

A HYDROGEL FOR SHUTTING OFF HEAVY WATER LEAKAGES WITH HIGH TENSILE ADHESION TO WET & DRY SUBSTRATES

DESCRIPTION

Contite G900 is a two component hydrogel injection grout with the mix ratio 1:1 to be used as a waterstop system producing an elastomeric gel. It provides an effective means of stopping water seepage and consists of a solvent free material.

USES & ADVANTAGES

Contite G900 is a two component hydrophilic prepolymer that reacts with the mix ratio 1:1 and produces a highly resilient elastomeric gel.

Properly applied Contite G900 adheres to the surface and forms a tough, rubbery gasket that immediately stops water.

Typical areas of use include shutting off water seepage, forming a waterproof membrane applied to positive side of walls, for reinjectable hoses & soil stabilization, prevention of water leakage in sewerage and drain pipes, tunnels, basements, ground stabilization, prevention of water leaks through expansion or construction joints, etc :-

Advantages :-

- Easy to handle on the jobsite.
- Non of the ingredients are corrosive the hydrogel based on Contite G900 is non corrosive in liquid or in cured form.
- If the cured material dries out it will remain flexible & return to original size on wetting.
- Solvent free.
- Good adhesion on wet as well as on dry concrete.
- Low viscosity; therefore good penetration.
- Cured material is non-toxic.

PROPERTIES

	Part A	Part B
Colour:	Dark brown	White
SG:	1.10-1.12	1.00-1.05
Viscosity: @25°C (77°F, lb/ft.s):	600-800 mPa.s 0.40-0.54	10-30 mPa.s 0.007-0.02

SUBSTRATE PREPARATION

Remove debris, old or failed sealant from joints, clean up the injection holes by using air blower and then flush out with water. If application is over joint, remove all old or failed sealant, then clean up and flush the joints with water.

MIXING

To prevent condensation on the liquids at the start of work, the temperature of the components should be at least as high as the ambient temperature.

All opened drums of Contite G900 should be purged with dry nitrogen and capped when not in use.

APPLICATION

Injection System

Drilling Injection Holes

It is recommended to use packers not surface injection ports. Surface ports do not adhere well to wet surfaces nor tolerate high pressures.

Metal & rubber packers are made to withstand high pressures up to 5,000 psi in wet & dry conditions.

Before drilling holes locate rebar.

Use a rotary hammer. The diameter shall be 13 or 16 mm. depending on the packer. Drill at 45 degrees or less to the surface toward the crack.

The drill hole depth should be to approximately the middle of the structure. Holes deeper than 45 cm are not normally required as long as adequate pressure is available. Holes should be staggered from one side of the crack to the other. The distance between drill holes as a rule of thumb is 30 cm. If the concrete is less than 15 cm thick drill holes straight into the face of the crack to avoid spalling.

Packer Insertion

Place the packer into the hole so that the top of the rubber sleeve is below the concrete surface.

Tap in the packer if it cannot be pushed in. Tighten as much as possible.

Flushing of Crack

In thicker walls flushing the crack first with water may aid injection. Start at the lowest packer on vertical walls or at the narrowest point of horizontal cracks. If using epoxy flushing is not advisable.

Crack Injection

Ensure all equipment is dry. Active water flow at a high rate is best stopped by Contite G900. Start at the highest point of resistance normally the lowest point on a vertical crack & the narrowest on a horizontal.

Monitor the pressure level. If free flow of resin is apparent at the cracks surface pause for a few minutes. The resin should heal the crack so as to contain the material. Restart pumping after 3-5 minutes. If resin continues to flow from the crack stop pumping & apply a surface seal with a rapid setting cement or oakum/foam rubber soaked in reactive material jam into place allow a few minutes to cure & start pumping again.

Wide cracks should have surface seals to contain the resin. Under normal conditions with active leaks the following should be observed (in this order).

- a) Water displaced from the crack
- b) Water & resin mix appearing at the crack (foamy)

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c) Pure resin from the crack

Continue pumping until resin is observed oozing from the next packer. Shut off the resin flow disconnect the pressure line & proceed to the next packer. After injecting several packers disconnect & return to the first packer & inject again.

Joint & Wide Cracks Sealing by Oakum Technique

Leaking expansion joints, wide cold joints, and extra wide moving cracks may be sealed using **Contite G900**.

Contite G900 is especially effective to repair failed waterstops the expansion of **Contite G900** allows it to stay in compression ensuring no bond failures. Outer confinement can be the soil or waterstop, inner temporarily by a backer rod or hydraulic cement. Alternatively use strips of oakum, foam rubber or other absorbent material soaked in resin & packed into the joint/recess. If water flow is at a very high rate small diameter pipes may be inserted in the packing material which serve to relieve pressure & divert flow away while the packing material cures. Once cured inject resin into the pipe to seal it, the pipe can then be removed.

The oakum and the **Contite G900** are applied into any void where small water leakages can be a problem (pipe outlet through walls etc.)

The foaming capability of **Contite G900** in combination with a good flexibility of the end product as well as a good adhesion to the substrate is used for expansion joints.

Soil / Dust Stabilization

Contite G900 can be used for stabilization of soils, sand dunes, stockpiles, etc. Either injection method can also be used wherever applicable.

Backfill Grout or Membrane Forming

The high reactivity of **Contite G900** is used for shutting off heavy water leakages (up to 5 m³ per minute).

The low viscosity of **Contite G900** mixture allows it to be used as a liquid but solidifying gel membrane applied to the positive side of a concrete structure from the negative side. The gel mixture will fill the voids behind the wall to stop water.

The procedure is drill through the wall and pump the **Contite G900** mixture via packers. The low viscosity in combination with a relatively long pot life allows the **Contite G900** to be used in masonry walls as a vertical barrier to fill the voids/joints to stop water coming through to the surface of the wall. The procedure is drill holes to 80% of the wall thickness or until 5 cm from the back of the wall and pump the **Contite G900** mixture via packers into the wall.

The low viscosity in combination with a good adhesion allows **Contite G900** to be used for the gel encapsulation method where voids are filled with a gelly material (e.g. delaminated concrete slabs etc.). The low viscosity in combination with a relatively long pot life allows **Contite G900** to be used for re-injectable hoses being installed in new structures for immediate waterproofing or for later waterproofing.

PACKAGING

Contite G900 10 kg & 20 kg in a can.

Other packaging units on request.

STORAGE CONDITIONS & SHELF LIFE

Contite G900 is very stable when properly handled.

To avoid problems, it is very important to understand that these materials are both temperature and moisture sensitive. Therefore, materials should be stored in an area with temperatures not exceeding 35°C (95°F) or not lower than 5°C (41°F), the shelf life is approximately 6 months in unopened drums. All part used drums should be covered by nitrogen and re-sealed to prevent the ingress of moisture.

HEALTH & SAFETY

Ordinary hygienic principles, such as washing the compounds from the hands before eating or smoking should be observed. Hands should be washed with a waterless cleaner followed by soap and water. Avoid breathing of vapours, prolonged contact with the skin, contact with open breaks in the skin, and ingestion. Use **Contite G900** with adequate ventilation.

TECHNICAL SERVICE

The Cormix International Limited Technical Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

QUALITY ASSURANCE

ISO 9001 : 2008 verified by TUV Nord.

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