

EPO INJECT

Low Viscosity Epoxy Crack Injection System



DESCRIPTION

EPO INJECT is a two part, solvent-free, low viscosity epoxy resin based injection system designed to form a strong permanent bond and seal in cracks in dry, damp or wet concrete and masonry. It is designed to seal and inject cracks in concrete floors, walls and structures using suitable resin injection equipment. However it can be easily applied manually in horizontal application because of its low viscosity.

TYPICAL APPLICATIONS

For inject and fill the cracks between 0.1 to 5mm wide in a wide variety of construction applications like concrete walls and floors, foundations, decks, tanks and sea walls to form a permanent bond or seal and thus prevent water seepage in areas such as basements, swimming pools etc. It is suitable for use in marine environments.

ADVANTAGES

- Low viscosity allows penetration into fine cracks thus seals the cracks permanently.
- Specially formulated for use in Middle East climatic condition.
- Excellent adhesion to dry and wet substrate.
- Resistant to wide range of aggressive chemicals, acids, alkalies, water and frosts.
- Non-shrink adheres with no loss of bonds.
- Can penetrate, cure and bond well in water soaked concrete cracks.

PRODUCT DATA

Form	Epoxy Resin
Colour	Transparent
Packing	3 Kg (A+B (2:1))
Consumption	1.0 Kg/m ² /mm (may varies depends up on surface condition)
Shelf life	12months, indoor storing non-open packaging under controlled condition

TECHNICAL SPECIFICATION

Test Name	Standard	Average Result
Density @ 25°C	--	1.06 Kg/Ltr
Pot Life @ 25°C	--	60 ± 15 min
Hardening period	--	3 – 6 hours
Compressive Strength 7 days	BS 6319: PART-2	> 65 N/mm ²
Flexural Strength 28 days	BS 6319: PART-3	> 30 N/mm ²
Tensile Strength 28 days	BS 6319: PART-7	> 25 N/mm ²
Adhesion on Concrete	ASTM C 881	> 3.0 N/mm ²
Adhesion on Steel	ASTM C 881	> 15 N/mm ²
Slant shear Bond To dry concrete @ 7 days To wet concrete @ 7 days	BS 6319: PART-4	> 45 N/mm ² > 35 N/mm ²



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APPLICATION PROCEDURE

SURFACE PREPARATION

All the surfaces to be injected should be clean from any dust, unsound or contaminated material, old paint, grease, corrosion deposits or algae. The surface should preferably be prepared using high pressure water jetting or light abrasive blasting, followed by thorough washing to remove dust and remaining particles. Blow the cracks and treated surface with oil free air to ensure complete removal of all dust and loose particles. Ensure that the surfaces should be dry.

MIXING

Add component A to component B and stir with a mixing paddle attached to a low speed electrical drill (max. 400 rpm to avoid entrapping air). Mix thoroughly for 2-3 minutes until a homogenous mix is obtained. Avoid any air entrapment during mixing. Only mix as much materials as you can inject within its pot life. Pre-trials are recommended.

CRACK SURFACE SEAL

EPO BOND FD is generally used to bond the injection packers or nipples to the substrate and to seal the face of the crack (see current **EPO BOND FD** TDS for additional application/mixing instructions).

INSTALLING OF THE INJECTION PACKERS

Packers should be placed between 200mm and 500mm apart dependent on crack size, along the length of the crack. Drill 10mm x 30mm deep holes at the crack where packers are to be located. This assists in keeping the injection point clear. Remove any residual dust in the hole and along the crack with vacuum (do not use compressed air).

Immediately after mixing, apply a small amount of the **EPO BOND FD** product to the underside of each packer, making sure that the valve will not be blocked and place the packer centrally over pre-drilled hole in the crack.

APPLICATION

A. **EPO INJECT** can be used:

(a) With standard injection equipment with closed containers (pressure pots) capable of working at pressures up to 1 N/mm² (10 bar).

(b) With plastic or foil lined cartridges using a hand operated skeleton cartridge gun at low pressures.

(c) By pouring into cracks directly or via a funnel. This is sometimes called the flooding method. It is mainly used for cracks 0.1 mm to 5 mm wide in horizontal areas. The crack is chiseled out in a V-shape, 5mm deep and 10mm wide along its entire length. The area is cleaned to remove all loose particles by means of oil-free compressed air. The mixed **EPO INJECT** grout is then poured into the cracks and topped up as necessary.

B. Following completion of the injection works the injection system shall be allowed to cure for 24 hours and shall be left undisturbed for this time.

C. Remove any packers or nipples and make good any holes or void with **EPO BOND FD** and allow curing. The **EPO BOND FD** can be ground off with an angle grinder or softened with a blow lamp and peeled off. Do not allow to burn.

LIMITATIONS

EPO INJECT should not be used on live cracks or where further movement is expected. **EPO INJECT** should not be used in the presence of running water.

PRECAUTIONS

CLEANING

Spillages should be absorbed with sand or earth etc. and disposed in accordance with local regulations. **EPO INJECT** and **EPO BOND FD** should be removed from tools, equipment and mixers with **EPO SOLVENT** immediately after use. Hardened material can only be removed mechanically.

FIRE RESISTANCE

The product is non-flammable but will burn in a fire.

HEALTH AND SAFETY

EPO INJECT should not come in contact with skin and eyes or be swallowed. Avoid prolonged Inhalation of the vapours. Some people are sensitive to epoxy resins, therefore, protective gloves, goggles and barrier creams should be used. Ensure adequate ventilation and if working in enclosed areas, suitable breathing apparatus must be used. If mixed resin comes in contact with skin, it must be removed before hardening with a resin removing cream followed by washing with soap and water. Contamination of skin by non-resin based products should be removed immediately with soap and water. Should accidental eye contamination occur with any of the above products, wash well with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately. DO NOT INDUCE VOMITING.

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