

Product Description

Techno StrucWrap EP (GF) Composite comprises of Techno StrucWrap EP epoxy and Techno StrucWrap GF reinforcing fibre fabric. Techno StrucWrap EP (GF) is a specifically engineered, unidirectional E- glass reinforcing fabric used in the conjunction with Techno StrucWrap structural composite system. The Techno StrucWrap GF reinforcing fabric is woven with E-glass continuous primary fibres oriented in the 0° direction (Fabric Length) with combination of glass and filler secondary fibers at 90° direction (Fabric Width) for added stiffening and stability. Techno StrucWrap EP is two component epoxy matrix material to be used as saturant for glass fibre wrapping.

Uses

Techno StrucWrap EP (GF) is a glass fibre composite system for strengthening columns, beams and slabs of load bearing structures particularly where improvement to shear strength and deformation characteristics is required. It is ideal for seismic retrofitting also. Typical applications include piers, columns, beams, slabs, retaining walls, masonry bridges, pipes, chimneys, tunnels and other structures.

Features & Benefits

- Very high strength to thickness or weight ratio – Appreciable increase in strength and load carrying capacity without significant increase in dead load
- Enhanced stiffness, shear & tensile capacities – increased load carrying capacity and better resistance to seismic forces and deflection.
- Chemical resistant – excellent resistance to acids and alkalis
- Flexible – Can be applied on any shape or contour of substrate
- Thin sections – Can be effectively used in space constrained areas.
- Economical – Easy to install, time & labour saving

Advantages

- 100% Solvent free, pure component system
- Good high and low temperature properties
- Long working time
- High elongation
- Ambient cure

Properties

Techno StrucWrap GF	
Density	2.5 gms/ cm ³
Weight of fibre	900 gm/m ²
Fibre Thickness	0.90mm
Nominal Thickness per layer	1.2mm
Tensile Strength	3000 N/mm ²
Tensile Modulus	72000 N/mm ²

Techno StrucMix Primer	
Density	1.14 gms/cc
Pot Life	30 mins @ 30° C
Full Cure	7 days

Techno StrucMix Putty	
Density	1.8 gms/cc
Pot Life	40 mins @ 30° C

Techno StrucWrap EP (Saturant)	
Colour	Pale Yellow
Application Temperature	15 ° C-40°C
Viscosity	Thixotropic
Specific Gravity	1.25 -1.26
Pot Life	1 hours 30 mins
Cure time	5 days at 30 C

Application Methodology

Surface preparation

Concrete surfaces to be treated shall be free from oil residues, demoulding agents, curing compounds, grout holes and protrusions. Edges and sharp corners to be rounded off by diamond grinding and finishing with a thin repair mortar. At the time of application the surface shall not have any free moisture. The concrete surface to be wrapped shall be structurally repaired prior to treatment, for corrosion induced damage/ structural damage, by epoxy grouting and epoxy/ polymer modified Technokem repair systems. Any depressions in the concrete substrate shall be repaired with Techno StrucMix putty to even out undulations.

Mixing

Before mixing, the contents of each can i.e., base and hardner should be thoroughly stirred to disperse any settlement, which may have taken place during storage. The base and hardener are emptied into a suitable container and the material is thoroughly mixed for at least 3 minutes. Mechanical mixing using a heavy-duty slow speed (300 - 500 rpm), flameproof drill, fitted with a mixing paddle is recommended.

Primer

The mixed material of StrucMix primer is applied over the prepared and cleaned surface. The application shall be carried out using a brush and allowed to dry for about 24 hours before application of epoxy putty.

Putty

The primed surface shall be finished with Techno StrucMix putty to cover the pinholes and undulations in the concrete thereby ensuring 100% contact of glass fibre wrap.

Techno StrucWrap EP (Saturant)

The mixed material of StrucWrap EP is applied over the repaired surface using a roller. Saturate the Techno StrucWrap GF glass fibre fabric by feeding it through the mechanical saturator or perform manual saturation using rollers.

Techno StrucWrap GF

The Techno Strucwrap GF shall be cut to required size and then pressed first by gloved hand on to the saturant applied area and then with a stiff spatula or a surface roller to remove air bubbles. One more coat of Techno StrucWrap EP (saturant) is applied over the glass fabric, The same procedure shall be followed for multiple layer fibre strengthening ensuring that each individual layer is firmly bedded and adhered to the preceding layer

Top protective coat

If UV resistance is required then two additional coats of two component aliphatic based coating is recommended

Curing

The coatings will become tack free in approximately 4 – 6 hours and be fully cured in 7 days.

Cleaning

Tools and equipments should be cleaned with xylene or, other solvent immediately after use. Hands and skin shall be washed with soap or an industrial hand cleaner.

Limitations

StrucWrap EP(GF) is only recommended for use as described in the uses section of this datasheet. The performance of StrucWrap EP(GF) is limited to the specifications and recommendations as described in this datasheet.

Estimation

Coverage

Product	Coverage
Techno StrucWrap Primer	6~8 m ² /Ltr
Techno StrucMix Putty	1m ² @ 1mm thickness /Ltr
Techno StrucWrap EP (Saturant)	0.8~1Ltr/m ²

Packaging

StrucWrap Glass Fibre is supplied in rolls of 1.2 meter width by 45 meter length. i.e. 54 m² per roll.

Techno StrucWrap Primer: 3.5 Ltr Pack

Techno StrucMix Putty: 5 Ltr Pack

Techno StrucWrap EP (Saturant): 14.2 Ltr Pack

Shelf Life

If stored in original unopened containers under above mentioned conditions, shall have a shelf life of 12 months. If stored at high temperature or highly humid conditions the shelf life may get reduced.

Health & Safety

Some people are sensitive to epoxy resin systems and may develop dermatitis on skin contact. Rubber gloves and/or barrier creams, protective clothing, goggles and respirator shall be worn while handling the materials. Sufficient mechanical and/or local exhaust ventilation shall be provided to maintain easy working conditions.

If contact with skin or eyes occurs, washing with plenty of water is suggested. Solvent should not be used. If irritation persists, immediate medical advice shall be sought. Smoking is prohibited during application/ handling of the product. Gloves & protective clothing shall be worn while handling & application of Techno StrucWrap GF fabric.

Technical Service

- Technokem has an advisory service on concrete mix design & application of right products at right place, can be contacted if assistance is required.
- Technokem maintains a technical division with highly qualified Technical Personnel to investigate and advise on subjects related to concrete and the Construction Industry. The Division will advise on the correct use and selection of right products at the right place.
- Technokem undertakes Consultancy Service for diagnosis and rehabilitation of distressed structures; undertakes / delegates jobs as a package for total waterproofing system with guarantee

Important: Technokem products are guaranteed against defective materials and are sold subject to its standard terms and conditions of sale. It is the Customer's responsibility to satisfy themselves by checking with the Company whether the information is still current at the time of use. The customer must be satisfied that the product is suitable for the use intended. All products comply with the properties shown on current Technical Literatures. However, Technokem does not warranty or guarantee the installation of the products as it does not have any control over installation or end use of the product. All information and particularly the recommendation relating to application and end use are given in good faith.

For Complaints/Suggestions:

Please write to our Customer Care Executive at

TechnoKem Manufactures of Construction Chemicals

#301, Krishna Classic, Road No.17,
Plot No. 51, Sardar Patel Nagar,
Kukatpally, Hyderabad - 500085,
Off: 040 - 29559256



info@technokem.com
www.technokem.com

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