

MC-Montan Injekt FR

Injection resin for the sealing and consolidation of rock, foundation soil and civil engineering structures



PRODUCT PROPERTIES

- Low-viscosity polyurethane-based duromer resin
- Good injectability
- Variable reactivity control
- Water-displacing
- Limited foaming on contact with water (rigid foam)
- High compressive and tensile strength
- Permanently watertight
- Can be combined with cement suspension (hybrid injection)
- Corresponds to fire class B2 according to DIN 4102 in the injection medium format
- No lasting effects on soil and groundwater according to DIBt test criteria
- REACH exposure: Water contact permanent, inhalation periodic, processing and application
- Environmental Product Declaration EPD

AREAS OF APPLICATION

- Sealing and consolidation of rock, subsoil and structures in special-purpose civil engineering and tunnel construction
- Waterproofing of trench/pit enclosures
- Stabilising of foundation subsoil against the risk of ground failure
- Increasing the load-bearing capacity of subsoil under floor slabs and foundations
- Sealing and reinforcing cracks, joints and cavities in structures made of concrete, masonry, natural stone, etc.

APPLICATION ADVICE

Preparatory measures: Prior to injection, an investigation of the rock or structure and of any leaks must be carried out according to the state of the art and the rules of technology, and an injection concept must be planned. Packers must be set before injection. A trial injection is recommended.

Mixing the components: Components A and B of MC-Montan Injekt FR are mixed as they pass through the mixing head of the injection pump (mixing distance ≥ 20 cm inline static mixer).

The working time of the mixed resin depends on the ambient temperature. The working time can be extended by cooling the resin components and the resin mixture.

Reaction acceleration: The reaction time of MC-Montan Injekt FR can be extended by mixing component A of MC-Montan Injekt FS. The slowest setting achievable is governed by the reaction time of MC-Montan Injekt FS.

Additives: The thixotropy of the resin can be increased by adding MC-Additiv ST (add 4 - 7 % to component A) to increase the viscosity of the mix. This also accelerates the curing reaction.

Injection: Injection is performed with the two components being mixed as they are dispensed by the MC-I 710.

Lances are recommended for injection into rock or subsoil.
MC-Bore Packer LS 18 packers are recommended for injection into building components.

Application work should cease once component/substrate temperatures fall below 5 °C.

Ensure compliance with the information given in the specifications and the Safety Data Sheets.

Equipment cleaning: Within the working time of the resin, all solvent-resistant tools can be cleaned with MC-Cleaner eco or thinner product MC-Verdünnung PU. Material that has reacted or set will need to be removed mechanically.

TECHNICAL VALUES & PRODUCT CHARACTERISTICS

Characteristic	Unit	Value	Comments
Mixing ratio	parts by volume	1 : 1	comp. A : comp. B
Density	kg/dm ³	approx. 1.13 approx. 1 approx. 1.23	EN ISO 2811-1 mixture component A component B
Viscosity (dynamic)	mPa·s	approx. 250 - 350	EN ISO 3219
Working time	seconds	approx. 20 - 30	ASTM D7487
Application conditions	°C	5 - 40	component and subsoil temperature
Compressive stress	N/mm ²	approx. 50	EN ISO 604
Flexural strength	N/mm ²	approx. 25	ISO 178 / 2% deformation
Volume change (with water)	%	approx. 200 - 1,000	depending on backpressure

All technical values are laboratory results determined at 21°C ±2°C and 50% relative humidity.

Colour	brown
Equipment cleaning agent	MC-Verdünnung PU (thinner), under no circumstances should water or aqueous cleaning agents be used
Delivery form	MC-Montan Injekt FR 20 l canister MC-KAT 27; 400 ml bottle, 5 pieces in a box MC additive ST; 400 ml bottle, 5 pieces in a box
Storage	Can be stored in original sealed packages at temperatures between 5°C and 35°C in dry conditions for at least 18 months.
Packaging disposal	Make sure single-use containers are completely empty.

Safety instructions

Please note the safety information and advice given on the packaging labels and safety data sheets. GISCODE : PU40

Note: The information contained in this data sheet is based on our experience and is correct to the best of our knowledge. It is, however, not binding. It will need to be adapted to the requirements of the individual structure, to the specific application and to non-standard local conditions. Application-specific conditions must be checked in advance by the planning engineer/specifier and, where different from the standard conditions indicated, will require individual approval. Technical advice provided by MC's specialist consultants does not replace the need for a planning review by the client or its agents in respect of the history of the building or structure. Subject to this prerequisite, we are liable for the correctness of this information within the framework of our terms and conditions of sale and delivery. Recommendations of our employees deviating from the information given in our data sheets are only binding for us if they are confirmed in writing. In all cases, the generally accepted rules and practices reflecting the current state of the art must be observed. The information given in this technical data sheet is valid for the product supplied by the country company listed in the footer. It should be noted that data in other countries may differ. The product data sheets valid for the relevant foreign country must be observed. The latest technical data sheet shall apply to the exclusion of previous, duly superseded versions; the date of issue in the footer must be observed. The latest version is available from us on request or may be downloaded from our website. [2300018170]