

CRACKBOND[®] POLYBLOC & POLYBLOC QUIKFIX

Hydrophobic Flexible Polyurethane Water Block Products



Product Description

CRACKBOND[®] POLYBLOC products are flexible, hydrophobic polyurethanes designed to stop water infiltration into concrete structures. **POLYBLOC** may be used in conjunction with **POLYBLOC ACCELERANT** (1-10%) in cooler temperatures to accelerate gel time. **POLYBLOC QUIKFIX** comes pre-mixed with a small percentage of **POLYBLOC ACCELERANT**. The application temperature range for **POLYBLOC** products is between 55 °F - 90 °F (13 °C - 32 °C).

General Uses & Applications

- Concrete crack injection - flowing water leaks, dry or wet cracks and honeycombed concrete areas
- Municipal and utility facilities - cracks and joints in wastewater containment tanks
- Underground parking garages - expansion joints, sealing pipe openings and beam joints
- Concrete dams and powerhouse galleys - flowing water leaks and cracks and joints
- Ground stabilization

Advantages & Features

- Hydrophobic, closed cell formulas which diverts the water away after reaction
- Flexible and may be used in moving structures
- Reacts with minimal amount of water < 5 %
- Works in wet and dry environment cycles

CRACKBOND POLYBLOC

- WQA Certified - Drinking Water System Components (NSF/ANSI /CAN 61) Joining and Sealing
- Expands to 750 % of initial volume when cured in free rise environment and will yield approximately 7 to 8 lb./ft. foam

STANDARDS & APPROVALS

CRACKBOND POLYBLOC
WQA Certified - Drinking Water System Components
NSF/ANSI/CAN 61

CRACKBOND POLYBLOC QUIKFIX

- Available in cartridges for faster repair where pump application is impractical such as residential and commercial basements
- Capable of filling large voids, cracks or expansion joints

Availability: Adhesives Technology Corp. (ATC) products are available online and through select distributors providing all your construction needs. Please contact ATC for a distributor near you or visit www.atcepoxy.com to search for a distributor by zip code.

Color:

CRACKBOND POLYBLOC - Light Yellow

CRACKBOND POLYBLOC QUIKFIX - Part A: Light Yellow, Part B: Clear, Mixed Color - Light Yellow

Storage & Shelf Life: 12 months when stored in unopened containers in dry conditions between 40 °F (4 °C) and 100 °F (38 °C).

Installation: Installation Instructions are available within this Technical Data Sheet (TDS). Due to occasional updates and revisions, always verify the most current usage. In order to achieve maximum results, proper installation is imperative.

Clean-Up: Always wear appropriate personal protective equipment such as safety glasses and gloves. Clean up by absorbing the grout into an inert material and then transferring the mixture into an open top drum. **POLYBLOC** - Do not seal the waste drum for 24 hours to allow product to fully react. Dispose of waste drum in accordance with local and state regulations.

Limitations & Warnings:

- Do not thin with solvents, as this will prevent cure
- Open containers of material should be used quickly to avoid moisture contamination
- To reseal an open product container, blanket container with nitrogen or dry air, less than -40 °F (-40 °C) dew point, in order to minimize water exposure
- Allow 24 hours prior to application of topcoat

Safety: Please refer to the Safety Data Sheet (SDS) for **CRACKBOND POLYBLOC** products published on ATC's website or call for more information at 1-800-892-1880.

Hydrophobic Flexible Polyurethane Water Block

- WQA Certified - Drinking Water System Components (NSF/ANSI/CAN 61) Joining and Sealing - see Table 3
- May be used with **POLYBLOC ACCELERANT** to adjust gel time
- Expands to 750 % of initial volume when cured in free rise environment and will yield approximately 7 to 8 lb./ft. foam
- Solvent-free when combined with **POLYBLOC ACCELERANT**

TABLE 1: CRACKBOND POLYBLOC Packaging

Package Size	5 Gallon (19 L)
Part #	B5G-CBPB
Pneumatic Dispensing Tool	Pump ¹
Injection Port ²	BIP-P
CRACKBOND POLYBLOC ACCELERANT ³	B1Q-PB-A
Pallet Qty.	36
Pallet Weight (lb.)	1,512



B5G-CBPB



B1Q-PB-A



BIP-P

1. Contact ATC for recommended bulk dispensing manufacturers.
2. Injection port for use with POLYBLOC bulk product only.
3. POLYBLOC ACCELERANT reacts with water and when combined with POLYBLOC is used to accelerate gel time.

TABLE 2: CRACKBOND POLYBLOC performance to ASTM Standards^{1,2}

Property	ASTM Standard	Units	Results
Viscosity ³ at 77 °F (25 °C)	D2196	cP	500 ± 100
Tensile Strength ⁴	D638	psi (MPa)	160 ± 20 (1.1 ± 0.1)
Elongation ⁴		%	65

1. Results based on testing conducted on a representative lot(s) of product. Average results will vary according to the tolerances of the given property.
2. Results may vary due to environmental factors such as temperature, moisture and type of substrate.
3. Property results based on uncured product.
4. Property results based on cured product.

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**TABLE 3: CRACKBOND POLYBLOC with POLYBLOC ACCELERANT
NSF/ANSI/CAN 61 Certification^{1,2}**

ANSI Certification	Description	Application	Water Contact Temperature	Surface Area to Volume Ratio
NSF 61	Drinking Water System Components - Health Effects	Joining and Sealing Materials	Cold 73 °F (23 °C)	0.01 cm ² /L

1. Joining and Sealing certified when mixed in the following ratio: 100 parts CRACKBOND POLYBLOC with 10 parts POLYBLOC ACCELERANT and 5 parts water. Cold end-use temperature 73 °F (23°C), at a maximum field SA/V ratio of 0.01 sq cm/L
2. Certification pertains to the 5 gallon configuration only.

**TABLE 4: CRACKBOND POLYBLOC Gel Time Effect
using POLYBLOC ACCELERANT at 77 °F (25 °C)^{1,2}**

Weight Percent	Start of rise sec	Top of rise min	Results
1%	110	8	Resilient Foam
3%	40	5	Resilient Foam
10%	15	1.5	Resilient Foam

1. Results based on testing conducted on a representative lot(s) of product. Average results will vary according to the tolerances of the given property.
2. Temperature of the components will affect the reaction time; hotter materials will decrease the reaction or working time, and colder materials will increase the reaction time.

Hydrophobic Flexible Polyurethane Water Block

- Cartridge product for faster repair where pump application is impractical such as residential and commercial basements
- Capable of filling large voids, cracks or expansion joints
- One cartridge will fill a volume of 302 in.³ (5,074 cm³) or a 3/16 in. (4.8 mm) crack in an 8 in. (203 mm) thick by 8 ft. (2.4 m) high wall

TABLE 5: CRACKBOND POLYBLOC QUIKFIX Packaging

Package Size	22 fl.oz. (627 ml) Cartridge
Part #	A22-CBPBQF
Recommended Mixing Nozzle	T38XL
Manual Dispensing Tool	TM22HD
Pneumatic Dispensing Tool	TA22HD-A
Case Qty.	12
Injection Port	CIP-P
Pallet Qty.	432
Pallet Weight (lb.)	760



A22-CBPBQF



TM22HD



TM22HD-A



CIP-P

TABLE 6: CRACKBOND POLYBLOC QUIKFIX performance to ASTM Standards^{1,2}

Property	ASTM Standard	Units	Part A	Part B
Viscosity ³ at 77 °F (25 °C)	D4878	cP	500 ±50	620 ±50
Tensile Strength ⁴	D412	psi (MPa)	55 (0.4)	
Elongation ⁴		%	140	
Die - C Tear ⁴	D624	pli	8	

1. Results based on testing conducted on a representative lot(s) of product. Average results will vary according to the tolerances of the given property.

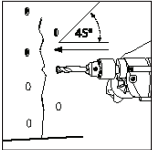
2. Results may vary due to environmental factors such as temperature, moisture and type of substrate.

3. Property results based on uncured product.

4. Property based on cured product.

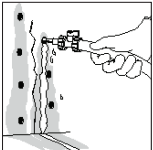
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CRACKBOND POLYBLOC QUIKFIX Installation Instructions



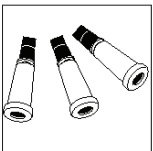
Drill

Drill a series of staggered holes along the full length of the leaking crack. Space the holes 4 to 6 inches apart starting at the bottom. For best results, insert the drill at a 45 degree angle toward the crack.



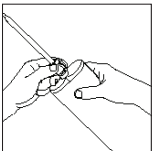
Flush

Attach the valve and nozzle supplied with the kit to a garden hose. A pump sprayer may also be used to supply water. Starting at the bottom, flush each hole while adjusting the water to a low-pressure stream using just enough water to flush the debris from each hole and to wet the entire crack.



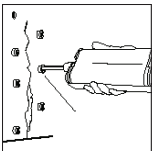
Injection Port Installation

Press the CIP-P injection port into the first hole and tap firmly using a hammer to ensure the tip is fully inserted - see Table 5. Continue inserting the injection ports until all of the holes are filled.



Cartridge Preparation

Shake cartridge well prior to pry-off closure removal and installing nozzle. Remove outer and inner cap on outlet port. Attach applicator nozzle with threaded retaining nut. Place the cartridge in the dispensing gun.



Application

Working from the bottom to the top, insert the nozzle into the first injection port hole and squeeze the cartridge gun three to four times. Depending on the size of the leaking crack, one cartridge will treat approximately 8 feet.



Clean-up and Finish

With a flat-bladed tool, remove excess grout on the exterior of the crack. For exposed walls that require a smooth appearance, remove injection ports with pliers. Patch any holes using a putty knife, with the CRACKBOND JET PATCH or similar patching material.

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CRACKBOND POLYBLOC Installation Instructions

Worksite Preparation

Prepare the work site by drilling holes at a 45 degree angle approximately 3 inches from the side of the crack to intersect the application site at about half the depth of the fissure. Holes are typically drilled on opposing sides of the application site in an alternating pattern. The spacing is dependent on the crack size. Flush drill waste from the hole prior to installing the BIP-P injection ports. Securely install injection ports in the pre-drilled holes. An injection port is used to assist the product in staying in the drilled holes - see Table 1. Press the injection port into the first hole and tap firmly using a hammer to ensure the tip is fully inserted. Continue inserting the injection ports until all holes have the injection ports inserted.

Reactivity Check

In order to facilitate a faster reaction time, **POLYBLOC ACCELERANT** may be added to **POLYBLOC** prior to mixing with water - see Table 4. A reactivity test should be performed by hand mixing in disposable containers to determine proper amounts. The recommended amounts for the reactivity check is:

- 100 parts by weight of **POLYBLOC**
- 10 parts by weight of **POLYBLOC ACCELERANT**
- 5 parts by weight of water

Add **POLYBLOC ACCELERANT** to **POLYBLOC** and mix into a homogeneous state. Add the water and mix thoroughly. Use the start time as the time mixing begins after the addition of the water to determine the cream time, the time the material begins to foam, and the tack-free time, the time the surface of the material is no longer tacky.

Application

After performing the hand-mix reactivity check, mix the proper amount of **POLYBLOC ACCELERANT** to **POLYBLOC** to obtain the desired gel time - see Table 4. Temperature of the repair area at the job site may also effect actual reaction speed. If the crack is dry, inject water through each port first using a separate pump. The use of a second pump for injecting water reduces the risk of having a reaction, resulting in a clogged pump. Start with a quantity of material that can be applied in a reasonable amount of time. Inject the mixture using a single-component injection pump. Start at the bottom port and continue until resin starts leaking out of the crack up to the next port. Continue process until the top port of the wall is reached. Once you reach the top, repeat process to see if any additional resin is accepted before escaping out of crack. It is possible that resin pushed through a void and crack will accept more material. The psi pressure resistance to set the pump will be determined by how the concrete is accepting the resin and by the width of the crack. Start at a low pressure and increase as needed.