



# TECHNICAL DATA

## Crack Repair Epoxy Sealer

### ***EPIREZ 123***

#### **Description**

**Crack Repair Epoxy Sealer** is a high strength epoxy injection grout offering low mixed viscosity and fast hardening to produce a bonding matrix exhibiting excellent adhesion and high compressive and tensile strength.

**Crack Repair Epoxy Sealer** is ideal for pressure injected structural repair of cracked and damaged concrete. When **Crack Repair Epoxy Sealer** hardens it adheres tenaciously to all concrete elements and the complete structure is restored to its original monolithic condition.

**Crack Repair Epoxy Sealer** will penetrate into some cracks by capillary action, or, in more critical applications, may be applied by pressure injection to cracks down to 0.2mm.

**Crack Repair Epoxy Sealer** will also bond to damp surfaces.

#### **Areas of application**

- Repair of spalled concrete
- Bridge decks
- Crack injection
- Columns
- Fine gap grouting
- Tunnels
- Stopping leaks in concrete
- Concrete structures

#### **Features**

- Low viscosity
- Deep penetration
- Bonds to damp surfaces
- Solvent free
- High strength

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The information contained in this Technical Bulletin is as up to date and correct as possible as at the time of issue. The data provided should be used as a guide only as the performance of the product will vary depending on differing operating conditions and application methods.

The sale of any product described in this Technical Bulletin will be in accordance with ITW Polymers & Fluids Conditions Of Sale, a copy of which is available on request. To the extent permitted by law, ITW Polymers & Fluids excludes all other warranties in relation to this product.

## General Properties

Shelf Life	: 2 Years
Appearance of Hardener	: Thin amber liquid
Appearance of Compound	: Amber liquid
Mixing Proportions by Weight or Volume	: 1 Hardener to 2 Compound
Solids Content	: 100%
Work Time	: 30 minutes at 25°C
Cure Time	: 24 hours at 25°C
Initial Mixed Viscosity	: 0.3 Pa.s
Density	: 1.08 g/cm <sup>3</sup>
Adhesive Bond Strength, Concrete	: 2.7 MPa (concrete failure)
Water Permeability	: $4 \times 10^{-17}$ m/s
Resistance to Chloride ion Penetration	: Good

## Estimating Data

1 litre Epirez Crack Repair Epoxy Sealer = 4 – 8 m<sup>2</sup>

## Application Directions

### Note:

All injection projects are different and as such the systems below should be used as a guide. Specific information is available from the ITW Polymers & Fluids Technical Department.

## Pressure Injected Structural Repair

### Smaller Projects

Vacuum or brush the crack clean along its entire length and if possible, on both sides of the structure. Ensure foreign matter is removed from the crack.

Drill 12mm diameter holes intersecting the plane of the crack at 150mm centres to a depth of 35-40mm. If a hole does not intersect the plane, leave it and drill a new hole immediately adjacent. Vacuum or brush the holes and crack clean.

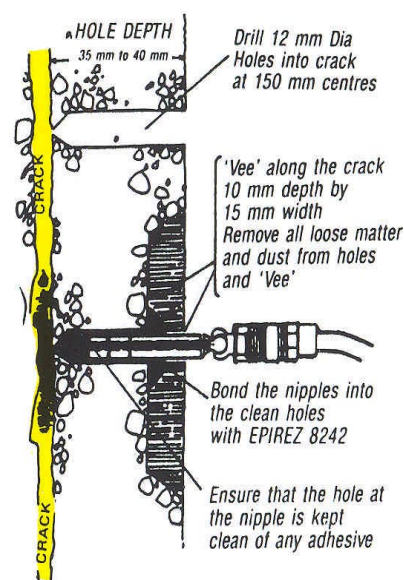
"Vee" out the crack along its entire length 10mm depth and 15mm width.

Use **Episet Structural Adhesive** to bond Injection Nipples into the holes and to seal the crack and any rejected holes. Take care not to block exit ends of nipples with the adhesive. Allow adhesive to harden overnight. If faster hardening is required use **Episet Anchor Adhesive**.

Loosen "heads" of all nipples except the lowest to allow air to bleed off.

Mix **Crack Repair Epoxy Sealer** thoroughly using a low speed (400rpm) stirrer fitted to a power tool. Take care to avoid air entrapment in the mix. Mix only enough material that can be used within the recommended work time.

Load mixed **Crack Repair Epoxy Sealer** into a High Pressure Gun. Attach the gun to the lowest nipple and pump until **Crack Repair Epoxy Sealer** fills the crack and runs out of the next highest nipple. Tighten that nipple "head" and repeat as necessary until **Crack Repair Epoxy Sealer** has filled the crack.



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## Larger Projects

Effective injection of fine cracks over larger areas requires higher pressure and longer duration than smaller projects.

In situations when the depth of epoxy penetration is specified it is recommended that a trial section of crack be injected then cored to ascertain that the specification requirements can be met.

## Cleaning

Clean tools and equipment before hardening commences by washing with **Epirez Clean Up Solvent**. Do not use for cleaning hands or mixing with product.

## Limitations

**Crack Repair Epoxy Sealer** should not be applied at temperatures below 10<sup>0</sup>C.

## Storage and Shelf Life

Store in dry conditions between 10<sup>0</sup>C and 30<sup>0</sup>C, away from sources of heat and naked flames. Protect from frost. When stored in original sealed containers the minimum shelf life is 2 years.

## Packaging

**Crack Repair Epoxy Sealer** is available in 300ml and 1.5 litre packs. Each pack contains Hardener and Compound in the correct proportion for use.

## Ordering Information:

300 ml	#901238
1.5 Ltr	#901233

## Safety precautions

Avoid contact with skin and avoid breathing vapour. Wear gloves and goggles when mixing and using. Keep away from children. Provide adequate ventilation if applied in confined spaces. If poisoning occurs call a Doctor or Poisons Information Centre. If swallowed DO NOT induce vomiting, give plenty of water or milk. If skin contact occurs remove any contaminated clothing and wash affected areas thoroughly with soap and water.

**TDG Code:** Hardener - UN 1760    Compound - Not Classified

## Note

The figures quoted for work time, cure time and performance are not definitive. They are dependent on job site conditions and will vary accordingly. In all cases we endeavour to provide typical figures for use as a guide.

## Health & Safety Information

The product is hazardous. A Material Safety Data Sheet is available from the ITW Polymers & Fluids Technical Department upon request or available on our website [www.epirez.com.au](http://www.epirez.com.au).

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