

Data Sheet

EPO-CRACKSEAL

Epoxy Resin Sealer for Concrete Crack Repair



Description

EPO-CRACKSEAL is a two pack extremely low viscosity system especially formulated for gravity feeding or pressure injecting into fine cracks and fissures in concrete.

Typical applications of EPO-CRACKSEAL include:

- Repair of concrete beams, columns, slabs, walls, etc.

When repaired using EPO-CRACKSEAL:

- Cracks are sealed against ingress of water
- Monolithic nature of the concrete is restored

In its fluid state EPO-CRACKSEAL has:

- Extremely low viscosity to enable it to penetrate and to wet out surfaces thoroughly.
- Long pot life to assist penetration and provide long usable time for working

In its cured state EPO-CRACKSEAL has:

- Extremely high mechanical strength
- excellent bond to damp as well as dry concrete

Typical strengths after full cure:

Compressive: 82 MPa	Tensile: 29 MPa	Flexural: 42 MPa
Bond Strength to Concrete:	Tensile: 2.9 Mpa (Concrete Failure)	Shear: 9.1 MPa (Concrete Failure)

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Gravity Feeding

This method is used for repairing cracks in the top face of horizontal surfaces.

Preparation

Drill 12 mm minimum diameter holes along the line of the crack to approximately 20 mm depth and at 0.5 to 1 m centres (the narrower the crack the closer centres). Do not permit dust and debris from drilling to enter the crack or holes. It is advisable to vacuum out holes and cracks.

Mixing

For smaller packs drain the entire contents of base and hardener packs into a clean plastic jug or similar suitable mixing vessel and mix thoroughly to obtain a uniform blend. At low temperatures, to facilitate flow, viscosity of mix may be reduced by the addition of up to 30 ml per kilo of a suitable solvent such as **RESOKLENS** which should be thoroughly mixed in. Use immediately after mixing.

With large packs mix an equal amount of Base and Hardener then treat the same as a small pack.

Application

Insert plastic funnels into alternate drilled holes and pour fluid into the funnels up to the level of the concrete surface. As the level of the fluid sinks top up as necessary until a stable level is reached. Any depressions remaining should be filled with a mortar (made up of dry sand mixed with the fluid) and trowelled in once the fluid in the holes has become tacky but before it has set hard.

Due to thermal shrinkage the width of a crack will be greater at lower temperatures and therefore crack

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repairs should preferably be undertaken during the cooler part of the day. However, do not apply in temperatures below 5^o C.

Pressure Injection

Follow injection equipment manufacturer's instructions for application. Mix as above.

Yield

2 Kg pack of **EPO-CRACKSEAL** will yield approximately 2 litre. In practice the main plane of cracking is usually accompanied by further cracking at approximately 90° to the main plane and this is borne out by experience which shows that the volume of material required to fill a crack is a minimum of three times the nominal crack volume and often more.

Pot Life

This is influenced by temperature and volume of mixed material. In practice under normal conditions a pot life of approximately 2 hours can be expected.

Cure Time

Full cure is achieved after approximately 7 days at 20^o C. Lower temperatures will prolong cure time. Repaired surfaces will generally take light foot traffic the following day, where possible, keep heavy traffic off for at least 4 days. In vertical or overhead situations loading should be delayed for 5 days in Summer and longer (7-10 days) in Winter

Cleaning of Equipment

Equipment should be washed thoroughly in **RESOKLENS** immediately after use and before material begins to set.

Storage

Keep all containers sealed, store at room temperature and away from direct heat. Under normal temperate and dry conditions a storage life of one year can be expected.

Health & Safety

EPO-CRACKSEAL should be handled carefully and skin contact, exposure to high vapour concentrations and ingestion avoided. Wearing of overalls, gloves and protective eyewear should be considered together with the application of a suitable barrier cream to hands where necessary.

Reference should be made to the separate **EPO-CRACKSEAL** and **RESOKLENS** Health and Safety literature.