

# Eurolan® FK Inject

## Low-viscosity, solvent-free, two-component epoxy resin for injection

With official test certificate

### Description

EUROLAN FK Inject is a epoxy resin for injecting cracks into concrete, masonry etc.

Main features:

- Extremely low viscosity
- Free of non-reactive softeners
- High flow properties
- Excellent adhesion to concrete
- High compressive and flexural tensile strengths after curing
- Resistant to sea water, salts, fuel, oils, fats, many alkaline solutions, acids and other chemicals.

### Product data

|   |  |
|---|--|
| Base                                      | epoxy resin  |
| Solvents                                  | none   |
| Colour                                    | transparent (yellowish)  |
| Density                                   | appr. 1.1 g/cm <sup>3</sup>  |
| Mixing ratio                              | resin base (below) :<br>hardener (above)<br>10 kg : 3 kg                           |
| Application                               | injection or pouring   |
| Viscosity<br>at + 20 °C                   | after mixing:<br>170 mPa · s   |
| Compressive<br>strength                   | 70 N/mm <sup>2</sup>   |
| Tensile flexural<br>strength              | 40 N/mm <sup>2</sup>   |
| Temperature<br>resistance<br>after curing | up to + 90 °C damp<br>heat (short term)<br>up to + 140 °C dry<br>heat (short term) |
| Potlife at + 20 °C                        |  |
| - 500 g                                   | appr. 110 min.   |
| - 5000 g                                  | appr. 75 min.  |
| Final hardness                            | appr. 3 - 7 days   |
| Temperature<br>for application            | above + 10 °C<br>(air and substrate)   |
| Cleaner                                   | thinner AX   |

### Range of application

Cracks in concrete and masonry are sealed with EUROLAN FK Inject, which gives an excellent bonding to the structure.

Cracks may result from shrinkage during the setting of concrete, compelled temperature expansion, overdosed sollicitations etc.

The danger of cracks is given for a structure whenever besides the formation of cracks a corrosion of the steel reinforcement might happen.

Cracks in concrete can be sealed and bonded with EUROLAN FK Inject. Also for bridge and road construction and every kind of weight-bearing component of concrete, steel or prestressed concrete.

The bonding with EUROLAN FK Inject requires clean crack sides.

The low viscosity provides an excellent penetration and it is possible to work with a low injection pressure.

Before injection works begin, it is necessary to check the reasons of cracks. Otherwise new cracks might happen again.

### Working instructions

#### Preparation of substrates

The substrate can be dry or slightly damp and must be free of dust, oil and grease. Blowing out cracks with compressed air is ideal.

#### Mixing

The quantity of hardener in the upper part of the container is matched to the resin base in the lower part. If only a partial quantity is required, the mixing ratio in parts by weight shown on the container label is to be observed. The hardener is emptied into the resin base and carefully mixed at low speed with the Deitermann stirring paddles no. 1 or 2. Mixing time: 2 minutes.

After mixing no streaky areas should be visible in the compound. For this reason pay special attention to the bottom and sides of the container when mixing.

#### Potlife

Potlife depends on temperature and container size; it is appr. 110 minutes for a quantity of 500 g at a temperature of + 20 °C. Larger containers and higher temperatures shorten the potlife. Curing takes place at temperatures (air and substrate) above + 10 °C.

#### Injection

EUROLAN FK Inject is injected through hole packers (screw or fitting ones) or bonding packers.

The distance of injection drill holes fits to the depth and width of the cracks. Usually the distance is 1 - 1.5 times of the crack depth. In concrete structures with continuous cracks the injection holes are drilled on both sides; on the back side they are moved by half of the distance.

Hole packers are put in turn on both sides of a crack in holes with a angle of inclination of 45°. Screw packers are suitable for high injection pressures until about 200 bar.

If there are hairline cracks, the use of hole packers is to be avoided, because the fine dust of the drilling, which gets into the crack, can disrupt the injection. For such works use bonding packers bonded with the adhesive PLASTIKOL Multipox S. Take care that the openings are not stopped up by the adhesive.

Bonding packers are suitable for injection pressures until about 50 bar. With a usual loss of pressure of until 20 bar through the check valve of the packer, the injection pressure should not exceed until 70 bar, measured before the packer.

After the injection packers are fixed, the cracks between the injection holes are closed by PLASTIKOL Multipox S. Continuous cracks in walls are, if it is possible, injected on both sides. If the air and substrate temperature is about + 10 °C, it is possible to begin with the injection after 12 hours.

Before starting the injection, check if the cracks are able to be injected. For this purpose it is necessary to clear each packer with oil- and waterfree compressed air. All packers are closed; only the packer, which is cleared by compressed air, and the next one are opened.

Injection is made by hand pump, one-component or two-component injection pump. In a two-component injection pump the mixture of the resin base and the hardener takes place in a separate bucket. It is necessary to observe the mixing proportions as specified. The working instructions of the pump supplier have to be followed.

If the cracks are nearly in plumb, it is possible to inject EUROLAN FK Inject at first through the lowest packer as long as it emerges from the next unclosed packer. Afterwards the resin is injected through the check valve until it emerges from the next packer and so on.

After until 15 to max. 30 minutes a new injection can be recommended to avoid the formation of air pockets. A loss of pressure should not be measured until the end of the injection.

After finishing the injection operations the supporting parts of the pump are cleaned carefully with THINNER AX.

After EUROLAN FK Inject is cured, the sealing of the cracks and the packers can be removed. For the stemming of unexpected discharge of the injection the quick-setting mortar CERINOL Fix should be used during the injection.

### **Pouring**

On horizontal surfaces drill holes for pouring at intervals of approx 50 cm. Spots at which the resin can escape are first to be sealed with CERINOL Fix. Then pour in the well mixed EUROLAN FK Inject in order to fill the holes completely. Pour EUROLAN FK Inject again when the level goes down.

### **Watchpoints**

If prematurely wetted before final curing, a grey film can form which can, however easily be removed after curing by washing with very diluted hydrochloric acid.

Observe the regulations of the Employer's Liability Insurance Associations when working in closed areas. Refer to further precautions shown on the container.

### **Delivery and storage**

EUROLAN FK Inject is available in 1 and 5 kg containers (net weights).

Can be stored dry and cool in original sealed packing for at least 12 months.

All epoxy resin-based products tend to crystallize with the action of frost. Material exposed to frost can be used again by warming. Allow the material to cool again before working, otherwise too rapid curing will make working impossible.

### **Notes**

The correct and hence successful application of our products is not within our control. A guarantee can therefore only be accepted for the quality of our products within the framework of our sale and supply conditions but not for their successful use.

Observe the safety precautions for protection of health and prevention of accidents given in the safety data sheet and on the label of the packaging.

This data sheet supersedes all earlier technical data on this product.

Information supplied by our employees and/or distributors going beyond the information contained in this data sheet must be confirmed in writing.

We reserve the right to make changes representing technical progress.

# **DEITERMANN**

**maxit Group**

maxit Deutschland GmbH  
DEITERMANN brand  
Lohstr. 61  
D-45711 Datteln  
Tel. +49 (23 63) 399-0  
Fax +49 (23 63) 399-540  
info@deitermann.de  
www.deitermann.com