

# MasterLife WP 900

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

## Material Description

MasterLife WP 900 is a blue/green flexible synthetic, robust hose. The hose comprises of a single core with micro-outlets that open at 1 bar of pressure. The hose is covered with a protective open webbed nylon mesh.

## Fields of Application

MasterLife WP 900 is designed to replace waterbar for use in concrete structures which contain joints other than expansion joints and are 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:

- Water reservoirs / tanks
- Canals
- Dams
- Sewage treatment plants
- Liquid storage vessels
- Any subbase concrete construction
- Water excluding or retaining structures

## Characteristics and Benefits

MasterLife WP 900 offers the following benefits:

- Eliminates costly design, welding and installation of waterbars.
- Water cannot penetrate the treated joint and rebar, unlike a traditional installation where water is in contact with the reinforcement up to the waterbar.
- The installed system ensures a waterproof structure.
- Fast easy installation procedures even to a 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.
- Allow for maintenance.
- Possible to retrofit against existing structures.

## Technical Properties

MasterLife WP 900 re-injectable hose is a specially formulated synthetic 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.

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

MasterLife WP 900: Outside diameter: 12.5 mm, internal diameter: 6.5 mm, discharge is via micro-openings. Installation within all types of concrete joints.

## Application procedure

### Preparatory work:

All MasterLife WP 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 MasterLife WP 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 MasterLife WP 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 200 mm 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 50 mm of concrete. The MasterLife WP 900 re-injectable hose is installed in lengths up to a maximum length of 12 m. For up to 600 mm wall thickness the MasterLife WP 900 hose should be installed at the centre of the wall thickness. The hose is clamped into position with



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MasterLife WP 900 clips spaced about 100 – 150 mm 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

Installation, injection, reinjection, and selection of materials should be entrusted to an experienced and certified MasterLife WP 900 applicator.

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 MasterLife WP 900 hose with our MasterRoc MP 307 resin. If you are looking to use any other MasterRoc injections resins, contact our technical department before use to check if it is compatible.

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 MasterLife WP 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 MasterLife WP 900 hose. This is to ensure even pressure distribution over the whole length.

- Within the gel time, pressurise the hose again briefly.
- Pressurise the MasterLife WP 900 hose.

## Installation of MasterLife WP 900

1. The maximum hose length is 10 – 12m.
2. Injection hose MasterLife WP 900 must lie flat on the surface of the first concrete layer.
3. Injection hose MASTERLIFE WP 900 is fixed with brackets or a grating. The distance between the brackets or the fixing points should be about 100 – 150 mm or less if necessary.
4. Alignment with the wall centre is the ideal position of the injection hose MASTERLIFE WP 900.
5. The distance of the MASTERLIFE WP 900 hose to the outer edge of the joint must be at least 93.75 mm.
6. In the area of hose joints the two hoses must overlap by 15 cm and lie parallel with 30 – 50 mm distance between them.
7. The connections at the nail packers or the filling and vent systems must be positioned so that they are perfectly accessible.

## Injection Process

MasterLife WP 900 should not be injected until after 28 days at the earliest.

Visible flaws along the construction joint must be filled with quick setting cement before the injection works are started.

The injection can be carried out differently:

- by nail packers, injection hose packers
  - by filling and vent hose
1. By flushing with water or using air it is checked if the inner passage of the injection hose is free.
  2. Through the connection (filling and vent hose, nail packer, injection hose packer) the injection hose is injected until the injection material comes out at the open end which is plugged with the injection nipple as soon as the injection material comes out without any air bubbles.



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3. During the injection works the flow and distribution of the injection material in the construction joint can be monitored with the manometer of the injection pump.
4. Required re-injection must be carried out within the processing time of the material and until the pressure remains constant. Constant pressure shows that the construction joint cannot take more material. The injection process is then finished.

## Contact Details

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Product Data	
Shelf life:	Needs to be stored off the ground in a dry environment according to manufacturer's instructions in a sealed box.
Storage conditions:	Store in original sealed containers and at temperatures between 5°C and 30°C. Store under cover, off the ground, out of direct sunlight and protect from extremes of temperature. Protect the materials from all sources of moisture. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.
Handling and transportation:	Refer to MasterLife WP 900 Safety Data Sheet
Disposal:	Refer to MasterLife WP 900 Safety Data Sheet

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## Disclaimer

### MasterLife WP 900, Master Builders Solutions UK Ltd, Version 2

#### Health and Safety

\*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

#### Spillage

Chemical products can cause damage; clean spillage immediately.

#### DISCLAIMER

"Master Builders Solutions UK Ltd" (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.