SikaFuko® ECO 1 Injection Hose System for Single Injections

SikaFuko® ECO 1 (formerly Durject) is an economical injection hose for planned sealing of construction joints. SikaFuko® ECO 1 enables a controlled injection of the construction joint for a reliable waterproofing system.

SikaFuko® ECO 1 is designed to deliver resin and microfine cements through a spiral cut injection channel and perforated foam jacket. Unlike SikaFuko® VT, it is not for applications that may require multiple injections.

Installation follows a procedure similar to that used for SikaFuko® VT described on the preceding page. Contact for a Sika Greenstreak Engineer for specific details. SikaFuko® VT and SikaFuko® ECO 1 hoses and accessories are available for purchase individually or in prepackaged Combipack kits.

Injection Materials for use with SikaFuko® Injection Hose Systems

Sika® Inject 215

Sika® Inject 215 is a highly flexible and solvent free, acrylate resin hydrogel for waterproofing concrete construction joints with SikaFuko® VT and SikaFuko® ECO 1 Injection Hose Systems. Sika® Inject 306 achieves very good penetration and has an adjustable reaction time between 8 and 50 minutes.

LIMITED WARRANTY: Sika Greenstreak warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Technical Data Sheet if used as directed within shelf life. Our most current General Sales Conditions shall apply. Please consult the Product Data Sheet prior to any use and processing.

Sika® Injection 306

Sika® Injection 306 (formerly Multigel 850) is a flexible and solvent free, acrylate resin hydrogel for waterproofing concrete construction joints with SikaFuko® VT or SikaFuko® ECO 1 Injection Hose Systems. Sika® Injection 306 achieves very good penetration and has an adjustable reaction time between 8 and 50 minutes.

SikaFuko® Injection Hose Systems

SikaFuko® VT is a specially designed PVC Injection Hose System which is installed in concrete construction joints to waterproof and seal any cracks or voids adjacent to the joint. The SikaFuko® VT System seals joints watertight and offers a complete maintenance program if leakage appears in the future.

When Sika® Acrylate Injection Resins, Portland Cement, Microfine Cement, or other approved injection resins are selected, the SikaFuko® VT System can be used for multiple re-injections – a significant advantage over any other hose system available.

SikaFuko® VT Re-Injectable Hose System is a logical step forward in improving waterstop technology. Utilizing this state-of-the-art injection system results in “zero leak tolerance.” Easy to install and reasonably priced – SikaFuko® VT simplifies the job and ensures watertight joints.

Additionally, SikaFuko® ECO 1 (formerly Durject) is an economical, single-injection hose for planned sealing of construction joints (see back cover for more details).

Typical Applications for SikaFuko® Injection Hose Systems

- Tunnels
- Waste/Waste Water Treatment Plants
- Lock and Dam Systems
- Reservoirs and Aqueducts
- Water Parks and Aquariums
- Power Plants
- Bridges
- Containment Structures and Tanks
SikaFuko® VT Injection Hose System

SikaFuko® VT Basic Use

SikaFuko® VT is an injection hose system embedded along concrete construction joints to deliver cements or resins into cracks or voids to create a watertight joint. After each injection, the hose can be cleaned for future injections, providing a long term maintenance program should further breaching at the joint occur.

The SikaFuko® VT Advantage

- Exclusive "valve" design allows for repeated injections
- Provides long term maintenance program
- Suitable for a wide range of injection materials
- Can be injected with water to test for watertightness in a safe and simple manner
- Proven performance record around the world
- Does not require split forming
- Suitable for a wide range of injection materials
- Provides long term maintenance program
- Exclusive “valve” design allows for repeated injections
- The SikaFuko® VT Design

Solid hose core made of high quality PVC. The core is capable of absorbing concrete pressure to ensure the integrity of the injection channel.

Lateral, staggered injection openings to ensure uniform discharge of the injection material.

Compressible neoprene strips in the longitudinal grooves are a unique and extremely important element of the SikaFuko® VT Hose System. These strips act as valves during injection and as a seal while cleaning the tube for re-injection.

SikaFuko® VT Design

Injection channel

Phase 1 Concrete Pour

When concrete is placed around the SikaFuko® VT Hose, the concrete pressure seals the neoprene strips, sealing off the injection openings and channel.

Phase 2 Injection

The internal injection pressure compresses the neoprene strips and allows the injection material to flow out from eight longitudinal gaps, allowing a uniform discharge of the material over the full length of the SikaFuko® VT Hose.

Phase 3 Cleaning The Hose

When using an approved injection material, the SikaFuko® VT Hose is easily flushed clean using water and applying vacuum pressure. The negative pressure reseats the neoprene strips, preventing injected material from being drawn back into the injection channel upon cleaning.

Phase 4 Readied for Re-injection

SikaFuko® VT Injection System is ready for re-injection if needed.

SikaFuko® VT Installation

SikaFuko® VT can be installed in lengths up to 33 feet. This length includes the fiber reinforced PVC ends. If longer lengths are required, please contact a Greenstreak Engineer.

SikaFuko® VT requires a minimum 2” concrete cover and a minimum 2” clearance between two parallel hose sections (Figure 1).

Intersecting hoses are required in most applications. The injection portion of the hose must maintain intimate contact with the concrete; vent sections can be overlapped (Figure 1).

1. Secure the SikaFuko® VT Hose to a flat, smooth concrete surface using special plastic clips or pipe clips every 8"-10" on center (see figures 1 and 2). SikaFuko® VT should not be installed in a buckled or constricted manner, nor should it be attached to reinforcing bars.

2. If injection of the SikaFuko® VT Hose is required, the injection pump is connected to the PVC vent ends. Fiber reinforced PVC vent ends should be exposed at the exterior in convenient, accessible locations for future injections. Junction boxes, nail packers, or simply continuing fiber reinforced vent ends to the outside of the concrete can be utilized (see figure 3).

3. When using junction boxes, continue fiber reinforced vent ends roughly 4" into the junction box. Tie vent ends together inside the junction box using cable ties or tie wire to secure during concrete placement.

Fabricating SikaFuko® VT Hose

1. Cut the SikaFuko® VT Injection Hose to the desired length.

2. Attach fiber reinforced PVC vent ends to the SikaFuko® VT Hose using connecting nozzles, rapid glue, and shrink-on sleeves.

3. Closure plugs are installed on the fiber reinforced PVC vent ends to prevent impurities from entering the hose.

See SikaFuko® VT Hose Assembly and Fabrication Guide for complete instructions.

SikaFuko® VT 1

6mm ID Hose

3mm Injection Ports on 20mm centers

SikaFuko® VT 2

13.5mm OD Hose

3mm Injection Ports on 20mm centers

24mm OD Hose

10mm ID Hose

5mm Injection Ports on 25mm centers
SikaFuko® VT Injection Hose System

SikaFuko® VT Basic Use

SikaFuko® VT is an injection hose system embedded along concrete construction joints to deliver cements or resins into cracks or voids to create a watertight joint. After each injection, the hose can be cleaned for future injections, providing a long term maintenance program should further breaching at the joint occur.

The SikaFuko® VT Advantage

- Exclusive “valve” design allows for repeated injections
- Provides long term maintenance program
- Suitable for a wide range of injection materials
- Can be injected with water to test for watertightness in a safe and simple manner
- Proven performance record around the world
- Does not require split forming
- Can be injected with water to test for watertightness
- Suitable for a wide range of injection materials
- Provides long term maintenance program
- Exclusive “valve” design allows for repeated injections
- The SikaFuko® injection hose system is easily flushed clean using water
- The negative pressure reseats the neoprene strips, preventing injected material from being drawn back into the injection channel upon cleaning.

SikaFuko® VT Design

- Solid hose core made of high quality PVC. The core is capable of absorbing concrete pressure to ensure the integrity of injection channel.
- Lateral, staggered injection openings to ensure uniform discharge of the injection material.
- Compressible neoprene strips in the longitudinal grooves are a unique and extremely important element of the SikaFuko® VT Hose System. These strips act as valves during injection and as a seal while cleaning the tube for re-injection.

SikaFuko® VT Installation

SikaFuko® VT can be installed in lengths up to 33 feet. This length includes the fiber reinforced PVC ends. If longer lengths are required, please contact a Greenstreak Engineer.

SikaFuko® VT requires a minimum 2” concrete cover and a minimum 2” clearance between two parallel hose sections (Figure 1).

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2. If injection of the SikaFuko® VT Hose is required, the injection pump is connected to the PVC vent ends. Fiber reinforced PVC vent ends should be exposed at the exterior in convenient, accessible locations for future injections. Junction boxes, nail packers, or simply continuing fiber reinforced vent ends to the outside of the concrete can be utilized (see figure 3).

3. When using junction boxes, continue fiber reinforced vent ends roughly 4” into the junction box. Tie vent ends together inside the junction box using cable ties or tie wire to secure during concrete placement.

SikaFuko® VT Design

- Injection channel
- Solid hose core made of high quality PVC. The core is capable of absorbing concrete pressure to ensure the integrity of injection channel.
- Lateral, staggered injection openings to ensure uniform discharge of the injection material.
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Dual placement of SikaFuko® VT

SikaFuko® VT Injection System is ready for re-injection if needed.

Connection between SikaFuko® VT injection hose and materials.

Connecting nozzels, rapid glue, and shrink-on sleeves.

SikaFuko® VT Assembly and Fabrication Guide for complete instructions.

Fabricating SikaFuko® VT Hose

1. Cut the SikaFuko® VT Injection Hose to the desired length.
2. Attach fiber reinforced PVC vent ends to the SikaFuko® VT Hose using connecting nozzels, rapid glue, and shrink-on sleeves.
3. Closure plugs are installed on the fiber reinforced PVC vent ends to prevent impurities from entering the hose.

Figure 1

Figure 2

Figure 3

1. Cut the SikaFuko® VT Injection Hose to the desired length.
2. Attach fiber reinforced PVC vent ends to the SikaFuko® VT Hose using connecting nozzels, rapid glue, and shrink-on sleeves.
3. Closure plugs are installed on the fiber reinforced PVC vent ends to prevent impurities from entering the hose.
SikaFuko® ECO 1
Injection Hose System for Single Injections

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Installation follows a procedure similar to that used for SikaFuko® VT described on the preceding page. Contact for a Sika Greenstreak Engineer for specific details.

SikaFuko® VT and SikaFuko® ECO 1 hoses and accessories are available for purchase individually or in prepackaged Combipack kits.

Injection Materials for use with SikaFuko® Injection Hose Systems

Sika® Inject 306

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LIMITED WARRANTY: Sika Greenstreak warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Technical Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer’s sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA GREENSTREAK SHALL NOT BE RESPONSIBLE FOR Warranties express or implied shall apply including any warranty of merchantability or fitness for a particular purpose. Sika assumes all risks. Buyer’s sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. NO OTHER technical properties on the current Technical Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and

Sika® Inject 215

Sika® Inject 215 is a highly flexible and solvent free, acrylate resin hydrogel for waterproofing concrete construction joints with SikaFuko® VT and SikaFuko® ECO 1 Injection Hose Systems. Sika® Inject 215 achieves very good penetration and has a fast reaction time between 2 and 15 minutes. Sika® Inject 215 is compliant for potable water applications in accordance with NSF regulations.

Although Sika® Inject 215 may be used for Sika® hose injections, its fast reaction time makes it less desirable than Sika® Inject 306 for most applications. Sika® Inject 215 is used more often for existing crack injections.

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Our most current General Sales Conditions shall apply. Please consult the Product Data Sheet prior to any use and processing.

SikaFuko® Injection Hose Systems

SikaFuko® VT is a specially designed PVC Injection Hose System which is installed in concrete construction joints to waterproof and seal any cracks or voids adjacent to the joint. The SikaFuko® VT System seals joints watertight and offers a complete maintenance program if leakage appears in the future.

When Sika® Acrylate Injection Resins, Portland Cement, Microfine Cement, or other approved injection resins are selected, the SikaFuko® VT System can be used for multiple re-injections – a significant advantage over any other hose system available.

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