CRACK REPAIR EPOXY SEALER (123)

HIGH STRENGTH EPOXY FOR REPAIRING CRACKED / DAMAGED CONCRETE

DESCRIPTION

EPIREZ® 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 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 sone 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 bond to damp surfaces.

INTENDED USE

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

PRODUCT FEATURES

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

ESTIMATING DATA

1kg Epirez® Crack Repair Epoxy Sealer = 1m2 @1mm thick

TYPICAL PHYSICAL PROPERTIES

Technical data should be considered representative or typical only and should not be used for specification purposes.

Mixing Ratio by Volume	1 Hardener to 2 Compound
Work Time @25°C	30 minutes
Cure Time @ 25°C	24 hours
Initial Mixed Viscosity	0.3 Pa.s
Solids Content	100%
Density	1.08g cm^3
Adhesive Bond Strength (Concrete)	2.7 MPa (concrete failure)
Water Permeability	4 x 10^{-17} m/s

SURFACE PREPARATION

Surface preparation guidelines cannot cover all site or field contingencies and it is always recommended that an on-the-spot adhesion test be performed as part of the Standard Quality Assurance audit for the project.

CONCRETE

Remove prior coatings and all loose material. New concrete must be at least 28 days old. Remove any oil or grease contamination by washing with a suitable surface degreaser. Hose off with high pressure water. Captive blast clean to expose firmly adhered aggregate. Rinse with water and allow to dry before application.

Alternative, acid etch using **Epirez® Concrete Etch & Cleaner**. Neutralise surface by washing with fresh water and allow to dry.

Repair joint edges, if necessary, with EPIREZ® Concrete Repair Products.

For critical applications, polished surfaces or frequently wet surfaces, prime porous concrete first with **Epirez® Epoxy Primer Sealer**.

MIXING INSTRUCTIONS

It is strongly recommended that full units be mixed, as ratios are pre-measured.

Proper homogenous mixing of resin and hardener at the correct ratio is essential for the curing and development of stated properties.

Precondition product to between 18 to 25°C before use.

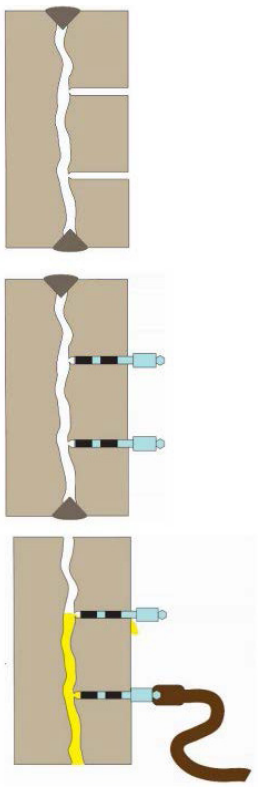
Measure sufficient Hardener and Compound to be used in 30 minutes. Mix thoroughly using a stirrer fitted into a low speed (400 rpm) power mixer. Ensure that all the material on the sides, under the lip of the container and on the stirrer is incorporated.

Note: Take care to avoid air entrapment into the mix. Keep propellor below liquid line, as additional air can be added to mixture, resulting in air bubbles on the surface of the finished product.

APPLICATION INSTRUCTIONS

Injection Repair Method

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.



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 insect the plane, leave it and drill a new hole immediately adjacent.

Vacuum or bush the holes and crack clean.

“Vee” out the crack along its entire length at a 10mm depth and 15mm width.

Use **EPIREZ® Episet Structural Adhesive (8242)** to seal the crack.

Allow adhesive to harden overnight.

Use **EPIREZ® Episet Structural Adhesive (8242)** to bond injection nipples into the holes and any rejected holes.

Take care not to block exit ends of nipples with the adhesive.

Allow adhesive to harden overnight.

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

Mix **EPIREZ® Crack Repair Epoxy Sealer** thoroughly using a low speed (400 rpm) 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 **EPIREZ® Crack Repair Epoxy Sealer** into a High-Pressure Gun.

Attach the gun to the lowest nipple and pump until **EPIREZ® Crack Repair Epoxy Sealer** fills the crack and runs out of the next highest nipple.

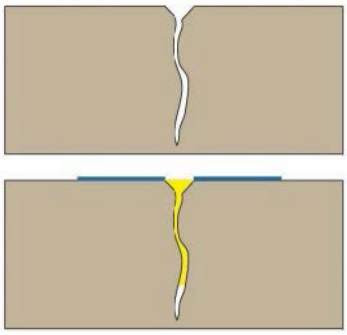
Tighten that nipple “head” and repeat as necessary until **EPIREZ® Crack Repair Epoxy Sealer** has filled the crack.

Larger Projects

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

In situation 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.

Gravity Method – Smaller Jobs



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

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.

Use masking tape on the crack edges to make clean up easier.

Pour small volumes of **EPIREZ® Crack Repair Epoxy Sealer** and allow it to penetrate into the crack.

Repeat until the crack no longer accepts the epoxy.

Remove tape before epoxy hardens.

CLEAN UP

Tools and equipment may be cleaned before hardening commences by washing in **EPIREZ® Clean Up Solvent**.

Do not use for cleaning hands or mixing with the product.

STORAGE

Store in dry conditions between 10˚C and 30˚C away from sources of heat and naked flames. Protect from frost. When stored in original sealed containers, the minimum shelf life is two years.

WARRANTY

Epirez® will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control, we can accept no liability for the results obtained.

DISCLAIMER

All information on this data sheet is based on laboratory testing and is not intended for design purposes. ITW Polymers & Fluids and EPIREZ® makes no representations or warranties of any kind concerning this data.

ORDER INFORMATION

Item No.	Package Size
E901238	300ml
E901233	1.5Ltr

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For Health & Safety information, refer to Safety Data Sheet available from ITW Polymers & Fluids upon request or available on our website.