



OVERVIEW

FLOWGRIP 1K RESIN is a single-component polyurethane injection resin with low viscosity properties; when it is cured it forms an impermeable flexible seal.

Primary uses :

For hair cracks where very low viscosity injection resin is needed to allow penetration.
 Moving cracks where Flexibility is required to withstand differential movements.
 To be used in conjunction with **FLOWGRIP 1K FOAM**, the high foaming expansion of **FLOWGRIP 1K FOAM** can stop the flowing water then **FLOWGRIP 1K RESIN** can be used as an impermeable permanent seal.

Advantages :

- Forms a permanent sealing with high strength in the crack or joint.
- Fast-reacting impermeable seal.
- Penetrates deep in fine cracks.
- Nontoxic when in contact with drinking water.
- Can be used in dry and wet cracks.
- Excellent adhesion to mineral construction materials (such as Concrete, cement, brick), metal, and certain plastics.
- It is chemically resistant to water, weak acids and alkalis, mineral oils, fungi and bacteria, groundwater, seawater, and petroleum products.

Directions of use :

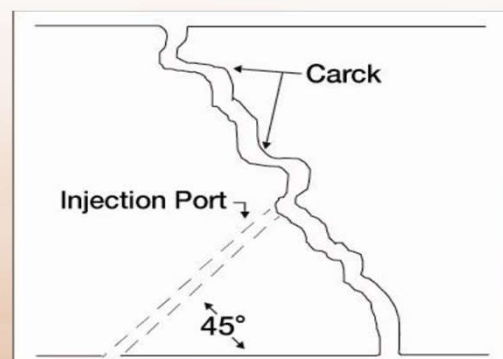
- Clean surfaces.
- Drill injection holes.
- Insert injection packers.
- Flush crack, if necessary.
- Injection using single-component grouting equipment.
- Cleanup.

STEP1 – Clean surfaces:

Cleaning of the surface helps the technician identify the exact location and the width of the crack to be injected. Sometimes the concrete surface is hidden under a surface of mineral deposits left from long-term water leakage. Items that obscure the crack should be removed because the crack must be seen clearly in order to lay out the drilling patterns for the injection holes.

STEP2 - Drilling injection holes:

In order to inject resin into the crack, it is necessary to install injection ports, also called mechanical packers or just packers. The metal-rubber type packers are made for high pressures in wet and dry structures. Before drilling the injection holes, locate rebar and conduit, and plan the pattern to minimize damage during drilling. It is advisable to use a high-quality rotary hammer. The diameter of the average injection hole shall be 13mm depending on the packer used. Packers are supplied in several diameters and lengths. The angle while drilling should be approximately 45 degrees or less to the surface and towards the crack depth of the drill hole intersecting the crack should be somewhere close to the middle of the structure, if possible. Holes deeper than 30cm are usually not required even if the concrete being repaired is more than 100cm thick.



GRIPMIX provides an extensive range of products and services for most concrete and finishing needs. Please contact the GRIPMIX for Building Construction Materials Trading Co. LLC-Dubai for further information, samples, demonstrations and instructor services. The information presented in this leaflet is based upon laboratory research, as well as comprehensive field work and application. All products are sold subject to standard conditions of sale which are available on request. This information is based on GRIPMIX's current state of knowledge and is intended to provide general information on GRIPMIX's products and their methods of use. The potential user is recommended to determine the suitability of GRIPMIX's suggestions and products before adopting them on a commercial scale.



Holes should always be staggered from one

side of the crack to the other. The recommended number of holes is four in 100cm. This assures a higher percentage of holes intersecting the crack, even if the angle of the crack within the concrete is not perpendicular to the surface. No two cracks behave just alike. In some instances, a crack will fill from just a few injection packers. The distance of the drilled holes to each other usually varies from approximately 15cm to 25cm according to the width of the crack. The wider the crack, the further apart are the drill holes. Experience helps in deciding how far apart to drill the injection holes. If the concrete thickness is 15cm or less, do not attempt angle drilling, set the packers straight into the face of the crack.

STEP3- Insert injection packers: Place packers in the previously drilled hole, so that the top of the rubber sleeve is below the concrete surface. If the packer can't be pushed into the hole, tap it in. Tighten the packer with a wrench as tight as necessary.

STEP4- Flush crack if necessary: In some circumstances, it can be very useful to flush the crack with water to improve the subsequent penetration of the PU resin into thicker walls. Flushing helps to detect blind holes, or lost continuity of a crack.

STEP5- Crack injection: When all preparation work is completed, make sure the injection pump is in good working order. Load the resin hopper and charge the pump, hose, and gun. Open the valve on the gun, and allow all remaining solvent to pass while watching for the resin to appear. Catch all surplus material and solvents in a waste container.

Start slowly injecting the crack, holding the pressure line allows the operator to feel the pump pulsations.

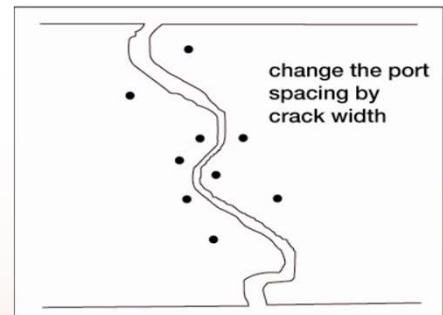
If the resin continues to flow freely out of the crack, stop pumping and apply a surface seal over the crack with rapid-setting cement or place absorbent materials. Proceed pumping until the resin has traveled from one packer to the next, and is oozing out slowly on the visible side of the crack. Once you are assured that the resin has reached the next injection packer, shut off resin flow, disconnect your pressure line, and proceed to the next packer. Some cases need to be re-injected up to three times. Continue in this fashion until the crack is completely filled.

STEP6- Clean up :

Once the injection work is completed, a good and thorough cleanup is essential. The packers can be removed within 24 hours and the holes should be patched. If desired, an electric grinder can be used to remove excess cured grout that flowed out the crack.

Package and storage :

FLOWGRIP 1K RESIN is supplied in 4 and 10-liter specially made iron pails; All **GRIPMIX** products should be stored in a dry shaded area, protected from breakage, deterioration, and contamination. The shelf life is up to 12 months in un-opened condition and if stored as per recommendation



TECHNICAL DATA

Colour	Transparent yellow liquid.
Density:	1 g/cm ³ .
Viscosity	200Mpa.S @ 25°C

Health and Safety :

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin, and foodstuff. Treat splash with water to eyes and skin immediately if accidentally ingested.

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