

Kimitech EP-IN

Description

Kimitech EP - IN is a fluid epoxy bicomponent resin with low viscosity with structural adhesion to concrete, steel, wood, stone material. The product has not solvent and doesn't shrink on hardening. Hardening is caused by a chemical reaction of the two components. Kimitech EP - IN is a very good wetter, proper to impregnate fabrics and tapes with a high basic weight and to penetrate easily into cracks and microcracks (up to 0,3 mm of thickness). It has excellent dielectric properties, protecting the armatures from stray currents. The product is supplied in two pre-dosed containers (A + B), of which 'A' is overmeasured so as to make an easy mixing with themselves.

Use

- injections in damaged structures (concrete, wood, masonry) to restore the perfect monolithic characteristic to the structure and achieve the necessary static features
- vertical and oblique anchorages with a high resistance to unthreading
- restoration of missing parts and strengthening of wooden bearing structures with specific applications (call our technical department)
- restoration of concrete floorings near expansion joints or more stressed parts
- it is used, together with Kimifill, to obtain epoxy mortars, proper to make stepless floorings with high resistance to compression, abrasion, chemical agents and impacts
- structural strengthening of vaults, masonry, buildings in reinforced concrete by the use of composites of fabrics and tapes of the Kimitech line
- structural restoration and strengthening of structures in concrete by the technique of 'Beton Plaque'

Application

To carry out several kinds of intervention look it up in the specifications and the technical sheets of the materials to be used. The surfaces to be treated must be perfectly dry (green-mixed concrete must have 4 weeks drying at least), free from dust, grease, varnishes and detaching agents generally. Pour the component 'B' (hardener) in the component 'A' (resin) and mix with a drill at low number of turns (200 - 300 per minute) till you obtain a perfect amalgam, being careful not to incorporate air during mixing. In case of separate mixing , comply with weight proportions (not volume) suggested in the packing.

Injections in damaged structures

After having cleaned the crack and removed the dust with compressed air, fill it with Kimitech EP-IN epoxy adhesive. When the adhesive is still green, insert two copper or plastic tubes in the crack; One will be useful to inject the resin, the other one as saturation indicator of the crack. Once the two components of the Kimitech EP-IN resin have been mixed, make the injection using the special MM/TL or AC/TL spraying gun or a low-pressure pump. In case of filling in mixed masonry, where dispersion may take place, the product can be mixed with Kimifill WR4 powder so as to make it less fluid.

Vertical and oblique anchorages

Clean the hole with compressed air. Once the two components have been mixed, if the length of the holes doesn't exceed 40 cm., pour it by gravity, then insert the bar turning it to allow the exceeding resin to pour out. If the holes are longer, fill them by an injection with the MM/TL or AC/TL spraying gun connected to a plastic tube that comes down up to a depth of about the middle of the hole, then insert the bar. In case of anchorages on mixed masonry structures, where high dispersions may take place, the product can be mixed with Kimifill WR4 so as to make it more fluid.

Restoration of missing parts and strengthening of wooden bearing structures.

As for strengthening of wooden structures, mix the resin with very thin and dry saw dust, to make plastering in view, mix with Kimifil HM quartz in ratio resin-quartz 1 to 5 for the restoration of inconsistent or missing parts (for these operations call our technical department).

Restoration of concrete floorings and carrying out of mortars.

The surfaces to be treated must be perfectly dry (green-mixed mortars and concrete must have 2 weeks drying at least), free from dust, grease, varnishes and detaching agents generally. The concrete supports must be formerly treated with a coat of Kimicover Fix or Kimitech PRIMER. After having mixed the resin with the harder, add the Kimifill HM quartz with a ratio of 1 to 10, then restore the missing concrete parts or carry out the stepless coating on the whole flooring. After hardening, perform the final coat with Kimitech or Kimicover resins.

Structural strengthening with composite systems.

After having prepared the surface to be treated and applied the Kimitech EP-TX epoxy adhesive or the Kimitech TX 311 epoxy mortar (call our technician department), tenter the fabric and, with a proper metallic roller, carry out a light pressure on the fabric itself to allow adhesion to the adhesive and so as to avoid dangerous air bubbles. Apply several coats of Kimitech EP-IN on the fabric with a brush to allow the complete impregnation of the fabric itself. All these operations will be carried out on 'green' products. In case there is the necessity of carrying out several reinforcement coats or a protection of it, call our technical department.

Structural restoration by 'Béton - Plaqué' technique

Sandblast both concrete and steel surfaces to be sized so as to remove cement coating and extruded residual slags. The concrete supports must be formerly treated with a coat of Kimicover FIX or Kimitech PRIMER. Mix the resin carefully and, according to the necessary viscosity or consistency, use it as it is or add Kimifill aggregates.

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Characteristics	Mean value
Number of components	2 (A+B)
Density (A+B) UNI EN 2811-1	1.08 ± 0,05 g/cm
Freezing time (200gr at 25° C)	20 - 30 minutes
Complete hardening at 25° C	7 days
Minimum temperature for use	+ 5° C
Limit of operative temperature	-30° C/+ 90° C
Ratio resin/harder	100/50 in weight
Colour	Transparent
Viscosity (poises at 25°C)	8-10 (A+B)
Solid content (A+B) UNI 8309	> 98%
Compression strength ASTM D 695-02a at 24 hours:	> 53 MPa
at 7 days:	> 65 MPa
Bending strength ASTM D 790 at 24 hours:	> 35 MPa
at 7 days:	> 45 MPa
Maximum stretch ASTM D 638	30,4 MPa
Tangent modulus of tensile stress ATM D 638	1760 MPa

Packing

mKg. 6 /A+B) Metallic containers

Kg.18 (A+B) Metallic containers

Storage

Its stability lasts 24 months in sealed containers and dry place.

Warning

Don't apply on wet or dusty surfaces. The tools used for laying Kimitech EP-IN must be cleaned with Epox Solvent before hardening. The product must be handled with care: use gloves, protective cream and glasses to avoid contact with the skin and the eyes. The Kimifill saw dust or quartz aggregates added to the product must be perfectly dry. The technical characteristics and the ways of application here suggested are based on our actual knowledge and experience, but they cannot imply any guarantee by us about the final result of the product. The customer has to make sure that the technical sheet is valid and not outdated and to verify that the product is appropriate for its use.