

MC-Montan Injekt FR / FN / FS

Injection resins for sealing and solidification of rocks and ground and for fixing and uplifting of concrete slabs

Product Properties

- 2-component duromer resins
- Variable reaction times between 1 to 60 minutes
- Water-displacing
- Limited foaming when directly mixed with water (rigid foam)
- High compressive- and tensile strength
- Complying with building material class B2 for fire behaviour acc. to DIN 4102 in the injection medium
- Complying with DIBt standards for appraisal of impact of building products on soil and groundwater

Areas of Application

- Sealing and solidification of rocks, building ground and structures against pressurized water in building pit closures, in tunnel- and special underground constructions
- Stabilization of building ground against ground seepage
- Increase of load-bearing capacity of building ground under base slabs and bed-plates
- Controlled uplifting injection of base slabs and bed-plates
- Sealing and reinforcing of cavities and cracks in buildings made of concrete and masonry
- Sealing of rigid joints in concrete buildings
- REACH-assessed exposure scenarios: long-term water-contact, periodical inhalation, application

Application

Product description

MC-Montan Injekt FR, MC-Montan Injekt FN and MC-Montan Injekt FS are two-component injection resins which cure to a waterproof resin body. MC-Montan Injekt FR reacts very fast, MC-Montan Injekt FN reacts fast and MC-Montan Injekt FS reacts slowly.

The injection resins may be injected into building ground and structures both with and without exposure to water. They fulfil the hygienic requirements for contact with drinking water. In contact or when mixed with water the resins are foaming to a solid and closed-cell foam.

The foaming behavior can be regulated by means of adding additives.

Preparative measures

Prior to each application the injectivity of the rocks, building ground or structure must be checked and an injection concept is to be defined.

Injection packers / Injection lances

Placing of suitable packers/lances with adequate bore diameter. Arrangement and setting depth of the packers have to comply with the injection concept.

Mixing of components

Mixing of the components is carried out during application in the mixing-head of the 2-component injection pump (required mixing section: 20 cm grid mixers).

Addition of additives

MC-Montan Injekt FR / FN / FS can be made thixotropic by adding MC-Additiv ST (addition of 4 - 7 % to component A).

Injection

Injection is carried out using a 2-component injection pump with sufficient pressure and capacity (e.g. MC-I 700). Slowly reacting resins (> 30 mm) may be injected using a 1-component injection pump (e.g. MC-I 510).

Injection of MC-Montan Injekt FR / FN / FS must be stopped if the temperature of the ground / structure drops below + 6 °C. Already opened packs must be used within 24 hours.

Cleaning of equipment

In case of any longer interruption of work, exceeding the pot life of the resin, the injection pump must be flushed thoroughly with MC-Verdünnung PU. Partially or completely cured material can only be removed mechanically.

Technical Data for MC-Montan Injekt FR / FN / FS

Characteristic	Unit	Value*	Comments
Mixing ratio	p.b.v.	1 : 1	component A : component B (MC-Montan Injekt FS : MC-Montan Injekt F)
Density (mixed)	kg/dm ³	approx. 1.13	DIN EN ISO 2811-1
Viscosity	mPa·s	300 ± 50	DIN EN ISO 3219
Compressive strength	N/mm ²	> 75	DIN EN 196 T 1
Flexural tensile strength	N/mm ²	approx. 65	DIN EN 196 T 1
Volume expansion in contact with water	-	2 - 10 times	depending on counter pressure
Application time			
MC-Montan Injekt FR	sec	approx. 20 - 30	ASTM D7/487
MC-Montan Injekt FN	min	approx. 1	ASTM D7/487
MC-Montan Injekt FS	min	approx. 60	ASTM D7/487
Application temperature	°C	+ 6 - + 35	air-, material- and substrate temperature

Product Characteristics MC-Montan Injekt FR / FN / FS

Equipment cleaning	MC-Verdünnung PU Water or water-based cleaning agents must not be used under any circumstance!
Colour	brown
Delivery	MC-Montan Injekt FR: 20 l canister MC-Montan Injekt FN: 20 l canister MC-Montan Injekt FS: 20 l canister MC-Montan Injekt F: 20 l canister MC-Additiv ST: 400 ml aluminium bottle, 5 x 400 ml per box MC-Additiv FS: 400 ml aluminium bottle, 5 x 400 ml per box
Storage	Can be stored in original unopened packs at temperatures between + 10 °C and + 25 °C in dry conditions for at least one year. Protect from frost! Same requirements are valid for transport.
Disposal	Packs must be emptied completely.

* All technical data are lab values and relate to + 23 °C and 50 % relative humidity.

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 05/16. 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.