



# MC-CarbonFiber® Lamella

(Formerly Known as MC-Dur CFK Lamellen)

## Surface-bonded, Carbon-fiber strips for structural reinforcement

### Product Properties

- **MC-CarbonFiber® Lamella** based on an epoxy resin matrix, reinforced with unidirectional carbon fibers
- High tensile strength at small cross-section and low structural height.
- Easy application, low weight, high efficiency
- Removal of dust by suction cleaning.
- Optimized utilization of mechanical properties due to alternative types/qualities.

### Areas of Application

- Subsequent reinforcement of structural components made of reinforced concrete, pre-stressed concrete, masonry and wood.
- Increase and reconstruction of load bearing capacity and/or serviceability
- Reduction of structural deformation and subsequent restriction of crack widths.
- Interior and exterior areas of new and old structures.

### Application

#### Preliminary Inspection

Prior to application the actual state of the structure to be reinforced must be determined and the application requirements for the process must be verified by the structural engineer in charge with proper structural auditing of the structure. The structural analysis is carried out in accordance with Standard Guidelines.

#### Performance of work

Application and monitoring are carried out by qualified staff with an additional certificate for application of **MC-CarbonFiber® Lamella** issued by MC-Bauchemie.

#### Substrate Preparation

All substrates to be reinforced must be prepared by suitable manner, e.g. granulate blasting. The surface must be sound, dry (residual moisture  $\leq 6\%$ ) and free from any dust and grease. Before application of the **MC-CarbonFiber® Lamella** the evenness of the concrete surface is to be verified. The surface can be levelled (roughness  $< 1.0$  mm) with the levelling mortar.

All the Surface should be repaired by MC Range Concrete replacement, before application of **MC-CarbonFiber® Lamella**. For Patch repair MC range epoxy system or Nafufill Range Repair Mortar system should be recommended before application of **MC-CarbonFiber® Lamella**. All the Pin holes, bug holes should be Filled and levelled by using Epoxy putty.

#### Application

The **MC-CarbonFiber® Lamella** must not be bent at right angles or subjected to sharp lateral pressures. The Strips can be cut to size on site. The **MC-CarbonFiber® Lamella** have to be cleaned before application using suction cleaning or lint-free white cloth in order to produce absolutely clean surface for subsequent gluing.

The **MC-CarbonFiber® Lamella** adhesive **MC-CarboSolid® 1280** is mixed according to the manufacture's advice and applied according to the general building approval. The **MC-CarbonFiber® Lamella** do not require any support whilst hardening.

If used on surfaces exposed to weathering the **MC-CarbonFiber® Lamella** must be protected against direct sun by application of surface protection system. If used on surfaces exposed to mechanical impact the strips must be protected respectively.

#### Quality assurance

Production of the **MC-CarbonFiber® Lamella** is subject to an in-house production control and an external surveillance. Application is monitored according to the general building approval.



#### Technical Data For MC-CarbonFiber® Lamella

Characteristic	Unit	50/1,4	100/1,4	100/2,4	Comments
		Value	Value	Value	
Nominal Width	mm	50	100	100	
Nominal Thickness	mm	1,4	1,4	2,4	
Design Area	mm <sup>2</sup>	70	140	240	
Modulus of elasticity	gpa	152	152	152	
Ultimate tensile strength	mpa	2120	2120	2120	
Elongation at break	%	1,7	1,7	1,7	

#### Product Characteristics for MC-CarbonFiber® Lamella

Matrix	Epoxy resin
Colour	Black
Durability	Unlimited, provided proper storage
Strip Preparation	Suction Cleaning or Cleaning with a Lint-free white cloth
UV Protection	MC-Surface protection system
System products	MC-CarboSolid® 1280 MC-DUR Putty

#### Safety Advice

Please Take notice of the safety information and advice given on the packaging labels, safety information sheets and General Application Advice.

**Note:** - The information on this Data Sheet is based on our experiences and correct to the best of our knowledge. It is However, not binding. It has to be adjusted to the individual structure, application purpose and especially to local conditions. Our Data refers to the accepted engineering rules, which have to be observed during application. This provided we are liable for the correctness of this data within the scope of our terms and conditions of sale-delivery-and-service. Recommendations of our employees which differ from the data contained in our information sheets are binding if given in written form. The accepted engineering rules must be observed at all times.

**Edition:** - MC/IND/190512, Some Technical Changes have been made to this print medium. Older editions are invalid and may not be used anymore. If a technically revised new edition is issued, this edition becomes invalid.