MC-Carbosolid 1209 (formerly MC-DUR 1209)

Adhesive for CF-sheets for structural reinforcement

Product Properties

- Two-component adhesive based on epoxy resin
- High mechanical strength
- Application even at high temperatures (≤ 40 °C)
- High penetration

Areas of Application

- Adhesive for high-tensile reinforcing sheets for reinforcement of components made of reinforced concrete and brickwork
- REACH-assessed exposure scenarios: periodical water-contact, periodical inhalation, application

Application

Substrate Preparation
Before application of MC-CarboSolid 1209 all substrates must be verified for load-bearing capacity and prepared by means of a suitable surface blasting method. The substrates must be dry (residual moisture ≤ 6 %, CM-method), free of cement laitance, dust, oil and other contaminants. A minimum pull-off strength of 1.5 N/mm² is required. The bonding surfaces of the substrate must be protected from increasing backwards moisture.

Before application of CF-sheets the evenness of the concrete surface must be checked. The levelling mortar MC-CarboSolid 1000 can be used for levelling (roughness < 1.0 mm) according to the application advice indicated in the technical data sheet.

Mixing and Application
MC-CarboSolid 1209 consists of two components, supplied in prepacked quantities. First, the base component is mixed thoroughly and then the hardener is added. Both components are mixed together thoroughly and homogeneously for at least 3 minutes. Slowly rotating mixers with paddle (max. 300 rpm) are suitable for mixing.

Care should be taken to keep entrainment of air to a minimum while mixing. After mixing the resin must be refilled into a clean container and mixed again.

The freshly applied CF-sheets are coated with MC-CarboSolid 1209. Care must be taken during application that the carbon fibres are completely embedded in the adhesive.

General Information
High temperatures shorten while low temperatures extend all indicated times and intervals. As a rule of thumb a change in temperature of 10 °C either halves or doubles the indicated pot life.
Furthermore please note that higher temperatures reduce both the viscosity and the thixotropic properties of MC-CarboSolid 1209.
Varnish runs must be avoided. MC-CarboSolid 1209 should be stored inside at cool temperatures.

Safety Advice
Please take notice of the safety information and advice given on the packaging labels and safety data sheets.

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Technical Data for MC-CarboSolid 1209

Characteristic	Unit	Value*	Comments
Mixing ratio	p. b. w.	3 : 1	base : hardener
Density	kg/dm³	1.12	
Pot Life	minutes	45 40 30	5 kg 10 kg 30 kg
Application conditions	°C % K	≥ 8 - ≤ 40** ≥ 15 - ≤ 25 ≤ 85 3	air and substrate temperature material temperature relative humidity above dew point
E-Modulus	MPa	approx. 3.000	at 20 °C and 50 % relative humidity
Adhesive tensile strength	MPa	14	steel/steel (die Ø 20 mm)

Product Characteristics for MC-CarboSolid 1209

Cleaning agent	MC-Reinigungsmittel U
Colour	transparent
Delivery	5 kg, 10 kg and 30 kg packs
Storage	Can be stored in original sealed packages at temperatures below 20 °C (recommended > 15 °C - < 20 °C) in dry conditions for at least 12 months. Protect from frost! The same requirements are valid for transport.
Disposal	Packs must be emptied completely.

* All technical data relate to 20 °C and 50 % relative humidity.

** At substrate temperatures > 30 °C the different layers of MC-CarbonFiber Sheets must be applied fresh in fresh

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 11/19. 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.

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