



PolyFM-1C™ Injection Grout | FLEXIBLE POLYURETHANE INJECTION FOAM

Manufactured by Polygem | 5600 Lower Macungie Rd. | Macungie, PA 18062 | 630-231-5600 | Made in USA

POLYGEM
polygem.com

TB - TECHNICAL BULLETIN

PRODUCT DESCRIPTION

PolyFM-1C™ Injection Grout is a high-performance blend of hydrophilic and hydrophobic polyurethane resins, engineered for reliable crack repair and void grouting. When exposed to water, it expands up to 10 times its original volume to create a permanent, flexible, and watertight seal. Easy to use and clean, PolyFM-1C eliminates the need for costly equipment or messy setups. It comes packaged in convenient 10 fl. oz. caulk-style cartridges that fit any standard caulk gun, making application fast and simple.

ADVANTAGES

- **Very Flexible Foam Seal**
- **Expands 10+ Times the Original Volume**
- **Fits Standard Caulk Gun**
- **No Mixing or Expensive Dispensing Equipment Needed**
- **Bonds to Most Wet or Dry Surfaces**

RECOMMENDED USES

PolyFM-1C is excellent for sealing cracks and joints that leak or exhibit movement. It is ideal for use for;

- **Foundation Cracks**
- **Pipe Penetrations**
- **Pre-Cast Section Seams**
- **Rock Voids & Pockets**
- **Concrete Tie Holes**
- **Floor & Wall Joints**

SURFACE PREPARATION

Remove any loose, flaking, or deteriorated concrete. For crack injection, drill holes at a 45° angle to intersect the crack path at approximately half the depth of the concrete. Clean drilled holes of all dust and debris before installing injection ports. For high-pressure injection, the surface of the crack between the ports should be sealed with a fast-setting epoxy paste.

APPLICATION INSTRUCTIONS

Note: These are general guidelines. Application methods may vary depending on which kit purchased and job site conditions. Product requires moisture to react and expand.

- 1. Setting Injection Ports:** Install injection ports along the length of the crack, then seal the surface with a fast-setting paste epoxy. Make sure the seal is continuous so resin cannot escape during injection.
- 2. Open Cartridge Tip:** Remove the red cap from the cartridge. Cut no more than 1/8 in. (3 mm) off the tip, or puncture it with a small nail to create a clean opening. This ensures proper flow and prevents waste.
- 3. Load Cartridge:** Place the cartridge into a standard caulk gun. Position the cartridge tip firmly into the first injection port so resin will flow directly into the crack.

Note: If the repair area is dry, lightly mist each port with 3 sprays of water from a spray bottle. Moisture helps the foam expand and cure properly

- 4. Dispense Resin:** Apply a slow and steady, pressure on the caulk gun. This allows the resin to expand into foam and fill the crack completely. Watch for resin or foam to rise into the next higher port. Once it appears, cap the filled port, move to the next one, and repeat until every port is filled and capped.

- 5. Save Unused Material:** Re-cap cartridge, save for later.

PACKAGING

PolyFM-1C 10 fl. oz. (296 ml) Cartridge:
Single Cartridge or a Case of 24 Cartridges.

PolyFM-1C 22 fl. oz. (650 ml) Cartridge:
Single Cartridge or a Case of 12 Cartridges.

Also available in a **1 Gallon Bucket** or a **5 gallon Bucket**

STORAGE & HANDLING

For best results, purchase quantities suited to your project and use material soon after receipt. We recommend to store the material at 72°F (23°C).

LIMITATIONS

Not for use on contaminated or oily surfaces.

Not intended for use as a primary structural repair material.

DO NOT install when surface temperature is below 45°F (7°C) or above 90°F (32°C).

High volume water flow will require optional accelerator catalyst to adjust foam expansion rate.

CAUTIONS

Product is moisture-activated. Keep containers tightly sealed to prevent exposure to atmospheric moisture.

Wear chemical goggles and NIOSH approved respirator.

Wear proper protective clothing and gloves to prevent direct skin contact of resins. Consult the Safety Data Sheet for full listing protective requirements.

During damp and/or cool conditions PolyFM-1C will cure slower. **DO NOT** put repaired concrete into service until fully cured.

PolyFM-1C Injection Grout may irritate eyes and skin.

Avoid contact with eyes or prolonged contact with skin.

For professional use only.

Keep out of reach of children.

TECHNICAL SPECIFICATIONS

Typical Properties | All Values Measured After 7 Days at 73°F (23°C).

Mix Ratio:.....Single Component

Working Time: (Once Injected)2 min.
(Stays Liquid in Cartridge)

Cure Time: (73°F - 23°C).....2 hrs minimum.
(Cure Time Depends on Moisture Content)

Viscosity: 600 cps.

Tensile Strength (Restricted): (ASTM D-638)2,200 psi.

Tensile Strength (Free Rise): (ASTM D-638) 300 psi.

Elongation: (ASTM D-638)400%

Tear Strength (Restricted): (ASTM D-624) 400 psi.

Tear Strength (Free Rise): (ASTM D-624) 55 psi.

Color:Clear Amber

POLYGEM LIMITED WARRANTY:

Polygem warrants that during the shelf life of the product (as determined from the date of manufacture), the product will conform to the specifications provided in this technical bulletin. **POLYGEM MAKES NO OTHER WARRANTIES, EXPRESSED, IMPLIED, OR STATUTORY, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.** Neither any performance or other conduct, or any oral or written representation, statement or advice provided by Polygem or any of Polygem's distributors, agents, or employees will create a warranty, or in any way increase the scope or duration of this limited warranty. Polygem will have no warranty obligation if the product becomes defective, in whole or in part, as a result of: (i) the transportation of the product; (ii) any alteration or modification to the product by third parties; or (iii) improper handling or storage of the product (including improper handling or storage by third-party carriers or distributors).

011626PA | Data sheets are subject to change without notice.