DUROJECT INJECTION HOSE

SPECIFICATION DATA & PROCESSING INFORMATION

1. PRODUCT NAME

DuroJect Injection Hose

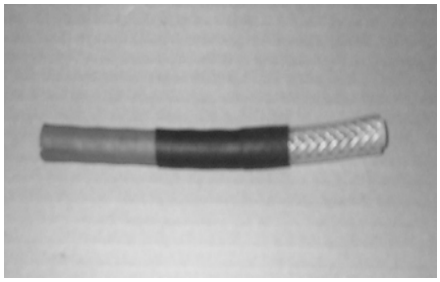
An economical injection hose for planned sealing of construction joints. This system enables a controlled injection of the construction joint and thus reliable waterproofing. It is used for resin and microfine cement injections.

2. MANUFACTURER

BBZ USA, Inc.
3400 Tree Court Industrial Blvd.
St. Louis, MO 63122 USA
Tel: 800.325-9504
Fax: 800.551-5145

3. PROPERTIES

During the concrete pour, ***DuroJect's*** foamed plastic jacket prevents any laitance or wet cement from penetrating the injection channel and clogging the outlets. During the injection process, the injection grout is forced out through the spiral outlets of ***DuroJect's*** core. The injection pressure opens the slotted perforations so that the injection grout emerges through the slots to all sides. Voids, honey combing and hairline cracks around the injection hose and the construction joint are sealed.



4. USE WITH WATERSTOPS

The ***DuroJect*** injection hose can also be used in combination with various PVC waterstop profiles.

Internal flat or centerbulb waterstop – The injection hose is fastened to both legs of the waterstop using special clips (every 8 inches) at the edge beads.

External Base Seal Waterstop – The injection hose is fastened to both waterstop anchor ribs with special round clips to the middle locking anchor. Suitable clearance to the reinforcement steels must be observed so that the construction steel does not lie on the injection hoses.

5. INSTALLATION

The ***DuroJect*** injection hose is installed on the hardened concrete surface in the middle of the construction joint. The maximum length of the hose is 32 ft or 10m.

The hose is safeguarded to prevent it from sliding or floating by means of special clips or pipe clips at approximately every 8 inches. We recommend centers of every 4-6 inches for corners and edges. The injection hose shall not be fastened to reinforcing steel.

The injection hose must lie flat on the concrete surface throughout and placed in such a way that it is not buckled or constricted.

During the later injection work the injection equipment is connected either via nail packers or injection ends.

The injection ends are either fixed into a junction box or carried to the outside of the concrete. In general, **DuroJect** is attached directly to a nail packer, which is supplied with a zerk nipple to connect to the pump. The nail packer is fixed to the formwork.

The junction boxes or nail packers are to be located 6 inches off the joint.

Always criss-cross the PVC vent ends for crossing over the ***DuroJect*** Hose. The minimum distance between two hose sections is approximately 2 inches.

Types of Injection Materials: Although this hose can be injected with many different materials, in most cases, the Manufacturer, BBZ USA , Inc. recommends **Multigel 850** for watertight or environmental concerns, and **Tricodur SI Microfine Cement** for structural requirements. Polyurethane and epoxy resins can also be used in ***DuroJect*** injection hose.

Tools required for inject:

- One-component pump capable of 600 psi
- Packer and packer attachments
- Pump accessories and attachments

Contact BBZ or its Area Representative for recommendation of sealing material and required equipment for proper injection.

Injection of sealing materials. The waiting period between pouring concrete and injecting the ***DuroJect*** **Hose** is determined by the curing time of the concrete, normally 28 days. If this is not possible, contact the manufacturer (BBZ).

7. INJECTION PROCEDURES

Injection starts at one end of the hose and follows these steps: Remove the closure plugs from both the injection end and the opposite vent end. Close the chosen injection end with a packertong (see Figure 1) or Nail Packer (see Figure 2). Fill the hose with injection material with an injection pump until the material flows out the other end. Close that other end with another packertong or nail packer and resume pumping. Injection pressure should be between 75-150 psi. From the moment that no further material flows into the joint, gradually increase the pressure until the necessary pressure is reached (generally about 500-600 psi delivery pressure). Maintain pressure for approximately 3-5 minutes up to 600 psi. This is essential to allow the injection material to thoroughly penetrate the joint.

Important:

To seal the joint, apply moderate pressure for a long injection time, rather than exerting a high pressure for a short injection time. Once a maximum pressure of 600 psi is held for approximately 5 minutes, reinject the specified injection material into the injection hose from the opposite vent end within the gel time of the injection material. This is to ensure that an even pressure distribution is guaranteed over the entire length of the joint. During the gel time, or setting time, pressurize the ***DuroJect*** Hose again for a moment. If the injection material penetrates the wall surface, this should be patched with rapid cement. Remove the packertong or nail packer. Close the vent ends with closure plugs. Follow this procedure for all injection materials.

Figure 1

Figure 2

8. AVAILABILITY AND COST

Availability: ***Duroject Hose*** and Duroseal injection materials and related products are available throughout the United States, Canada and internationally. Contact Manufacturer (BBZ) or an Area Representative for information and the licensed applicator in your area.

Cost: Costs may vary with the specific job and method of application. Specific job cost can be obtained from BBZ, an Approved Applicator or Product Representative.

9. WARRANTY

BBZ AG and BBZ USA warrant that the products manufactured by them shall be free from material defects. The obligation of BBZ AG and BBZ USA under this warranty, should any of the products prove defective, shall be limited to replacement of the defective product.

This warranty is expressly in lieu of all other warranties, express or implied, including the warranties of merchantability and fitness for a particular purpose. There are no warranties which extend beyond the description of the face hereof.

Limitations of Liability: The manufacturer and BBZ in no event, whether claim is based on warranties, contract negligence or otherwise, are liable for incidental or consequential damages.

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