

MasterBrace® Laminate

Ready to use Carbon Fibre Reinforced Polymer laminates

DESCRIPTION

MasterBrace Laminates are ready to use pultruded carbon fibre laminates (plates) that provide high tensile strength for flexural reinforcement (plate bonding) of concrete, metal, wood and other construction materials

RECOMMENDED USES

- Increase the load-bearing capacity (e.g. structural conversion following a change in capacity load).
- Reduce deflection to structural elements (increase in rigidity).
- Increase fatigue resistance.
- Limit or cover the fissuring (cracking) states (increase in durability)

FEATURES AND BENEFITS

- **High strength to weight ratio** – provides additional strength without adding to the 'dead load' of a structure
- **Small profile** – does not reduce overhead clearance in buildings or parking structures
- **Available in a range of cross sections** – allows for cost effective design
- **Lightweight** – easily applied using hand application techniques
- **Fast curing adhesive** – quick installation avoiding costly downtime of structures or buildings
- **Simple installation** – can be applied insitu to structures in use

TYPICAL PROPERTIES:

Grade of Laminate	170/3100
Density g/cm ³	1.5
Tensile Modulus, Typical Value** (GPa)	170
Tensile Strength, Mean Value** (MPa)	3100
Tensile Strength, Minimum Value** (MPa)	2800
Elongation at Break, %	≥1.8%
Fiber volumetric content	>68%
** Values above are typical mean values obtained from regular testing as per ASTM D-3039. Some variation may occur depending upon the batch size and test method sensitivity. Standard deviation of ± 5% is common. The designer is advised to satisfy himself, by prior	

testing if necessary, that the grade chosen will perform to the performance criteria as per his design.

APPLICATION

Substrate preparation

Remove from all grease, oil, dust residual curing compound, mould release agent or other contaminants that could impair adhesion.

Spalled concrete should be cut back to sound concrete and made good with suitable **MasterEmaco** repair products.

For concrete laitance should be removed preferably by light sweep blasting or hydro-jetting. Mechanical wire brushing may be appropriate for small areas. Apply MasterBrace P 3500 as primer using roller or brush and wait until dry for the adhesive application

Installation of MasterBrace Laminates

Clean the laminate surface with Solvent No. 2

Apply one layer of **MasterBrace ADH 2200** approximately 2 – 3 mm thick onto the substrate & laminate surfaces

Apply the **MasterBrace Laminate** to the substrate and using a roller, exert a constant pressure by moving the tool both ways in the longitudinal direction of the laminate

PACKAGING

MasterBrace Laminates are available in 50m/100m rolls.

Reference	Width (in mm)	Thickness (in mm)	Section (in mm ²)
50x1.4	50	1.4	70
100x1.4	100	1.4	140
50 x 2.4	50	2.4	(available on special request with MOQ and lead time)
100 x 2.4	100	2.4	
100 x 3.0	100	3.0	

MasterBrace Laminates are also available in other customer sizes based on the project requirement. Please consult your local Master Builders Solutions representative for such requirements

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SHELF LIFE

24 months. Store under cover, out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air-conditioned environment.

PRECAUTIONS

Please refer the Material Safety Data Sheet for handling and storage of this product.

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