

MasterInject® 1302 (Formerly known as Concrecive® 1302)

Epoxy Based Injection Resin

DESCRIPTION OF PRODUCT

MasterInject® 1302 is epoxy based low viscous injection resin with two parts and designed for injection to cracks with a width up to 5mm.

Complies with EN 1504-5

FIELDS OF APPLICATION

- Repair of cracks with a width of 0.2-5.0 mm
- Repair of reinforced concrete, masonry and similar mineral construction materials with injection
- Filling the narrow voids between the steel jackets and concrete

FEATURES 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

APPLICATION PROCEDURE

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 the holes. All the cracks and packer sides should be sealed with **MasterBrace® ADH 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 **MasterFlow® 920 AN** should be used as cap seal and allow 2 hours for curing of the cap.


Mixing

MasterInject® 1302 has two parts in pails, produced according to right mixing ratio. Material temperature should be between 15-25°C 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

MasterInject® 1302	Part A	Part B
Quantity	4,40 kg	0,68 kg
Mixed Density	1,06 kg/liter	

TECHNICAL DATA

Product Chemistry MasterInject® 1302 Part A MasterInject® 1302 Part B	Epoxy Resin Epoxy Hardener	
	Clear	
Solid Content (by volume)	100 %	
Mixed Density	1,06 ± 0,05 kg/liter	LK
Viscosity	300-450 mPa.s	
Compressive Strength (20°C) (7 days) TS EN 196	>65 N/mm ²	
Flexural Strength (20°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. 5,0 mm	
Flash Point	>+62°C	
Application Temperature	+10°C +35°C	
Pot Life (+20°C)	25 minutes	
Fully Cured at 20°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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APPLICATION METHOD

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 **Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti.** Technical Service for injection to wider cracks than 5mm and non-injection application with using **MasterInject® 1302**.

COVERAGE

1.06 kg/liters

WATCH POINTS

- Epoxy injection applications should be made by expert applicators.
- During the application the substrate and environment temperature should be between 10-35°C.
- 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.
- **MasterInject® 1302** is provided in ready to mix pails. Do not add any solvent etc. into 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 5mm. For wide cracks consult to **Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti.** Technical Service.

CLEANING OF TOOLS

After the application all tools should be cleaned with a proper detergent or solvent such as thinner. **MasterInject® 1302** can be cleaned with only mechanical abrasion after hardening.

PACKAGING

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

STORAGE

Store in original container in cool (+5°C-+25°C) and dry indoor conditions.

SHELF LIFE

18 months under proper storage conditions after production date.

HEALTH AND SAFETY PRECAUTIONS

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 mixtures should not come into contact with skin and eyes; in case of 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. **Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti.** is only responsible for the quality of the product **Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti.** 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.

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CONTACT INFORMATION

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MasterInject® 1302 Technical Data Sheet -Revision
Date: 12/2022

	
1020 Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd. Şti. Adres: Barbaros Mah. Begonya Sok. Nidakule Kuzey Ataşehir, C Kapısı No:3 E/5, 34746 Ataşehir İstanbul	
20 DOP NO: 02.1504.5.001 1020 – CPR – 040 065835	
EN 1504-5:2013 MasterInject 1302 Beton yapıların korunması ve tamiri için mamuller ve sistemler - Bölüm 5: Beton Enjeksiyonu (Products and systems for the protection and repair of concrete structures - Part 5: Concrete injection) Betondaki çatlak, boşluk ve yarıkları yük aktaracak özellikle dolduran enjeksiyon mamulleri (F) (Injection products that fill cracks, voids and crevices in concrete with a characteristic to transfer load. (F))	
Çekme bağ dayanımı yoluyla adezyon (Adhesion by tensile bond strength)	Alt tabakadan oluşan kopma (Cohesive failure in the substrate)
Hacimsel büzülme (Volumetric Shrinkage)	< % 3
Camsiya geçiş sıcaklığı (Glass transition temperature)	> 40°C
Kuru ortama enjekte edilebilirlik (Injectability into dry medium) Çatlak genişliklerinin 0,5 mm-0,8 mm olduğu veya EN1771'in uygun olmadığı durumlarda:Çekme yoluyla bağ dayanımı (Crack widths:0,5 mm-0,8 mm or where EN 1771 is not suitable: Covered by adhesion by tensile bond strength)	Çatlağın doldurulma yüzdesi>90 (Percentage of the crack filled>90)
Viskozite (Viscosity)	300 ± 20 cp (Sp.2, 100 rpm, 26°C)
İşlenebilirlik süresi (Workable time)	10°C:40±20 dakika (minutes) 21°C:35±20 dakika (minutes) 35°C:27±20 dakika (minutes)
Polimerler için çekme dayanımı gelişimi (Tensile strength development for polymers)	Asgari kullanım sıcaklığında 72 saat sonundaki çekme dayanımı >3 N/mm ² (Tensile strength >3 N/mm ² within 72 h at the minimum use temperature)
Islatma-kurutma ve ısı çevrimlerinden sonra çekmede bağ dayanımı yoluyla adezyon (Adhesion by tensile bond strength after thermal and wet-drying cycles)	Kopma alt tabakadan meydana gelmeli (Cohesive failure in the substrate)
Betonla uyumluluğu (Compatibility with concrete)	Kopma alt tabakadan meydana gelmeli (Cohesive failure in the substrate)
Yangına tepki (Reaction to fire)	E
Tehlikeli maddeler (Dangerous substances)	Madde 5.4'e uygun (In accordance with clause 5.4)