MC-Montan Injekt TR-X

Swelling, flexible, waterproofing acrylate gel sealant for injection in rock and solid structures

BE SURE. BUILD SURE.

PRODUCT PROPERTIES

- Low-viscosity acrylic-based hydrogel
- Very good injectability
- Readily controllable injection path propagation thanks to controllable reaction time
- Very low application temperature
- Reliable sealing/waterproofing due to high elasticity and good swelling capacity
- Durably water-impermeable in moist media
- CE conformity according to EN 1504-5: CE U(S2) W(2/3/4) (1/40)
- Corresponds to fire class B2 according to DIN 4102 in the injection medium
- General building authority approval issued by DIBt for injection into soil and groundwater
- Fulfils the UBA (German environmental agency) guidelines for sealants in contact with potable water
- High chemical resistance especially in highly alkaline environments
- REACH exposure: water contact permanent, inhalation periodic, processing and application
- Environmental Product Declaration EPD

AREAS OF APPLICATION

- Swelling, flexible consolidation and waterproofing of fine and coarse loose rock
- Injection of waterproofing membrane into foundation soil (curtain injection)
- Elastically swellable sealing of structural joints (e.g. tubbing joints)
- Sealing of cavities and imperfections in the area of the annular gap
- Injection of construction joints via injection tubes/hoses
- Injection of structures with a dry, moist, water-bearing condition during the injection as well as with permanent at least one-sided water exposure after the injection

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 TR-X are prepared from their respective subcomponents in the specified mixing ratio. Component A is mixed from subcomponents A1 and A2. To do this, pour component A2 into the container of component A1 and stir energetically with a wooden paddle. Component B2 is dissolved in component B1 (or in water) and mixed with a wooden paddle (addition rate 0.2 to 4 %). The reaction times of MC-Montan Injekt TR-X depend on the volume of component B2 added to component B1 (or water). The standard mixture is prepared with B1. This results in a high solids, high performance hydrogel. Mixing with water instead of B1 results in a more dilute, softer hydrogel.

Mixing of the components A and B thus prepared takes place during injection: The components are mixed as they pass through the mixing head of the MC-I 710 injection pump (mixing distance $\geq$ 10 cm inline static mixer).

Reaction time with addition of component B2 in 24.6 kg or 123 kg of component B1

	Container unit		20 °C		10 °C	
%	24.6 kg	123 kg	B1	Water	B1	Water
0.2 %	0.049 kg	0.246 kg	10'	8'36"	32'	17'
0.5 %	0.123 kg	0.615 kg	7'	5'27'	14'	11'
1 %	0.246 kg	1.230 kg	4'40"	3'48"	9'27"	6'30"
2 %	0.492 kg	2.460 kg	3'30"	3'10"	6'05"	5'15"
4 %	0.984 kg	4.920 kg	3'	2'30"	4'15"	3'45"

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APPLICATION ADVICE

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

MC-Bore Packer LS 18 packers or injection lances are recommended for injection into foundation soil.

Application work should cease once component/subsoil temperatures fall below 1 °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 tools can be cleaned with water or air. 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
	mass fractions		
Canister		23.8 : 1.19	comp. A1 : comp. A2
	mass fractions		
Drum		119 : 6	comp. A1 : comp. A2
	mass fractions		
Canister (variable)		24.6 : 0.1	comp. B1 : comp. B2
	mass fractions		
Drum (variable)		123 : 0.5	comp. B1 : comp. B2
Density	kg/dm³		DIN 53479
		approx. 1.04	mixture with B1
		approx. 1.02	mixture with water
		approx. 1.06	component A1
		approx. 0.933	component A2
		approx. 1.04	component B1
		approx. 1.2 - 1.5	component B2
Viscosity	mPa·s	approx. 25	EN ISO 3219 (with comp. B1)
		approx. 2.5	DIN EN ISO 3219 (with 0,2 % comp. B2)
Working time		approx. 2' 30" - 10'	at 20° C
		approx. 3' 45" - 32'	at 10° C
Application conditions	°C	1 - 40	component and subsoil temperature
Strain	%	approx. 270	EN ISO 527 (with comp. B1)
		approx. 70	EN ISO 527 (with comp. B1)
Swelling dimension	%		linear shrinkage
		approx. 92	water storage at 20 °C (with comp. B1)
		approx. 120	water storage at 20 °C (with water)
Ultimate elongation	%	approx. 200	DIN 52 455-1

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

Colour	blue
Equipment cleaning agent	water
Delivery form	Component A1, 23.8 kg canister / 119 kg drum / 1000 kg container Component A2, 1.19 kg canister / 6 canister Component B1, 24.6 kg canister / 123 kg drum / 1000 kg container Component B2, box of 4 x 0.5 kg containers
Storage	Can be stored in original sealed packages at temperatures between 1°C and 25°C in dry conditions for at least 12 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.

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. [2300018174]

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