

# Hydrapox Injection

**High performance low viscosity two part epoxy resin for crack injection & cavities**

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## Description

**Hydrapox Injection** are designed for injecting cracks in concrete and masonry where there is a need to consolidate a structure or exclude water and air from contact with reinforcement. **Hydrapox Injection** is a low viscosity system and is suitable for cracks down to 0.2 mm at the surface and internal cracks tapering down to 0.01 mm.

## Advantages

- Excellent bond strength to concrete, steel reinforcement, brickwork and masonry
- Low viscosity – high performance
- Cost effective and efficient repair
- Fast cure, high early compressive strength
- Fill cracks and Cavity
- Suitable for pressure grouting

## Description

**Hydrapox Injection** basic pack incorporates a two-part epoxy crack injection resin contained in a patented single cartridge, complete with injection nipples and hoses. A selection of either **Hydrapox Injection**, a low viscosity system, a thixotropic system, ensures the most cost effective and efficient solution. The Cemcrete accessory pack contains additional items which are complementary to the basic pack. a two-part surface sealer and adhesive for fixing nipples and sealing cracks, an injection gun and the basic safety wear, gloves and goggles.

## Standards Compliance

**Hydrapox Injection** conforms to the specification of ASTM C881 Type I

## Properties

Typical properties of **Cemcrete Injection** are:

### Usable life at

10°C:	100 minutes
20°C:	50 minutes
30°C:	25 minutes
40°C:	15 minutes

### Viscosity at

10°C:	400 to 800 MPas
20°C:	250 to 500 MPas
30°C:	100 to 250 MPas

### Set time at

10°C:	12 hours
20°C:	7 hours
30°C:	5 hours
40°C:	3 hours

## When cured for 7 days at 20°C

**Compressive strength:** > 70 N/mm<sup>2</sup> (BS 6319)

**Flexural strength:** > 45 N/mm<sup>2</sup> (ISO R178)

**Tensile strength:** > 55 N/mm<sup>2</sup> (ISO 527)

**Modulus of elasticity:** 2800 N/mm<sup>2</sup>

**Elongation at break:** 2.5%

**Tensile bond strength:** When tested to BS 3900, Pt E10 in both dry and wet states is greater than average concrete

## Specification clauses

### Low viscosity crack injection

The crack injection system shall be which has Compressive strength greater than 70 N/mm<sup>2</sup> Flexural strength greater than 45 N/mm<sup>2</sup> Tensile strength greater than 55 N/mm<sup>2</sup>, Modulus of elasticity approximately 2800 N/mm<sup>2</sup> and elongation at break approximately 2.5%. It shall be applied strictly in accordance with application instructions given in the product data sheet.

## Application instructions

### Surface preparation

Surface Sealed has to retain the injection system under pressure. Care must be taken to provide a bond surface which is dry and free from any contamination.

### Cemcrete Injection work procedure

- Drill holes along the crack line
- Clean crack line with electric grinding tools and ensure that concrete surface is clean, sound and free from oil and grease
- Insert injection nipples in holes at distances of between 20 to 40 cm to avoid any counter-pressure (In some case may be use injector head for high pressure injection purpose)
- Seal along the crack line on surface with Cemcrete surface sealer (see denote) and add blow through the nipples with compressed air to ensure dust and loose particles are removed. Then start to inject **Hydrapox Injection** by using suitable pressurized injection equipment such as a twin line manual crack injection pump, a peristaltic pump or other similar equipment (or other airless spray high pressure pump). Nipples should be open at suitable intervals and injection should continue until the epoxy comes out at other end of system

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## Application instructions (contd...)

- Remove the nipples and close with Cemkcrete surface sealer
- Hydrapox Injection** may also be brushed or rolled on to surface for sealing micro-cracks and shrinkage cracks. If such surface exposed to direct sunshine, do such application immediately or soon before application of other layers on top to ensure no degradation of epoxy due to UV-light. If longer time before subsequent top layers added, saturate **Hydrapox Injection** on surface with sand filler to prevent exposure to UV-light.

### \* Denote : **Mixing and application of the surface sealed**

Only mix enough sealer that can be applied within the usable pot-life. Pour a small quantity of the resin into the mixing bucket provided and slowly add the powder. Stir until a smooth thick cream consistency is obtained. Immediately after mixing, apply a small amount of sealer to the back of each nipple ensuring that the valve will not be blocked, then place the nipple to ensure the valve (centre) is firmly over the crack. Additional sealer should be applied to the flange of the nipple to ensure a resin-tight seal to the substrate. Cemkcrete surface sealer should be knifed into the crack between nipples to ensure a resin-tight seal. Where cracks can be sealed on one side only, nipples should be placed at centers which are 80% of the depth to which the resin is required to penetrate. Application of the injection resin may commence as soon as the Cemkcrete surface sealer has fully hardened (at least 1 hour at 20°C or 2 hours at 10°C).

## Making good

After the **Hydrapox Injection** resin has set, remove the nipples. These can be knocked off with a hammer. Make sure any holes or voids with Cemkcrete surface sealer. The existing surface sealer can then be removed by either grinding or heating with a hot air gun and scraping the concrete surface until the original substrate profile is restored.

## Cleaning

Tools and application equipment should be cleaned using solvent for **Hydrapox Injection**.

## Limitations

**Hydrapox Injection** should not be used for cracks where movement is expected to continue. Other measures should be taken to accommodate such movement, i.e. cutting and forming a movement joint. Contact your local Cemkcrete office for further information.

## Estimating

**Cemkcrete Injection package :** 3 kg 15 kg packs  
**Cemkcrete injection nipples:** Each  
**Cemkcrete Surface Sealed:** 13 kg pack (A+B+C)

## Storage

**Hydrapox Injection** has a shelf life of 12 months and should be stored in internal dry conditions at temperatures between 10°C and 40°C.

## Precautions

### Health and safety

**Hydrapox Injection** and Cemkcrete Surface Sealed should not come into contact with the skin or eyes, or be swallowed. Avoid inhalation of vapors and ensure adequate ventilation. Some people are sensitive to resins, hardeners and solvents. Wear suitable protective clothing, gloves and eye/face protection. Barrier creams provide additional skin protection. Should accidental skin contact occur, remove immediately with a resin removing cream followed by soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately. Do not induce vomiting.

### Fire

**Hydrapox Injection** is non-flammable. Cemkcrete Surface Sealed is flammable. Do not use near naked flames. No Smoking during use. In the event of fire extinguish with dry powder or CO2. Do not use water jet.

**Important Note:** Cemkcrete warrants its materials free of manufacturing defects and produced as per standard specifications and sold under the terms and conditions of usages, whilst Cemkcrete endeavors to ensure that any advice, recommendation, or information, given through its products literatures are reflects of the R&D in-house lab test and practical sites experience and knowledge based feed backs, however, the products are being used under various conditions and applied beyond its control where or how either directly or indirectly at various locations and places at a different stages that of an intended purposes and uses. Therefore, Cemkcrete cannot hold warranty or responsible for resultant consequences, such as damages to the property or assets but the product itself.