

MC-DUR CFK-Lamellen E

Surface-bonded carbon-fibre strips for structural reinforcement

Product Properties

- MC-DUR CFK-Lamellen E based on an epoxy resin matrix, reinforced with unidirectional carbon fibres
- High tensile strength at small cross-section and low structural height
- Easy application, low weight, high efficiency
- Removal of dust by suction cleaning
- Optimised utilisation 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 according to the general building approval issued by the German Building Institute (DIBt) in Berlin.

Structural analysis

The structural analysis is carried out in accordance with the general building approval issued by the DIBt Berlin or an approved structural verification by an authorised institute.

Performance of work

Application and monitoring is carried out according to the general building approval by the DIBt Berlin. Application must only be carried out by qualified staff with an additional certificate for application of MC-DUR CFK-Lamellen or MC-DUR CFK-Lamellen E issued by MC.

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. Depending on the existing surface roughness the

surface might have to be levelled with MC-DUR 1000 Parat 09.

Application

The MC-DUR CFK-Lamellen E must not be bent at right angles or subjected to sharp lateral pressures. The strips can be cut to size on site. The MC-DUR CFK-Lamellen E have to be cleaned before application using suction cleaning or a lint-free white cloth in order to produce absolutely clean surface for subsequent gluing.

The adhesive is mixed according to the manufacturer's advice and applied according to the general building approval. The MC-DUR CFK-Lamellen E do not require any support whilst hardening.

If used on surfaces exposed to weathering the MC-DUR CFK-Lamellen E must be protected against direct sun by application of a surface protection system.

If used on surfaces exposed to mechanical impact the strips must be protected respectively.

Quality assurance

Production of the MC-DUR CFK-Lamellen E 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-DUR CFK-Lamellen E

Characteristic	Unit	160/2800	200/3000
		Value	Value
Tensile strength	MPa	≥ 3,000	≥ 2,900
E-Modulus "characteristic"	GPa	≥ 165	≥ 210
Elongation at break	%	≥ 1.70	≥ 1.20
Fibre content	vol.-%	≥ 68	≥ 68
Standard profiles (width/thickness)*	mm/mm	50/1.2 80/1.2 100/1.4 120/1.4 150/1.4	
Density	kg/dm ³	1.50	1.60
Length of roll	m	100	100

* special profiles and lengths available on request

Product Characteristics for MC-DUR CFK-Lamellen E

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 systems	
System products	MC-DUR 1280	- duromer adhesive
	MC-DUR 1009 HB	- bond coat for levelling mortar
	MC-DUR 1000 Parat 09	- levelling mortar
	Colusal VL	- corrosion protection primer

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 only binding if given in written form. The accepted engineering rules must be observed at all times.

Edition 12/15. 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.