

BonDuit[®]

Conduit Adhesive

American Polywater's

BONDS to Polyethylene, PVC, Fiberglass, Metals and more

BonDuit® Conduit Adhesive is a unique two-part adhesive system used to transition-splice conduits (innerducts) of different types. BonDuit® Adhesive makes a strong, durable splice that is air/water tight in less than 5 minutes. The joint is up to 400% stronger than mechanical screw couplings, and requires no expensive equipment.

Estimated Load Capacity and Usage

Conduit Diameter	Polyethylene Conduit to PVC Standard Coupling		Polyethylene Conduit to PVC Long Coupling	
	Coupling length	Pullout Force	Coupling length	Pullout Force
1 ¼ inch	2 ⅛ inch	760 lbs _f	3 inch	1,140 lbs _f
1 ½ inch	2 ⅜ inch	1,140 lbs _f	3 ¼ inch	1,410 lbs _f
2 inch	2 ½ inch	1,520 lbs _f	3 ½ inch	2,130 lbs _f
2 ½ inch	3 inch	2,280 lbs _f	4 ¼ inch	3,230 lbs _f
3 inch	3 ¼ inch	2,950 lbs _f	6 ⅜ inch	5,710 lbs _f
4 inch	3 ¾ inch	4,560 lbs _f	6 ⅞ inch	8,220 lbs _f
6 inch	4 ⅝ inch	8,220 lbs _f	8 inch	14,610 lbs _f

Results are based on careful surface preparation and a 24-hour cure at 70° F. Under these cure conditions; the load will reach 80% capacity after one hour and 50% capacity after ½ hour. Load capacity will increase by an additional 20% as the joint continues to cure. To create air-tight joints for air-assisted cable installation, a cure time of 2 hours at 70°F is recommended. BonDuit® Conduit Adhesive is not designed for high stress pulls, such as those in HDD installations.

Kit Contents

BonDuit® Conduit Adhesive Kits contain the materials necessary to prepare plastic and metal surfaces for bonding. By following the instructions, a strong joint takes just minutes. Each kit contains enough material for numerous applications, depending on the size of each coupling or joint.

Conduit Size	Standard Coupling Length	Applications per Kit
1 ¼ inch	2 ⅛ inch	30-40
1 ½ inch	2 ⅜ inch	25-35
2 inch	2 ½ inch	20-30
2 ½ inch	3 inch	15-25
3 inch	3 ¼ inch	12-18
4 inch	3 ¾ inch	8-12
6 inch	4 ⅝ inch	3-6

BonDuit® Application Instructions



Sand Conduit



Sand Coupling



Clean Coupling and Conduit with Type TR™



Close Tool

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 considerably.
2. For conduit over 3 inches, taper the end at a 45° angle with a rasp or knife. This will help when the conduit is inserted into the coupling.

Surface preparation is critical for a good bond. Abrade and clean both adhesion surfaces well.

3. Clean both conduit and coupling with a rag or American Polywater's Grime-Away™ Multi-Purpose Cleaner Wipes to remove dirt and grime.
4. Use 80-grit abrasive cloth to sand the outside of conduit ½ inch beyond the depth of insertion into the coupling. Using same cloth, thoroughly sand inside of the coupling. Be sure all the polish is removed.
5. Clean the adhesion surfaces of both the conduit and coupling with Type TR™ Cleaner Wipe to remove any oils and displace water. Gloves are recommended.

Note: Prepare as many conduit and coupling sets as possible and have them ready to assemble in advance. This will reduce BonDuit® Conduit Adhesive waste.

6. Place the BonDuit® Conduit Adhesive cartridge into dispensing tool and snap it into place. See instructions on page 4 for more information on the use of the dispensing tool.
7. 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.
8. Place mixing nozzle onto tool and lock into place by twisting clockwise. Depress handle on dispensing tool until BonDuit® Conduit Adhesive comes out of nozzle tip. Pump 1 or 2 more times to make sure you are getting an even mixture. Dispense and discard this excess material.

The BonDuit® Conduit Adhesive should be a uniform light gray color with no streaking when it comes out of the nozzle tip.



Priming Cartridge



Apply BonDuit® Adhesive



Smooth Excess Material

9. Place BonDuit® Conduit Adhesive in a 1/8- to 1/4-inch bead using a zigzag pattern the depth of the connector insert. The pattern should be about 3/8-inch in width and extend to the outer edge of the conduit. The end of the mixing nozzle may be trimmed off up to the last notch to place a larger bead for larger diameter conduits.

10. Twist the coupling **immediately** onto the conduit. You must twist the coupling to be sure that BonDuit® Conduit Adhesive 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.

11. Smooth any excess BonDuit® Conduit Adhesive. Gloves are recommended.

12. BonDuit® Conduit Adhesive develops a strong bond, allowing movement or burial quickly. See chart below for temperature dependence. Do not move joint until set.

Temp.	Working time	Set time before movement
35° F 2° C	40 Minutes	7 Hours
52° F 11° C	20 Minutes	3 1/2 Hours
60° F 16° C	10 Minutes	1 1/2 Hours
70° F 21° C	6 Minutes	60 Minutes
88° F 31° C	4 Minutes	40 Minutes

Note: If material in the mixing nozzle has set up, replace the mixing nozzle.

13. To store cartridge, remove mixing nozzle and replace the cap on cartridge.

Application Temperature

Working temperature for BonDuit® Conduit Adhesive is 35°F to 95° F (2° C to 35°C).

Cool Weather Application

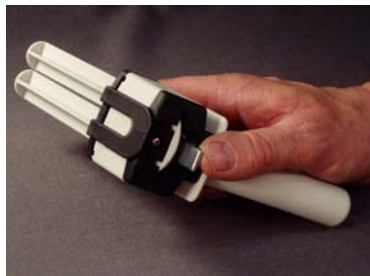
In cool weather (below 60° F) keep BonDuit® Conduit Adhesive warm before using (above 60° F or 17°C). Keep couplings in a warm area before use. It may be necessary to heat the transition joint to force the BonDuit® Adhesive cure. Below 35° F, the joint should be heated to cure the adhesive.

Warm Weather Application

In warm weather (above 85° F), keep BonDuit® Conduit Adhesive cool, below 70° F (21°C). This will help keep 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.

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 BonDuit® Conduit Adhesive 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

BonDuit®
Conduit Adhesive

**BONDS Polyethylene to
PVC, Fiberglass, Metals & more**

Contains: 1 Kit

Kit Contains:

- 2 -- BonDuit® Conduit Adhesive
1.7oz (50ml) cartridges
- 8 -- Mixing Nozzles
- 1 -- 1" X 24" 80-grit Sandpaper Strip
- 8 -- TR-1 Cleaning Wipes

Before using this product the end user should conduct whatever evaluations are necessary to determine that the product is suitable for the intended end use. American Polywater expressly disclaims the implied warranties and conditions of merchantability and fitness for a particular purpose. American Polywater's only obligation shall be to replace such quantities of this product proven to be defective. Except for the replacement remedy, American Polywater shall not be liable for any loss, injury or direct, indirect, or consequential damages resulting from product use, regardless of the legal theory asserted.

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