MasterFill™ ER 1302 (Concresive® 1302)

Epoxy Based Injection Resin

Material Description

MasterFill™ ER 1302 is epoxy based low viscous injection resin with two parts and designed for injection to cracks with a width up to 1mm.

Complies with EN 1504-5

Areas of Application

- Repair of cracks with a width of 0.2-1.0 mm
- Repair of reinforced concrete, masonry and similar mineral construction materials with injection
- Filling the narrow voids between the steel jackets and concrete

Characteristics and Benefits

- Penetrates into the narrow cracks easily
- High mechanical strengths
- Perfect bonding to the concrete
- Low viscosity and can be injected easily under low pressure
- Solvent free

Processing Method

(A) Preparation of Substrate

Existing plaster should be removed to make the crack plane visible. The concrete surfaces must be sound, clean and dry. It shouldn't be weakened by over-troweling and lack of curing. The concrete should be free of frost, curing membranes, waterproofing treatments, oil stains, laitance, friable material and dust. If there is a water leakage it must be drained or properly plugged.
Depending on the crack width the holes should be drilled in both two sides of the crack line with an angle of 45° to the surface. The holes should be 5-10 cm away from the crack line and deep enough for passing across the crack plane and reach opposite side. Through the crack line, the holes should have a distance of 20-25 cm from each other. The holes have to be cleaned by air compressors to remove all dust and loose particles. Injection packers should be installed in to the holes, than screwed and fixed to

Technical Properties

Product Chemistry **MasterFill™ ER 1302** Part A **MasterFill™ ER 1302** Part B	 Epoxy Resin Epoxy Hardener	
Color	Clear	
Solid Content (by volume)	100 %	
Mixed Density	1,08 ± 0,05 kg/lt	LK
Viscosity	200-350 mPa.s	
Compressive Strength (20^{0}C) (7 days) TS EN 196	>65 N/mm^2	
Flexural Strength (20^{0}C) (7 days) TS EN 196	>25 N/mm^2	
Bonding Strength (to concrete) (7 days) (TS EN 1542)	>2 N/mm^2	
Applicatin Thickness	Min. 0,1 mm Maks. 1,0 mm	
Flash Point	>+62^{0}C	
Application Temperature	+10^{0}C +35^{0}C	
Pot Life (+20^{0}C)	25 minutes	
Fully Cured at 20^{0}C	7 days	

Typical values are obtained from the test results of 4x4x16 mortar prism in 23°C and 50% relative humidity conditions. High temperatures shortens the curing and working time, lower temperatures extends the durations.

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the holes. All the cracks and packer sides should be sealed with **MasterStrength™ ER 1406** by using a steel spatula or trowel to prevent the leakage of injection resin from the crack openings. Allow 12-24 hour for curing the cap. For quick applications **MasterFlux™ ANC 920 SF** should be used as cap seal and allow 2 hours for curing of the cap.

(B) Mixing

MasterFill™ ER 1302 has two parts in pails, produced according to right mixing ratio. Material temperature should be between 15-25ºC before mixing. Part B should be added into the part A without any remaining material in the pail. It should be mixed with using a proper mixer (~300rpm) for polymer mixing. Mix the parts at least 3 minutes to have a homogenous mixture.

Mixing Ratio

MasterFill™ ER 1302	Part A	Part B
Quantity	4,40 kg	0,68 kg
Mixed Density	1,08 kg/liter	

(C) Processing

Tie the pneumatic pipe of the pump to the lowest entry port fixed to the cracked surface. Start pumping the resin into the crack until the resin comes out from upper port. Remove the pipe from the current packer and close the port opening by screwing. Follow the same instruction to the entry port fixed at the top of the surface. When the resin leaks out from the upper entry port it is understood that the whole crack plane has been fully filled with epoxy and finish the application. At least 24 hours after the application all the packers (entry ports) could be cut or pull out and surface could be finished. Consult to **MBT Teknik Yapı Kimyasalları San. ve Tic. A.Ş.** Technical Service for injection to wider cracks than 1mm and non-injection application with using **MasterFill™ ER 1302.**

Consumption

1.08 kg/liters

Point to Consider

- Epoxy injection applications should be made by expert applicators.
- During the application the substrate and environment temperature should be between 10-35ºC.
- Resinous materials' pot life and curing times vary depending on the relative humidity, substrate and environment temperature. Reaction gets slow in low temperatures and it causes to extension on pot life and working time. On the other hand high temperatures speed up the reaction, which results to short pot life and working time. For full curing of material, both the substrate and environment temperature shouldn't be under allowed application temperature.
- **MasterFill™ ER 1302** is provided in ready to mix pails. Do not add any solvent etc. İnto the mixture during the application.
- Mixing should be made with proper mixers and do not allow mixing by hand.
- Injection pressure is defined due to crack width and crack depth and it should be defined according to the project.
- The crack width must be smaller than 1mm. For wide cracks consult to **MBT Teknik Yapı Kimyasalları San. ve Tic. A.Ş.** Technical Service.

Cleaning of Tools

All the tools and equipments must be cleaned by solvent after the application. After **MasterFill™ ER 1302** is hardened, it can only be removed from the surface mechanically.

Packaging

5.08 kg set
Part A: 4.40 kg pail
Part B: 0.68 kg pail

Shelf Life

18 months after the production date under appropriate storing conditions.Opened packages have to be stored by tightly sealing the bag/cover and must be used in one week.

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Storage

Must be stored in its original unopened packaging, in a dry and closed environment between +10ºC - +25ºC. For short-term storage, maximum 3 pallets should be stacked on top of each other and shipment should be made on a first-in, first-out system. For long term storage, pallets should not be stacked on top of each other.

Health and Safety

It is dangerous to approach the application sites. During the application, a protective apparel, protective gloves, goggles and masks which comply with the Occupational Health and Safety Rules should be used. Due to the irritation effect of the uncured materials, the mixture should not come into contact with skin and eyes; in case of a contact, the affected area should be washed with plenty of water and soap; in case of swallowing, a physician should be consulted immediately. No food or beverages should be brought to the application area. The product should be stored and kept out of reach of children. For detailed information please consult the Material Safety Data Sheet.

Disclaimer

The technical information given in this publication is based on the present state of our best scientific and practical knowledge. **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is only responsible for the quality of the product **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones.

Contact

MBT Teknik Yapı Kimyasalları San. ve Tic. A.Ş.
Eyüp Sultan Mah. Sekmen Cad. Hayy 1000A
No:26/8 Sancaktepe, İstanbul
Tel: 0216 561 35 45 www.mbt-tech.tr