

## POLYWATER FST MINI DUCT SEALANT

Polywater FST seals ducts with excellent pressure-blocking in tough environments. It has excellent wetting and adhesion to metal, concrete, and plastic surfaces. FST seals out methane and other gases and holds 22 feet (6.7 m) water head pressure. The semi-permanent seal is re-enterable and is chemically resistant.

### INSTALLATION

Installation temperature:

40°F to 95°F (4°C to 35°C)

In-service temperature:

20°F to 200°F (-30°C to 95°C) continuous

-40°F to 250°F (-40°C to 120°C) peak

- Good surface preparation is critical.
- Rapid injection produces better mixing.
- Static mixer must be firmly attached to cartridge. It is reusable for 7-10 minutes.
- Visually ensure tip orifices are not clogged before attaching static mixer.

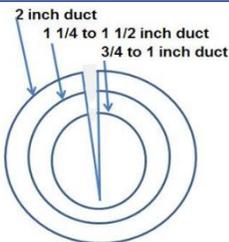
### SAFETY

- Wear eye protection.
- Use protective gloves and protect bare skin.



Clean duct with wire brush.

1. Use a wire brush to remove any loose debris or rust from the duct. Wipe cable and duct with dry towel or cleaning wipe. Roughing the surfaces with an abrasive such as sandpaper or steel wool may increase the effectiveness of the FST. Cleaning wipe will remove contaminants and any organic residue.



Pre-cut foam damming disk.

2. Create a foam dam for the FST material. Select a 2-inch (50-mm), 1¼ to 1½-inch (32 to 38-mm), or ¾ to 1-inch (19 to 50-mm) disk. The outer layers can be removed as necessary.



Insert foam disk.

3. Cut cable ties or untape cable bundle and separate cable bundle. Place cables into pre-cut slit so that disk surrounds the cable. Slide foam disk into conduit 3 inches (7.6 cm). Make sure that the slit is open on top. Place a second foam disk at the end of conduit. Note: The second foam disk can be inserted after the FST liquid is injected on vertical conduits.



Install cartridge.

**4.** Remove FST cartridge from foil pouch.

*NOTE: Do not remove cartridge from protective foil until ready to use. Wear impermeable gloves and eye protection.*

Place the cartridge into dispensing tool (Cat # TOOL-50-11) and snap it into place. *See instructions on page 4 for use information on the dispensing tool.*



Attach static mixer.

**5.** Hold cartridge upright and twist cap 90° counterclockwise to remove from cartridge.

Place static mixer onto cartridge and lock into place by twisting 90° clockwise. Depress handle on dispensing tool until FST comes out of static mixer tip. Pump a small amount of material through static mixer until an even mixture is dispensed. Discard this excess material.



Inject foam sealant.

**6.** Insert static mixer into conduit and inject the suggested amount of foam sealant (see Table 1).

Sealant will rise fully in 5 to 7 minutes.

Sealant will harden (set) in 10-15 minutes.

**TABLE 1**

Duct Size, O.D. Inches (mm)	APPROXIMATE QUANTITY LIQUID FOAM SEALANT	
¾ inches (19 mm)	1 squirt	<p>Note: 1 squirt is 1 full pump of TOOL-50-11. There are approx. 15 squirts per cartridge.</p> <p>Use as a starting point only. Actual required quantity will vary. These calculations are based on an empty conduit, assuming a 0% cable fill.</p>
1 inch (25 mm)	2 squirts	
1¼ inches (32 mm)	3 squirts	
1½ inches (38 mm)	4 squirts	
2 inches (50 mm)	8 squirts	



Replace cap to reuse cartridge.

**7.** To reuse cartridge later, remove static mixer from cartridge and replace cap.

## ADDITIONAL INSTRUCTION TIPS

### CLOGGED/LEAKING CARTRIDGE

The small orifices in the cartridge tip may become clogged. Poke through and loosen hard material or crust with a wire. Material may be used as directed once the clog is cleared. If the back plugs are leaking, do not use cartridge.

### RE-USE AND CLEANUP

Cartridge can be reused for several weeks after initial use. Remove static mixer and visually ensure that orifices are not blocked. Seal with replaceable plug. When ready to use, remove replaceable plug and check to make sure orifices are clear of any hardened sealant. Attach a new, unused static mixer and insert used cartridge into dispensing tool.

Unreacted material may be cleaned from surfaces with a solvent wipe such as Type HP™. Part A amber resin will react with water if surfaces are washed with soap and water solution. Once reacted, material has strong adhesion and may be scraped or cut from surface. For skin contamination, wash thoroughly with soap and water. See SDS for further information.

### WATER IN DUCT

FST will cure if the duct contains less than 10% water. If water is relatively clean and not flowing, the foam dam will work as a good block. FST will incorporate any excess water into the body of the cured foam seal. Too much water and/or contamination will weaken the seal.

For flowing water, use the saturated foam method. See alternative instructions or watch video.  
[www.polywater.com/product/polywater-fst-foam-duct-sealant/](http://www.polywater.com/product/polywater-fst-foam-duct-sealant/)

### REMOVAL

FST produces a watertight seal intended for permanent use. It can be removed. Use an adjustable pliers and squeeze the HDPE conduit to break the seal. For steel and PVC conduit, use a screwdriver and hammer to break the seal around the edges and remove.

### COLD WEATHER USE

FST can be used in temperatures down to 40°F (4°C). Reaction is slower, but the sealant will completely foam and cure with time. At cold temperatures, FST becomes slightly viscous and flows through the static mixer at a slower rate. Cure times are as follows:

	40°F (4°C)	70 F (21°C)
Foaming, Expansion Complete	8 - 9 Minutes	4 - 5 Minutes
Hard, Non-Sticky Skin Formation	12 - 15 Minutes	7 - 9 Minutes

To decrease cure time in cold temperatures, keep FST cartridges warm prior to use.

## TOOL ASSEMBLY



1. To assemble the dispensing tool, rotate the black retaining collar forward.



2. While lifting the metal tab, slide piston with ratchet teeth side down, into the slot through the front end. Push the piston all the way through and gently release the metal tab. The metal tab should catch on the ratchet teeth.



3. Insert cartridge into the wide opening on the black retaining collar.



4. Push the collar back and press firmly to snap into place.

## CONTACT US

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**IMPORTANT NOTICE:** The statements here are made in good faith based on tests and observations we believe to be reliable. However, the completeness and accuracy of the information is not guaranteed. Before using, the end-user should conduct whatever evaluations are necessary to determine that the product is suitable for the intended use.

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