

Polywater® FST-MINI Duct Sealant

Instructions for use on conduit, 2-inch or smaller diameter

FST™ Kit Contents:

Foam Base Cartridge (protective pouch)
Mixing Nozzles

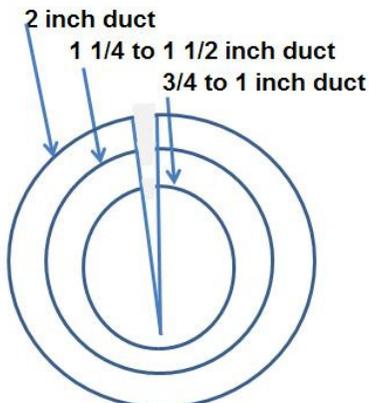
Pre-cut Foam Disks
Pair Protective Gloves

See alternate Saturated Dam Method for running water, sealing cut-outs in metal cabinets.



Clean duct with wire brush.

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



Pre-cut foam disk.

- 2.) Create a foam dam for the FST Duct Sealant material. Select a 2-inch, 1¼ to 1½-inch, or ¾ to 1-inch disk. The outer layers can be removed as necessary.



Insert foam disk.

- 3.) Place cables into pre-cut slit so that disk surrounds the cable bundle. Slide foam disk into conduit 3 inches. 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™ Foam 50 mL 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.



Inject Foam Sealant.

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

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

- 7.) Insert mixing nozzle into conduit and inject the desired amount of foam sealant (see Table 1).

| Duct Size, O.D., inches | Approximate Quantity Liquid Foam Sealant |
|-------------------------|--|
| 3/4 | 1 squirt |
| 1 | 2 squirts |
| 1 1/4 | 3 squirts |
| 1 1/2 | 4 squirts |
| 2 | 8 squirts |

Table 1

*NOTE: 1 squirt is 1 full pump of TOOL-50-11
There are approximately 15 squirts per cartridge.*

Use as a starting point only, actual required quantity will vary. These calculations are assuming a 10% cable fill.

For ducts larger than 2 inches use FST-250KIT.

Sealant will expand fully in 5 to 7 minutes.

- 8.) Remove static mixer from cartridge and replace cap.

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

Dispose of any excess material in accordance with local and national regulations.

Storage: FST™ Duct Sealant is sensitive to sun, water and heat. To keep the FST™ Duct Plug cartridge up to a month after initial use, place the partial used cartridge into the foil bag and tape it shut. Place the foil bag in a dry cool dark place until ready to use.

Polywater® FST Duct Sealant Application and Use

Clogged/leaking Cartridge

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

Re-use and Clean-up

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

Unreacted material may be cleaned from surfaces with a solvent wipe such as Polywater's Type HP, 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 MSDS for further information.

Water in Duct

FST™ Sealant will cure if the duct contains less than 10% water. If water is relative clean and not flowing, the foam dam will work as a good block. FST™ Sealant 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.

Removal

Polywater FST™ Duct Sealant produces a good, water-tight seal intended for permanent use. It can be removed. Use a channel locks and squeeze the HDPE conduit to break the seal. The FST™ Duct Sealant seal then can be removed. For steel and PVC conduit use a screw driver and hammer break the seal around the edges and remove.

Cold Weather Use

FST™ Duct Sealant 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™ Duct Sealant becomes slightly viscous and flows through the mixing nozzle 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™ Duct Plug cartridges warm prior to use.

Urethane Safety

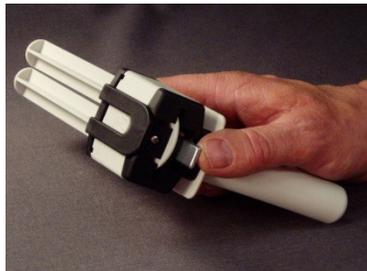
Irritating and toxic smoke and vapors may form during combustion of cured FST™ Duct Sealant foam. Hazardous or irritating decomposition products include oxides of carbon, oxides of nitrogen and hydrogen cyanide. If possible, remove cured sealant prior to any torch cutting operations. The Sealant can usually be removed from the conduit using chisel style tool or pick. If burning the sealant material cannot be avoided, provide appropriate ventilation/respiratory protection against decomposition products during flame cutting operations.

Cable Compatibility

FST™ Duct Sealant Foam is compatible with cable jacket materials. The foam is an inert solid that will not attack the jacket material.

Dispensing Tool Assembly Instructions

1. To assemble the dispensing tool, insert the piston. Rotate the black retaining collar forward. 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.
2. Insert cartridge into the wide opening on the black retaining collar. Push the collar back and press firmly to snap into place.
3. Twist cap 90° to remove from cartridge. Place mixing nozzle onto cartridge and lock into place by twisting. Save cap for storage of unused material.



Insert Piston



Lift Metal Tab



Insert Cartridge



Secure Collar

Important Notice: The statements and information 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. The user assumes all risks and liability in connection with such use.

The statements contained herein are made in lieu of all warranties, express or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, which warranties are hereby expressly disclaimed. American Polywater's only obligation shall be to replace such quantity of the product proven to be defective. Except for the replacement remedy, American Polywater shall not be liable for any loss, injury or damage, direct or indirect, arising from the use or the failure to properly use these products, regardless of the legal theory asserted. The foregoing may not be altered except by a written agreement by the officers of American Polywater Corporation.