

# Polywater®

Solutions at work.

## INSTRUCTIONS FOR USE

### POLYWATER® BONDUIT® CONDUIT ADHESIVE (BT-50)



## POLYWATER BONDUIT CONDUIT ADHESIVE

BonDuit® creates watertight, airtight conduit connections. Its strong bond withstands movement and vibration. BonDuit is used to transition polyethylene conduits to PVC, fiberglass, composite, and metals. No special equipment is necessary for installation.

### INSTALLATION

Installation temperature:

35°F to 120°F (2°C to 50°C)

In-service temperature:

-60°F to 250°F (-50°C to 120°C)

- Good surface preparation is critical.
- Prime cartridge.
- BonDuit should be a uniform gray as dispensed from the static mixer.
- Keep cartridge warm above 60°F (15°C) for cool weather application.
- Leave static mixer on cartridge until next use.

### SAFETY

- Wear eye protection
- Use protective gloves



1. Cut conduit to the desired length. If possible, use a pipe cutter or a miter saw to cut the conduit at a 90° angle. A good, straight cut will maximize adhesion area and improve the connection.

For conduit over 3 inches (75 mm) in diameter, taper the end at a 45° angle with a rasp or knife. This aids conduit insertion into the coupling.

Square Conduit End



2. Use 80-grit abrasive cloth to sand the outside of conduit ½ inch (13 mm) beyond the depth of insertion into the coupling. Using same cloth, thoroughly sand inside of the coupling. All surface finish should be removed.

Sand conduit and coupling



Clean Coupling and Conduit with Cleaning Wipe

3. Clean the adhesion surfaces of both the conduit and coupling with cleaner wipe to remove any oils and displace water. Gloves are recommended.

*Prepare as many conduits and coupling sets as possible and have them ready to assemble in advance. This will reduce BonDuit waste.*



Close Tool

4. Place the BonDuit cartridge into dispensing tool and snap it into place. See instructions on page 4 for more information on the use of the dispensing tool.



Priming Cartridge

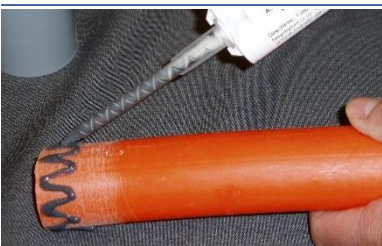
5. Twist cap 90° counterclockwise to remove from cartridge. Depress handle on dispensing tool to prime cartridge each time product is used until both the white and black resins are coming out of the cartridge.



Attaching Static Mixer

6. Place static mixer onto cartridge and lock into place by twisting clockwise. Depress handle on dispensing tool until BonDuit comes out of static mixer tip. Pump 1 or 2 more times to ensure an even mixture. Discard this excess material.

The BonDuit should be a uniform light gray color with no streaking when exiting the static mixer tip.



Apply BonDuit Adhesive

7. Apply BonDuit in a 1/8- to 1/4-inch (3 to 6 mm) bead using a zigzag pattern the depth of the connector inserts. The pattern should be about 1/2 inch (13 mm) in width and extend to the outer edge of the conduit. The end of the static mixer may be trimmed off up to the last notch to place a larger bead for larger diameter conduits.



Smoothing BonDuit on coupling

6. Twist the coupling immediately onto the conduit. Twisting the coupling ensures that BonDuit is well mixed and spread evenly on the inside of the splice.

*For conduits over 3 inches, it may be necessary to use a come-along or other mechanical assistance to pull the splice together.*

Smooth any excess BonDuit along the conduit/coupling junction. Gloves are recommended.

BonDuit develops a strong bond, allowing quick movement or burial. See Table 1 below for work time and cure rate depending on temperature. Do not move joint until set.

**TABLE 1**

TEMPERATURE	WORKING TIME	FUNCTIONAL CURE
35°F 2°C	40 Minutes	7 Hours
52°F 11°C	20 Minutes	3½ Hours
60°F 16°C	10 Minutes	90 Minutes
70°F 21°C	6 Minutes	60 Minutes
88°F 31°C	4 Minutes	40 Minutes

*Note: If material in the static mixer has set up, replace the static mixer.*

BonDuit kits contain the materials necessary to prepare plastic and metal surfaces for bonding. Each cartridge contains enough material for numerous applications, depending on the size of each coupling or joint. See Table 2.

**TABLE 2**

CONDUIT DIAMETER	APPLICATIONS PER CARTRIDGE
1 inch (25 mm)	20 - 30
1½ inches (38 mm)	12 - 18
2 inches (50 mm)	10 - 15
3 inches (75 mm)	7 - 10
4 inches (100 mm)	4 - 6
6 inches (150 mm)	1 - 2

## **ADDITIONAL INSTRUCTION TIPS**

### **Cool Weather Application**

In cool weather, keep BonDuit warm (above 60°F (16°C)). Cold adhesive is difficult to pump and may stress the application tool. Keep couplings in a warm area before use. It may be necessary to heat the transition joint to force the BonDuit cure. Below 45°F (7°C), the joint should be heated for 8 hours to reach maximum strength.

### **Warm Weather Application**

In warm weather (above 85°F), keep BonDuit cool (below 70°F). This prevents the adhesive from curing before coupling is attached. If possible, use adhesive to make bonds in the cooler mornings and out of direct sunlight to slow down cure rate.

## 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 tip first 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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