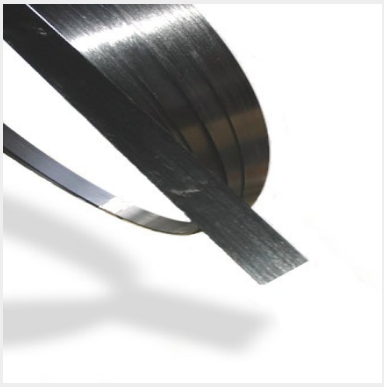

Kimitech PLATE

ST7-0221

Pultruded carbon fibre plate for FRP interventions.

DESCRIPTION

Kimitech PLATE is a carbon fiber plate prepreg with epoxy resin. The pultruded plate, available in different widths, is suitable for the structural consolidation of works in r.c., prestressed r.c., wood, masonry and steel.
It is particularly suitable for the plating of predominantly inflexible elements and for the binding of masonry systems.
The **Kimitech PLATE** foils are part of the **Kimitech PLATE** system which gained the Italian **CIT** n° 392.

ADVANTAGES

- High mechanical strength; great workability and ductility; reduced thickness and weights; excellent resistance to stray currents, solvents, acids.
- May size the reinforcement according to the needs of the structure; good reversibility; The product, suitably treated, can be finished with skim coatings, plasters, varnishes or with fire protection.
- Fast, easy to lay, even in express works.

USES

Kimitech PLATE it is used for the structural reinforcement of beams and joists in r.c., wood and steel, for the consolidation or reinforcement of vaults and masonry elements in general. It must be applied (carrying out a thorough cleaning with **Solvente EPOX**, then a light sandpapering) by spreading the **Kimitech EP-TX** epoxy adhesive both on the substrate (previously primerized) and on the plate.

WORKS

- Structural reinforcement with carbon fibre plate (**SA60**)

APPLICATION

For information on how to carry out each type of application, refer to the relative specifications and technical data sheets of the materials to be used. In reinforced concrete structures, clad surfaces with tensile strength greater than 1.5 Mpa.
Apply **Kimitech PLATE** to cured concrete, perfectly dry, compact and dust free surfaces.
Surfaces to be clad should be sandblasted to get rid of any trace of oil, paint, parting compounds and cement slurries.
On surfaces with uneven sections greater than 1 mm in size, fill or apply a levelling coat using proper products (contact our Technical Dpt).
Cut the sheet to the required length using a diamond cutting disc hand tool.
Clean carefully with **Solvente EPOX** then smooth the surface of the plate to be laid with glass paper to remove any dust, oil or anything else which might interfere with bonding then apply an even 1-2 mm layer of **Kimitech EP-TX** epoxy adhesive to this side (smooth side of plate) using a flat spreader; in the same way, apply a thin layer of adhesive to the substrate to be clad after applying a coat of suitable primer (see the specifications or contact our Technical Dpt).
Lay the plate on the wet adhesive and press it evenly onto the substrate using a rubber roller to remove air pockets or bubbles. Once hardened, the rough side of the plate will be visible; fire-retardant and/or protection from atmospheric agents should be applied to this side (contact our Technical Dpt for advice of which protective products to use).

PACKAGING

50 m rolls.
plate thickness 1,4 mm.
Width 50, 90* and 100 e 120* mm.
* minimum order 1500 m.

STORAGE

Stored in a dry place away from UV rays, **Kimitech PLATE** has an unlimited duration.

Properties		Value	Reference Regulation
Plate thickness [mm]		1,4	
Width [mm]		50 – 90 – 100 - 120	
Lenght [m]		50	
Colour		Black	
Density [g/cm^3]	fibre	1,8	ISO 1183-1:2004 (E)
	matrix	1,0	
Fibre content in weight [%]		65	ISO 11667:1997 (E)
Glass tranition temperature of the resin, T_g [°C]		> 110 °C	EN 12614:2004
Max and min. Temperature of use[°C]		0°C – 50°C	
Reaction to fire		NPD	EN 13501-1:2007
Resistance to fire		NPD	EN 13501-2:2007
Resistance class		C150/2300	

Properties	Value	Reference regulation
Tensile elastic modulus [GPa]	159	UNI EN 13706-1-2-3
Tensile strength (average value) [MPa]	3095,5	
Tensile strenght (typical value) [MPa]	2759	
Tensile shear deformation [%]	1,76	

WARNING

Product for professional use.
The product is an item according to the definitions of Regulation (EC) n. 1907/2006 and therefore does not require a Safety Data Sheet.
Equipment used to lay epoxy adhesives must be cleaned with **Solvente EPOX** before the adhesive hardens. Take the necessary precautions to stop the epoxy adhesives coming into contact with the skin and eyes.
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.

TECHNICAL SPECIFICATION

SK60 - Structural reinforcement with carbon fibre plate

If necessary, shoring the structures to be reinforced.

Clean the surface to be treated removing detached parts and any material could affect the good adhesion between support and reinforcing system. The composite material must to be applied on flat surfaces. Repair any cracks with adequate material (mortar or resin). In case of irregular surfaces, proceed smoothing it with adequate hydraulic mortars.

As a primer, Kimicover FIX by Kimia S.p.A. or a similar product will be used respecting the following minimum consumptions:
- 0,2 Kg/m^2 (concrete or wood)
- 0,3 Kg/m^2 (masonry)
- 0,5 Kg/m^2 (gypsum or “cannucciato” structures)

As a bi-component epoxy adhesive, Kimitech EP-TX by Kimia S.p.A. or a similar product will be used respecting the following consumptions
- 2,5 Kg/m^2 on a smooth RC support or a steel surface.
- 3 Kg/m^2 on wooden support;
- 3,5 Kg/m^2 on irregular support (masonry surface);
- 4 Kg/m^2 on cannucciato or gypsum-based supports

As pultruted reinforcing system, Kimitech PLATE by Kimia S.p.A. or a similar product will be used. In order to perform the application, sand ligthly the plate surface, the one to be attached, and clean it with Solvente EPOX by Kimia S.p.A. Then proceed applying, on the cleaned surface, the epoxy adhesive Kimitech EP-TX by Kimia S.p.A. or a similar product uniformly and resecpting the minimum consumption of 1 kg/m^2.

As anchoring systems, if necessary, Kimitech FRP-LOCK by Kimia S.p.A. or similar products will be used.

The carbon-fibre-based pultruted element used for structural reinforcing systems will respect the following characteristics:
- Failure mechanical resistance – avarage value: 3095,5 Mpa;
- Failure mechanical resistance – charactersitic value: 2759 Mpa;
- Elastic modul: 159 Gpa;
- Failure tensile elongation: 1,76 %

The above presented reinforcing system will fulfil requirements of C150/2300 class of resistance (Elastic Modul > 150 Gpa _ Tensile characteristic resistance > 2300 Mpa) and will be included in a specific Italian Technical Suitability Certification (Italian acronym: CIT), according to the chapter 11.1, case C of NTC 2008 and following the chapter 4.2 of “Guide Lines for identification, qualification and acceptance control of Fibre reinforced Polymers systems to be used as structural reinforcing systems on existing constructions”