

MC-Injekt 2300 flow

Ductile-elastic, permanently sealing, moisture-reactive injection resin for concrete, masonry and foundation soil



PRODUCT PROPERTIES

- Low-viscosity polyurethane-based elastomer resin
- Very good injectability
- Extra-long application time
- Strongly reactive acceleration with water – Water Boost Technology
- Expansive increase in volume with self-injection effect on contact with water
- Increase in reactivity with MC-KAT 22
- Creation of a water-stopping foam from component B with MC-KAT 22
- Permanently elastic sealing
- High elasticity
- Durable water impermeability
- CE conformity according to EN 1504-5: CE U(D1) W(1) (1/2/3/4) (5/40)
- REACH exposure: water contact permanent, inhalation periodic, processing and application
- EPD environmental product declaration

AREAS OF APPLICATION

- Ductile, flexible filler and sealant of cracks, construction joints and cavities in concrete and masonry under dry, water-bearing and pressurised water-bearing conditions
- Grouting of injection tubes and hoses
- Waterproofing of hydraulic structures
- Waterproofing of masonry against moisture penetration and rising damp
- Waterproofing of pipe and liner connections to manhole/shaft structures of sewerage infrastructure
- Sealing injection of manhole ring joints, pipe penetrations, socket joints

APPLICATION ADVICE

Preparatory measures: Prior to injection, an investigation of the structure and 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-Injekt 2300 flow must be mixed in the specified mixing ratio with slowly rotating stirring paddles or similar for one-component injection. Only batches of the components produced at the same time may be mixed with one another. The mixing time is 2 minutes.

Mixed reaction resin must be repotted in a clean empty container or a container with mixed resin of the same quality has been stored. Repotting is completed once the resin is transferred into the reservoir of an injection pump and briefly remixed.

The mixed resin can be processed for a whole working day without exposure to water. MC-Injekt 2300 flow can be injected into fine cracks for up to 140 minutes. In addition, up to approx. 9 h in wider cracks or cavities. The pot life/working time depends on the resin composition, the prevailing ambient temperature and the ambient humidity. If necessary, the reactivity can be increased with MC-KAT 22. MC-KAT 22 accelerates the reaction and increases pore formation (increase in volume).

In the case of two-component application, the components are mixed as they pass through the mixing head of the injection pump (mixing distance ≥ 20 cm inline static mixer). Only batches of the components produced at the same time may be mixed with one another. The injection is carried out with freshly mixed resin.

Reaction acceleration: For the injection into wet components or against running water is basically no chemical acceleration necessary. The resin reacts on contact with water accelerated naturally in the component (Water Boost Effect). The pores become closed which further advance the resin in the component (expansive self-injection effect) before the resin immediately seals effective.

A chemical acceleration can take place with MC-KAT 22. The catalyst should preferably be added to component A before it is mixed with component B. The resin reacts faster depending on the concentration of the catalyst. With 1% MC-KAT 22, based on the individual components (corresponds to 0.5% on the total mixture), a processing time of approx. 30 minutes is achieved. In contact with water, the reaction

is further accelerated with a self-injection effect and an immediate sealing effect (water boost effect).

If the water is flowing very strongly, a primary injection with a water-stopping foam may be necessary. For this only component B of the MC-Injekt 2300 flow has to be mixed with MC-KAT 22 and injected against the flowing water. The foam is open-pored and has a temporary sealing effect. Immediately after the pre-injection, the permanently sealing injection with MC-Injekt 2300 flow takes place as a resin mixture of components A and B in the pre-injected component. Remaining amounts of the accelerated B-component can be used in the resin mixture. The reaction will be faster.

Injection: The injection is carried out in one component with the 1-component injection pump MC-520 or in two components with the 2-component injection pump MC-I 710.

MC-Bore Packers DS 14 (high pressure packers) are recommended for the injection. Each packer is injected twice in succession (main injection + post-injection). The re-injection must take place within the reaction time. Since MC-Injekt 2300 flow reacts more quickly in contact with water, the post-injection must be adapted to the component moisture. In principle, post-injection is recommended for dry components at the end of the first hour after the initial injection of each packer and for damp and wet components after approx. 10 minutes. If the strongly flowing water was previously stopped with component B and MC-KAT 22, the main injection with MC-Injekt 2300 flow (components A + B) takes place within the first hour after the foam injection. The packers can be removed quickly if water is pressed into the drilling channel at the end of the resin injection.

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 for MC-Injekt 2300 flow.

Equipment cleaning: Within the working time, all solvent-resistant equipment 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. 1.048 approx. 1.016 approx. 1.08	EN ISO 2811-1 mixture component A component B
Viscosity	mPa·s	approx. 120 approx. 200 approx. 70	EN ISO 3219 mixture component A component B
Working time	minutes	approx. 140	EN 1504-5 (up to 1,000 mPa·s)
At 1 Vol. %		approx. 30	with addition of MC-KAT 22 (based on comp. A)
At 2 Vol. %		approx. 20	with addition of MC-KAT 22 (based on comp. A)
At 3 Vol. %		approx. 15	with addition of MC-KAT 22 (based on comp. A)
At 4 Vol. %		approx. 13	with addition of MC-KAT 22 (based on comp. A)
Application conditions	°C	5 - 40	component and subsoil temperature
Strain (in the crack)	%	approx. 26.1 - 33.6 approx. 17.6 - 20.5	DIN EN 12618-1: 2003-11 crack width 0.3 mm crack width 0.5 mm
Volume change (with 5% water content)	Factor	approx. 4.3 approx. 15	closed cell without backpressure Comp. A + B Comp. A + B + 0,5% MC-KAT 22 on mixture
Volume change (with 10% water content)	Factor	approx. 40	open cell without backpressure Comp. B + 4-6% MC-KAT 22
Tensile strength (concrete, dry)	N/mm ²	approx. 0.82	EN 12618-1
Tensile strength (concrete, wet)	N/mm ²	approx. 0.74	EN 12618-1
Reaction time, pot life	hours minutes	approx. 9.5 approx. 6 approx. 7	ASTM D7487-18 on contact with water with MC-KAT 22
Ultimate elongation	%	approx. 47.7	EN ISO 527
Ultimate fracture strength	N/mm ²	approx. 0.92	DIN EN ISO 527-1
Glass transition temperature	°C	approx. -53	EN ISO 11357-2
All technical values are laboratory results determined at 21°C ±2°C and 50% relative humidity.			
Colour	light brown		
Equipment cleaning agent	MC-Cleaner eco, MC-Verdünnung PU		
Delivery form	Box of 6 x 1 l packs Canister for component A and B, each with 5, 10 and 20 l content MC-KAT 22: bottle 400 ml, 5 bottles each in a box		
Storage	Can be stored in original sealed packages at temperatures between 5°C and 25°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. [2400020601]