

## DESCRIPTION

Polywater<sup>®</sup> ZipSeal™ Duct Sealant is a two-part, high-expansion foam duct system that is quick to install and easy to remove. The innovative Zip-Disc™ damming system makes it easy to seal 2 inch (51 mm) and smaller conduits both horizontally and vertically. Under moderate pressure ZipSeal keeps water, acids, dusts, and gases out of the duct. It also deters insects and rodents from entering the duct. ZipSeal expands and hardens to a closed cell, rigid structure in minutes.

## COMPONENT PROPERTIES

	PART A	PART B
Chemical description	polymeric MDI	polyether polyol
Appearance	brown liquid	black liquid
VOC	0 g/L	0 g/L
Specific gravity	1.2	1.1
Shelf life	1 year	1 year

## TYPICAL PHYSICAL PROPERTIES

	METHOD	VALUE
Density	ASTM D1622	5 lb./ft <sup>3</sup> (80 kg/m <sup>3</sup> )
Compressive strength	ASTM D1621	45 psi (0.31 N/mm <sup>2</sup> )
% Porosity	ASTM D2856	>97% closed cell
Tensile strength	ASTM D638	80 psi (0.55 N/mm <sup>2</sup> )
Flexural strength	ASTM D790	46 psi (0.32 N/mm <sup>2</sup> )
Water absorption	ASTM D2842	<1.5%

## PERFORMANCE

CONDITION	WATER PRESSURE	TEST TIME
Watertight, PVC, rigid steel conduit	10 feet (3 m)	168 hours
Watertight, HDPE conduit	14 feet (4.3 m)	168 hours

CONDITION	RESULT
Air, 2 psi (130 mbar), 24 hrs., PVC and HDPE conduit	Pass (Holds Seal)

## CABLE COMPATIBILITY

ZipSeal is compatible with common cable jacket materials. It does not change physical or electrical properties of cable, based on tensile/elongation and volume resistivity testing. The cured foam is an inert solid that does not affect cable components.

## APPLICATION PROPERTIES

ZipSeal comes in a 50 mL cartridge with static mixers and Zip-Discs. The product rises in 2 to 3 minutes at 70° F (21° C) and is tack-free in 5 to 7 minutes. You should not move cables until foam is set.

	VALUE
Density	5 lb/ft <sup>3</sup> (80 kg/m <sup>3</sup> )
Rise time	~3 minutes
Tack-free time	~7 minutes
Mixed color	uniform gray
Foam volume/cartridge	35 cubic inches (570 cubic centimeters)

## CURE RATE

ZipSeal can be used in temperatures down to 40° F (4° C). At low temperatures, the reaction is slower, but the sealant will completely foam and cure with time.

## INSTALLATION INSTRUCTIONS

- 1.) Remove all loose debris and rust from the conduit. *It is okay if surface is damp.* Prepare surface by abrading and cleaning with solvent for best adhesion.
- 2.) Size Zip-Disc to match conduit diameter. Removed layers can be used for additional damming.
- 3.) Separate cables between layers of the Zip-Disc. Slide the disc into conduit ¼" (6 mm) past the edge.
- 4.) Place cartridge into dispensing tool. Place mixing nozzle onto cartridge and lock into place. Depress handle until resin exits the nozzle tip and discard material. (1 full squirt)
- 5a) **Horizontal:** Insert mixing nozzle tip through between the layers of the Zip-Disc. Place full injections about ½ inch (13 mm) apart at top of conduit. Each depression must be in a different location.
- 5b.) **Vertical:** Insert mixing nozzle tip through outer foam of the Zip-Disc into the black mesh. Place full injections around the circumference of the Zip-Disc about ½ inch (13 mm) apart. Each depression must be in a different location. *Use as a starting point only, actual required quantity will vary.* Static mixer is reusable for 3 minutes.
- 6.) To reuse cartridge, remove static mixer and replace the cap. Dispose of any excess material in accordance with local regulations.

CONDUIT SIZE	FILL AMOUNT	SEALS PER CARTRIDGE
1-inch (25 mm)	1 full depression	15 seals
1½-inches (40 mm)	2 full depressions	7 seals
2-inches (51 mm)	3 full depressions	5 seals

## STORAGE AND HANDLING

Store in a cool dry space. Protect from freezing. Warm to room temperature before use for best results. Product shelf life is one year.

## 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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