7783-2	Class I (permeable to vapour) Sd < 5 m Class II 5 m ≤ Sd ≤ 50 m Class III (not permeable to vapour) Sd > 50 m	Class I
Capillar absorption and water permeability EN 1062-3	< 0,1 Kg/m ² ·h ^{0,5}	< 0,1 Kg/m ² ·h ^{0,5}
Reaction class to fire	Declared value	F

WARNING

Product intended for professional use.

The use of natural raw materials may result in natural colour variations from one production batch to another.

If the product is not covered, use only material from the same batch of production and organize the installation in continuity or, if not possible, apply the product for environments defined by clean cuts in correspondence with string courses, edges, etc..

Do not apply the product with imminent rain forecast, fog and dew or with temperatures below + 2 ° C. Do not apply the product on surfaces that show water in stagnation and/or percolation of water from the substrate.

The equipment used for the preparation and laying of the product must be cleaned with water before hardening.

In the case of fractionated mixing, respect the ratio by weight (not volume) indicated on the packages.

Handle with care: use gloves, protective creams and goggles to avoid contact with skin and eyes.

In case of contact with eyes, wash thoroughly with water and contact a doctor.

For further information and advice on safe handling, storage and disposal of chemical products, the user must refer to the most recent Safety Data Sheet, containing physical, ecological, toxicological and other data related to safety. The information and requirements indicated in this Technical Data Sheet are based on our current knowledge and experience and are to be considered, in any case, purely indicative. They cannot guarantee the final result of the applied product and they have to be confirmed by exhaustive practical applications; therefore the user must test the suitability of the product for the intended application and its purpose. Users must always refer to the latest version of the local technical data sheet related to the product.