PRODUCT

E/2 Tixo

Tixo Epoxy System
Application of CFRP

DESCRIPTION

E/2 Tixo is a two-component, solventless, tixo epoxy system with excellent mechanical performances, good chemical resistance and outstanding adhesion to most known substrates in the construction industry, expressly formulated for the impregnation of CFRP (Carbon Fiber Reinforce Polymer). It can be applied by brush or roller on surfaces adequately prepared also on vertical and ceiling surfaces.

USES

E/2 Tixo has been expressly formulated for the impregnation/application of CFRP (Carbon Fiber Reinforce Polymer).

SPECIFICATIONS

- Form: Two packs to be mixed immediately before using
- Colour: Comp. A: whitish
  Comp. B: clear amber
  Mixed: whitish
- Mixing Ratio: 2 Parts "A" to 1 Part "B" by weight or volume.
- Density: 1,10 Kg ± 0,05 Kg/dm^3
- Solids content: 100%

- Pot-Life:

Application temperature	Standard = 7-25°C	Summer Grade = 30-40°C
Temperature	Standard	S.G. Summer Grade
5°C	======	======
10°C	100 minutes	======
20°C	45 minutes	======
30°C	20 minutes	60 minutes
40°C	10 minutes	40 minutes

- Full cure: 7 days

- Mechanical characteristics

Characteristics	Method	Unit	Value
Tensile strength	ISO 527-1-2 (93)	MPa	60
Elastic modulus	ISO 527-1-2 (93)	MPa	3000
Elongation to break	ISO 527-1-2 (93)	%	2,9
Compressive strength	ASTM D 695	MPa	60
Adhesion to concrete		MPa	3**

** concrete failure

Products and systems for the protection and repair of concrete structures.
Structural bonding

Shear resistance	UNI-EN 12188		N/mm2	>14
Shear strength in compression	UNI-EN 12188	50°C	N/mm2	>60
		60°C	N/mm2	>70
		70°C	N/mm2	>80
Tensile strength	UNI-EN 12188		N/mm2	>20
Linear shrinkage	UNI-EN 12617-1	30°C	%	0,068
Compressive strength	UNI-EN 12190		N/mm2	>70
Durability	UNI-EN 13733		specification exceeded	
Adhesion	UNI-EN 12188		specification exceeded	
Water sensibility			in accordance	
Elastic tensile modulus	ISO-527-1-2(93)		N/mm2	>2000
Elongation to break	ISO-527-1-2(93)		%	>2,5
Tensile breaking load	ISO-527-1-2(93)		N/mm2	>60

- Packing: 6 kg (4kg comp. A + 2 kg. comp. B). Other packages on request.

- Storage life: 24 months in the original, unopened packs under dry storage.

CHEMICAL RESISTANCE

E/2 Tixo has excellent chemical resistance to:
- Fresh, salty and demineralized waters.
- Anti-freeze liquids, oils, greases, gasolines, etc...
- Alkalis.
- Acids of medium concentration.

HOW TO USE

SURFACE PREPARATION

Surfaces must be sound and free from dirt, grease, old paint residues, loose materials, rust or other contaminants.
The recommended methods of cleaning are:
- Grit-blasting.
- Mechanical brushing

Irregularities and cracks of a certain consistency must be levelled with the adhesive paste P.A.103.

MIXING

Check uniformity of each component and stir parts "A" and "B" separately.
Mix only the quantity of material that can be used before expiration of pot-life. For standard quantities, pour all of part "B" into can containing part "A". Mix thoroughly using a mechanical low speed mixer with a paint mixing paddle until material attains uniform consistency and colour. Carefully scrape the sides and bottom of the containers while mixing. Thorough mixing will take 3 to 5 minutes.
For smaller batches check uniformity of each component, stir parts "A" and "B" separately and thoroughly, measure the two components as specified on the label into a clean container and proceed as above. A perfect uniform mixing must be obtained.

APPLICATION

E/2 Tixo may be applied by brush or roller on surfaces adequately prepared also vertically and on the ceiling.
1) Apply one coat of E/2 Tixo with a consumption of about 0,300 kg/m2.
2) Spread the CFRP on the resin layer taking care not to wrinkle. Press the fabric using a grooved metal roller to facilitate the release of air. Pressure must be applied in the fibers direction.
3) Apply a second coat of E/2 Tixo, as saturation, on the newly applied carbon fabric layer with a consumption of about 0,300 kg/m2 and roll again. Consumption is about 0,600 kg/m2 but varies according to the weight of the fabric itself. The data shown refer to a 0,300 kg/m2 carbon fabric.
4) For the application of more layers the same operations are repeated, which must take place within a time frame of 40-60 minutes at 20°C. Times are shortened with higher temperatures.
5) Finally, as a fabric covering, spray dry quartz sand of adequate grain size to create the bond for the final coating.
6) If a fabric overlap is required, this must be 10-15 cm, in the direction of the fibers.

HANDLING AND TOXICITY

"A" and "B" Components for Industrial Use Only.

Skin contact should be avoided by wearing impervious gloves (rubber or disposable polyethylene) and by using suitable goggles for eyes. Barrier creams such as Kerodex K7 may also assist in affording additional protection. Any accidentally contaminated skin areas should be cleansed immediately with soap and water and/or a suitable resin removal cream. For eyes, flush with plenty of water and get medical attention immediately.
The use of solvents for skin cleansing should be avoided

NOTES

E/2 Tixo is also available as E/2 Tixo S.G. (Summer Grade) offering same properties with adjusted pot-life for use in hot climate.

All information and direction contained in this technical data sheet are given in good faith and are based on the best known practical test.
SINIT, when having no control over transport, storage, handling, use and application of its product, must disclaim all responsibilities for any unsatisfactory results obtained.

All test values at 23° C.

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CE EN 1504-4 — IN COMPLIANCE WITH EUROPEAN STANDARD EN 1504-4 — SINIT STRUCTURAL BONDING

These data supersede all previously published data.

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