



# KEM INJECT UWEP

## Epoxy Resin Based Low Viscosity Crack Injection System

Ref CR/CI-V2-0414

### Description

KEM INJECT UWEP is a two part, solvent-free, low viscosity low modulus epoxy resin system designed to form a strong permanent bond and seal in cracks in dry, damp or wet concrete and masonry.

KEM INJECT UWEP is designed to be injected into cracks using suitable resin injection equipment. However it can be easily applied manually in horizontal application because of its low viscosity.

### Uses

For injecting into cracks in concrete or masonry, 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.
- Formulated for use in hot climates.
- Good adhesion to dry or wet substrate.
- Resistant to wide range of chemicals.
- Non-shrink adheres with no loss of bonds.
- Can penetrate, cure and bond well in water soaked concrete cracks.

### Typical properties

**Compressive Strength (BS 6319):** 50 N/mm<sup>2</sup> @ 25° C

**Tensile Strength (BS12):** 12 N/mm<sup>2</sup>.

**Flexural Strength (BS6319):** 20 N/mm<sup>2</sup>.

**Pot Life:** 45 Min. @ 25°C; 20 Min. @ 35°C

**Specific Gravity:** @ 25°C (mixed) 1.05.

### Direction for use

#### Surface Preparations

Clean the surface and remove any dust, unsound or contaminated material, 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. Dirt alone may be removed with wire cleaning, detergent scrubbing or the use of an appropriate degreaser. The effectiveness of decontamination can be accessed by a pull-off test. Blow the cracks and treated surface with oil free air to ensure complete removal of all dust and loose particles. Ensure that the surfaces are blown dry.

#### Fixing Injection Packers

The injection packers or injection nipples shall be inserted into predrilled holes at intervals along the length of each crack. The distance between each packer will depend upon the width and depth of the crack. Spacing shall be close enough to ensure that the resin will penetrate along the crack to the next point of injection. The surface of the cracks between the packers shall be sealed with KEM GELL EP. Both sides of any cracks which go all the way through a wall or slab shall be sealed in this way. The KEM GELL EP shall be allowed to cure for 8 hours at 35° C. At low ambient temperatures (5° C to 12° C) the curing time will be extended and the applicator shall ensure that the surface sealant has adequately cured prior to continuing. One of the injection hose shall be attached to the lowest packer on vertical cracks or to either end of the horizontal cracks.

#### Application

Thoroughly mix the entire hardener and base resin contents until the liquid becomes clear.

1. KEM INJECT UWEP can be used:

(i) With standard injection equipment with closed containers (pressure pots) capable of working at pressures up to 1 N/mm<sup>2</sup> (1 bar).

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

(iii) By pouring into cracks directly or via a funnel. This is sometimes called the flooding method. It is mainly used for cracks 0.25 mm to 3 mm wide in horizontal areas. The crack is chiselled 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 KEM INJECT UWEP grout is then poured into the cracks and topped up as necessary.

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.

**FOR FINISHING:** Remove any packers or nipples and make good any holes or void with KEM GELL EP or KEM MORTAR EP 1 and allow curing. The KEM GELL EP can be ground off with an angle grinder or softened with a blow lamp and peeled off. Do not allow to burn.

### Limitations

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

### Packaging

**KEM INJECT UWEP:** 2.5 kg Pack

**KEM GELL EP :** 0.750 kg. Pack.

### Coverage / Dosage

**KEM INJECT UWEP:** 2.5 kg Pack yielding 2.375 litres.

### Precautions

**CLEANING:** Spillages should be absorbed with sand or earth etc. and disposed in accordance with local regulations. KEM INJECT UWEP and KEM GELL EP should be removed from tools, equipment and mixers with Epoxy Thinner immediately after use. Hardened material can only be removed mechanically.

### Storage

**STORAGE:** Store in dry conditions upto 20° C Shelf life 1 year in original packing. If stored in high temperatures and/or high humidity conditions the shelf life may be reduced by 2 to 3 months.

### Health & Safety

It 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

### Technical Service

Chembond has established itself in various fields on the basis of its dependable technical service. For this purpose, we maintain a well equipped laboratory for research & quality assurance of all products. Our experienced personnel are always on call and would always be available for product demonstrations and product performance monitoring.

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