

MASTERFLEX[®] 900

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Re-injectable hose waterstop system for construction and cold joints in concrete

Product Description

MASTERFLEX[®] 900 is a blue flexible PVC hose available in two sizes. The hose comprises a solid core and lateral openings covered by neoprene strips, all banded by an open webbed nylon mesh.

Primary Uses

MASTERFLEX[®] 900 is designed to replace waterbar for use in concrete structures which contain joints other than expansion joints and subject to hydrostatic pressure on one or both faces of the structure. Its use prevents passage of water through concrete joints in the following typical applications.

- Shafts and tunnels
- Water reservoirs / tanks
- Canals
- Dams
- Sewage treatment plants
- Liquid storage vessels
- Any sub base concrete construction
- Water excluding or retaining structures

Advantages

- Eliminates costly design, welding and installation of waterbar.
- Water cannot penetrate treated joint and rebar, unlike traditional installation where water is in contact with the reinforcement up to the waterbar.
- The installed system assures a watertight structure.
- Fast easy installation procedures even to complicated design detail.
- Proven and predictable performance.
- Joints can be tested for watertightness before backfilling or membrane tanking operations.
- System enables retro-injection, to stop leaks caused subsequently by settlement or structural movement at the construction joint.
- Completely maintenance free.

- Possible to retro-fit against existing structures.

Typical Properties

Properties listed are only for guidance and are not a guarantee of performance

MASTERFLEX[®] 900 re-injectable hose is a specially formulated PVC compound. The material is tough, flexible, resilient, chemically inert, is not affected by weathering, low temperatures, or constant immersion in water. It will withstand rough treatment during installation and is easy to install.

MASTERFLEX[®] 900 re-injectable hose is unaffected by alkalis, sewerage, most water solutions of organic chemicals, aliphatic hydrocarbons (fuel), mineral oils, acids and alcohols.

Two basic types of MASTERFLEX[®] 900 injection hose are available:

MASTERFLEX[®] 900 1: Outside diameter: 19mm, longitudinal internal injection hole diameter: 6mm, discharge openings diameter: 3mm. Installation within all types of concrete joints.

MASTERFLEX[®] 900 2: Outside diameter: 24mm, longitudinal internal injection hole diameter: 10mm, discharge openings diameter: 5mm. Installation within long concrete joints, or voids where large quantities of injection materials are to be injected.

Installation

Preparatory work:

All MASTERFLEX[®] 900 re-injectable hoses should be protected from oil, dirt, concrete spatter and damage and should be left clean to receive concrete.

The surface where the MASTERFLEX[®] 900 re-injectable hose will be installed has to be smooth. The surface generated by an internal vibrator while compacting the concrete will usually be suitable

Method

The MASTERFLEX[®] 900 re-injectable hose consists of the injection hose itself and the vent ends. These are specially fabricated PVC hoses to withstand injection pressure, in green and transparent colours. The vent ends allow the fixing of injection equipment at a later stage and generally project 20 cms out of the concrete surface.

After pouring the concrete, only the vent ends are visible. The different colours make the identification of the start and end of the hose after concreting. The injection hose and vent ends must be encased in at least 5cm of concrete.

The MASTERFLEX[®] 900 re-injectable hose is installed in lengths up to a maximum length of 12m. For up to 600 mm wall thickness the MASTERFLEX[®] 900 hose should be installed at the centre of the wall thickness.

The hose is clamped into position with MASTERFLEX[®] 900 clips spaced about 200-250mm apart. The hose must not be fastened to the reinforcement bars in the wall.

It is essential that there is a direct contact between the hose and the concrete. If aggregate or debris lie on the concrete, these must be removed, to prevent floating of the hose in the freshly poured concrete.

Guidelines

The injecting of the hose may be carried out at any time either before switching off the dewatering as a precautionary measure or afterwards if leaks are noticed. The hose may be injected with water under pressure to test the integrity of the joint.

Injection of the MASTERFLEX[®] 900 hose with MEYCO[®] MP308 acrylic resin or RHEOCEM[®] microcement permits re-injection. Use of any other resins will render the hose unusable.

Injection always starts at one end adopting the following procedure:

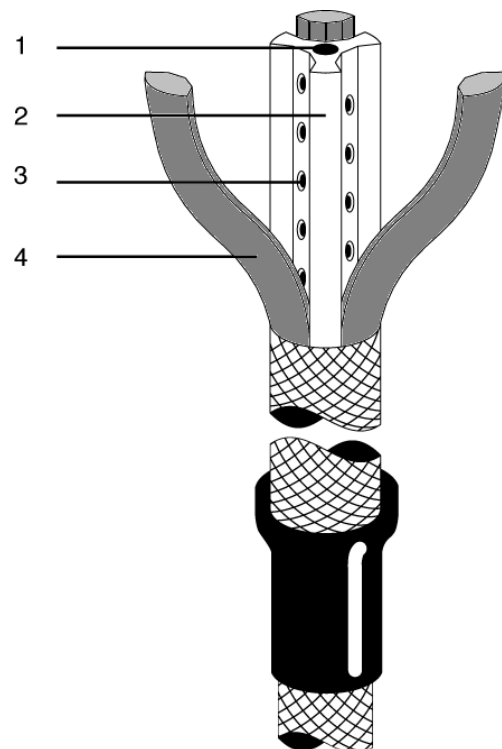
- Fill the hose with injection material by means of an injection pump until it flows out at the other end.
- Plug that end with the end cap.
- Pressurise the MASTERFLEX[®] 900 hose.

Continue to inject until the moment that no material flows into the joint (there is no or only slight pressure drop at the gauge); resin is seen flowing out of the joint or a predetermined quantity has been injected. Sealing is achieved by moderate pressure and a longer injection time, as opposed to high pressure over a brief injection period.

- If required the same procedure may be adopted from the other end of the MASTERFLEX[®] 900 hose, this is to ensure even pressure distribution over the whole length.
- Within the gel time, pressurise the hose again briefly.

Note: Normally one injection is enough to completely seal the joint, however this depends on the quality of the concrete and/or the water pressure.

Components of the MASTERFLEX[®] 900 HOSE



1. Injection diameter, 6 or 10mm, depending on the injection material.
2. Solid hose core for resisting concrete pressure.
3. The lateral openings with a diameter of 3 or 5mm, each staggered by 1cm, ensure a uniform discharge of the injection material.

The three neoprene strips in the longitudinal grooves act as non return valves

The information given here is true, represents our best knowledge and is based not only on laboratory work but also on field experience. However, because of numerous factors affecting results, we offer this information without guarantee and no patent liability is assumed. For additional information or questions, please contact your local UGC representative.

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