

MAXTREAT[®] LAMINATE

High Performance, High Strength, Corrosion Resistant Pultruded Carbon Fibre Plates



Maxtreat[®] Laminate is a composite fibre system where a carbon laminate strip is used in conjunction with an epoxy adhesive, Maxtreat[®] Glue.

Uses

Maxtreat[®] Laminate system is used for increasing load carrying capacity of structural members particularly where increase in live load / traffic loads is expected. It can also be used to repair when damage to structural member has occurred due to rebar corrosion, earthquake fire etc. and also in structural members having defects such as insufficient reinforcement and structural depth.

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 and tensile capacities-** Increased load carrying capacity and better resistance to seismic forces and deflection.
- **Chemical Resistance-** Excellent resistance to acids and alkalis.
- **Thin Sections-** Can be effectively used in space constrained areas.
- **Economical-** Easy to install, time and labour saving.

Instruction for Use

Surface Preparation

Concrete to be treated shall be free from oil residues, demoulding agents, curing compounds, grout holes and protrusions. The concrete surface to be glued with carbon strip shall be structurally repaired prior to treatment. Corrosion induced damages and structural damages shall be repaired by using epoxy grouting / appropriate mortars from Thermax range.

Properties

Type (Standard)	Dimensions Width×Thickness (mm)	Tensile Strength (MPa)	Elasticity Modulus (GPa)	Elongation at Break, %
Maxtreat [®] Laminate	50×1.4	≥2700	≥150	>1.8
Maxtreat [®] Laminate	100×1.4	≥2700	≥150	>1.8

Laminates with higher Modulus of Elasticity can be supplied on request.

Mixing

The base and hardener of Maxtreat[®] Glue shall be emptied into a suitable container and mixed with low speed, heavy duty drill fitted with a paddle and ensuring the sides are scrapped down. A uniform grey colour should be obtained after mixing thoroughly.

Application

The carbon strips shall be cut to the recommended sizes beforehand due to the impossibility of joint by lapping. Mixed adhesive is applied using a rubber spatula/serrated trowel or other suitable spreader on to the roughened surface of the carbon strip such that the thickness of epoxy adhesive is around 4mm. The adhesive applied on the carbon strip is now adhered to the prepared substrate such that excess mixed adhesive squeezes out from both sides of the plate. The overflow excess material shall be removed using rubber spatula or by suitable means.

Properties of Maxtreat[®] Glue

Compressive Strength	40 N/mm ² at 1 day >60 N/mm ² at 7 days
Shear Strength	13 N/mm ²
Pot Life	30 minutes at 40°C
Open Time	60 minutes at 40°C
Curing Time	7 days
Adhesive Bond Strength	>10 N/mm ²
Elasticity Modulus	4 kN/mm ²
Mixed Density	1.45-1.80 gm/cc
Volume of Solids	100%

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Curing

The adhesive will become tack free in approx. 4-6 hours and fully cured in 7 days.

Cleaning

Tools and equipment shall be cleaned with cleaning Sol solvent immediately after use. Hands and Skin shall be washed with soap, or an industrial hand cleaner.

Health & Safety Instructions

Some people are sensitive to epoxy resin systems and may develop dermatitis on skin contact. Rubber gloves and/or barrier creams, protective clothings, goggles and respirator shall be worn on 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.

Storage

Maxtreat[®] Glue: At least 12 months if stored in dry conditions in unopened containers. Maxtreat[®] Laminate can be used up to 3 years.

Packing

Maxtreat[®] Laminate is supplied as rolls of length 50m. Maxtreat[®] Glue is supplied in 2 ltr packs.

Coverage

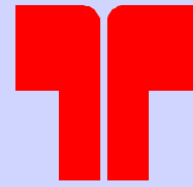
Maxtreat[®] Glue will cover 1 lit/m² @ 1 mm thickness.

Other Segments:

- Concrete Admixtures • Surface Treatments • Grouts & Anchors • Repair & Rehabilitation
- Protective Coatings • Industrial Flooring • Waterproofing • Sealants • Adhesives

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