**KIT CONTENTS**
- 1 - Fiberglass Mat
- Pouches of Resin & Hardener*
- 2 - Packer Protection Sleeves
- 1 - Roll Vinyl Tape
- 1 - Work Surface
- 2 - Spreading Spatulas
- 4 - Pair Disposable Gloves
- 6 - Nylon Zip Ties / Green Wire Ties

*Exact kit contents depends on kit size

**EQUIPMENT CHECK LIST - Necessary for installation**
- PipePatch Packer for 48” Patch Kits
- PipePatch Push Rods (S’ each)
- PipePatch Flex Adapter
- PipePatch Air Regulator
- High Pressure Jetter
- Hose Reel
- Pull Cables
- Sewer Camera
- Air Compressor (Min. 12 gallon)
- Measuring Tape
- Wire Cutters

**IMPORTANT NOTICE**
- Installer must examine whether the damaged pipe is repairable. Consult factory if necessary.
- The resin used in this system is ambient cure and is greatly affected by temperature. Store in a cool place. Working and curing time will be affected by temperature. Mixing temperature recommended at 70°F. The warmer the resin the less working and curing time! The colder the resin the more working and curing time.
- Ensure that the packer is protected in accordance with the installation instructions before wrapping the patch around the packer.
- If the damaged pipe is not cleaned of sharp edges, the packer could be punctured.
- This is a tested and proven system, use ONLY Source One Environmental PipePatch System Components.

**INSTALLATION INSTRUCTIONS**
*Read ALL Instructions and Inspect Kit Contents Before Beginning!

1) **Inspection & Preparation:** Using a sewer camera, visually inspect the damaged area. Clean the pipe to remove any roots or other debris. Inspect a second time to verify that the pipe is clear of debris and determine that PipePatch is suitable for your specific application. Install one pull cable from the farthest point of entry. This will be used to pull the packer into place.

2) **Measuring:** Position the camera head at the center of the damaged area. Attach a piece of tape to the camera cable at the entry point into the sewer line. This will serve as the distance to the center of the patch on the packer.

3) **Test your Equipment:** First, blow off the relief valve on regulator. Then, pre-inflate your packer 3 times inside appropriate size pipe at 30 PSI for 3”, 28 PSI for 4”-10”, 15 PSI for 12”-15” and 10 PSI for 18”-24”. Allow packer to sit for 5 minutes at appropriate PSI. In order to make sure that there are no obstructions in air flow, pressurize the pushrods/airline and listen/feel for leaks. Insert a male end on the last pushrod/airline and pressurize to feel the air pass freely.

4) **Preparing the Pushrods:** Connect the flex adapter to the packer. Assemble the appropriate number of push rods to the flex adapter making sure that each connection is locked in place. Position the camera head at the center of the packer and transfer the measurement from the camera cable to the assembled push rods/air hose. Connect pull cables and tape rear pull cable to first pushrod. Be sure to completely tape ALL connections.

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**Step 4. Preparing push rods**
5) **Prepare the Packer:** Slide the protective sleeve over the packer. Using the vinyl tape, secure the protective sleeve to the ends of the packer. Before taping, make sure packer is centered in middle of protective sleeve. Fold the sleeve on both sides of the packer. Securely tape all the way to the wheels.

**NOTE:** When using PipePatch 48” 6-10 Flow-Thru Packer and 12-15 Flow-Thru Packer assemble flex-adapter, (1) pushrod, and air hose. Attach pull cable at front and rear of Packer. Be sure to tape rear pull cable to pushrod. Insert fully in pipe and add 2-3 PSI to Packer. This will stiffen the Packer and eliminate sag. Pull into place.

6) **Perform a “Dry Run”:** Insert packer into the line, once the back wheels are inside the line add 3 PSI to the packer and push/pull the packer without a patch to the point to be repaired. This verifies that the packer can reach the damaged area. DO NOT INFLATE! Pull the packer out of the line using the pull cable. Examine protective sleeve to verify there are no tears in the sleeve. If there are any tears in the protective sleeve remove the sleeve and replace with the extra sleeve supplied in the kit. Wipe sleeve and slice fins close to tape so air can escape.

7) **Mixing Resin:** Put on both pair of gloves. Layout the work surface, unfold the fiberglass mat and position it woven side down (bright shiny surface). Remove the clip from the resin bag and mix thoroughly until resin has consistent color for about 1 minute.

**NOTE:** Mix ALL resin at the same time.

**IMPORTANT:** Once the contents of the bags are mixed they MUST BE APPLIED TO THE PATCH AND THE PACKER MUST BE INSERTED INTO THE PIPE. Please refer to the working time on the resin cure chart.

8) **Wetting Out:** Open resin bag(s) and pour contents (75%) onto the fiberglass mat. Use the spatulas provided to spread the resin evenly and liberally to coat the surface of the mat. Flip the entire mat over. Pour out remaining resin and spread out evenly. Scrape off excess resin. Fold the right side over 12”. Fold the left side over 13”, as shown in the diagram, to provide a 1” overlap. **Note:** For a 48” patch, fold the right side over 24” and the left side over 25”.

9) **Loading the Packer:** Center the wetted mat on the protected packer. Tightly roll the wetted mat around the protected packer. Secure the wetted mat to the packer using the green wire ties with two at the leading edge of the patch, this additional tie is not required when using the nylon ties. Position one tie in the middle of the fiberglass mat. Then position the other 1” from the other end of the fiberglass mat. Pull the cable ties snug with pliers (over-tightening of the cable ties can cause them to break.) Cut off any tails. Reattach the packer to the pre-measured push rods and pull cable. Make sure that each connection is taped to lock the push rods in place. Introduce the packer into the pipe and position it at the point to be repaired as marked on the push rods. **Note:** You may have to bridge nylon zip ties depending on patch size.

10) **Inflating the Packer:** Using the air regulator, slowly inflate the packer to the appropriate PSI. The nylon cable ties will release allowing the wetted mat to be pressed against the inner surface of the pipe creating the repair.

**NOTE:** If the pipe is badly damaged then care must be taken when inflating the packer to avoid further damage to the pipe and possible packer failure. Full pressure may not be needed. - Consult with Source One Environmental for any questions.

11) **Removing the Packer:** Leave the packer in place under maintained pressure allowing the patch to cure (1 - 3 hours). Deflate the packer and remove using the attached pull cables. Inspect the point of the repair with the sewer camera.

* Wheel rollers are recommended for all manholes to reduce the possibility of dragging coated cables.