SEALBOND PU-418 F

POLYURETHANE EXPANDABLE INJECTION FOAM

Product Description

SEALBOND PRESSURE INJECTION POLYURETHANE FOAM SYSTEM (PU-418 F) is a single component moisture cure polyurethane expandable injection foam suitable for water cut-off in wet dynamic cracks and joints.

SEALBOND PU-418 F is designed for concrete crack and joint waterproofing applications. For crack and joint applications, the low viscosity resins are injected into the actively leaking cracks or joints, contact moisture, and expand into a closed cell, flexible, fully-penetrated polyurethane seal.

Features

- Easy to apply using injection machine
- Fast sealing on active water leak

Application areas

- Bond cracked or delaminated concrete, and masonry with existing water leak
- Leakage part of building joints
- Polyurethane Foam

Technical / Performance Data

Viscosity	350 – 450 cps
Specific Gravity	1.15 – 1.12
Foam Density	42 kg/m²
Reaction Start Time	6 seconds
Foam Completion Time	18 seconds
Seal Shear Adhesion Strength	45 N/cm²

Procedure & Guidelines

SURFACE PREPARATION
GENERAL

Wear adequate PPE gear and goggles at all times and follow technical data sheet and MSDS instructions.

All surfaces must be thoroughly cleaned to remove dirt, grease, mill scale, loose rust, chalk, and any other contaminants that can reduce adhesion.

Identify the drill holes spacing and depths.

APPLICATION
PRESSURE INJECTION

Blow compressed air along the crack lines to completely clean and remove dirt and other loose contaminating materials. Provide temporary seal on crack surface except entry and exit ports. Inject Sealbond PU-418 F starting at the lowest entry port up to the proceeding ports until the voids are completely filled.

Use a twist drill (10ø) to drill holes at an interval of less than 20 cm. For structures thicker than 4 inches, it is recommended to drill at a 45-degree angle into the concrete structure in order to intersect the crack approximately halfway through the thickness of the substrate. This is achieved by not drilling directly into the crack, rather to begin drilling a few inches to the left or right of the crack in an angled approach to the crack itself. This technique permits the 'inside-out' reaction which is required for full penetration of the crack or joint. (Note: Typical drill spacing along the surface of the crack range from 6" – 12" depending on the thickness of the crack. Hairline cracks require closer spacing than larger cracks because the material will not travel as far.). Industry standards for drill diameters are 3/8" – 5/8" depending on the mechanical packer being used.

Remove dust from the drilled holes and insert packers. Leave about 2 cm from the injection site to easily remove packers. In poured concrete substrates, the drill hole will act as a solid channel which will direct the resin to the crack which permits the usage of shorter length packers. In substrates which may exhibit voids such as block wall, stone, brick, and rubble, it is recommended to use longer packers which provide a definite grout delivery channel to the crack or joint being sealed.

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Use a T handle (10ø) to tighten packers to securely withstand injection pressures.

Fill two-thirds of the injection pump with urethane foam grout and close the lid. The applicator is able to adjust reaction times based on flow rate and application variables. This is achieved by adjusting the amount of 15x accelerator accordingly in the range of 2-20%. For gushing leaks, 20% accelerator solution will provide immediate results while most common crack leaks are repaired with a 5% solution. After mixing, the polyurethane is ready for injection.

Begin injection from the lowest packer. A common observation will be the decrease of water flow from the face of the crack and/or reacting material exiting the face of the crack. This is a good indication of successful penetration and results. However, the applicator must ensure that enough material is injected into each crack in order to achieve the required density for sustainable results.

When injecting, a good technique is to inject 2-5 ports with observable penetration, and then go back to reinject those 2-5 ports once again to ensure adequate material consumption. Packers that still consume considerable amounts of product should be injected a third time or as much as necessary to create a permanent seal. (Note: It is quite possible to achieve differing results on the same injection application due to inadequate material consumption alone). If the crack is not accepting product, you may not have drilled deep enough or the crack is directed in the opposite side. In this case, drill from the opposite side of the crack and ensure to intersect the crack.

After allowing the material to fully cure overnight if possible, packers can be removed by loosening the shaft. Some applicators leave the rubber base in the wall and then patch the drill hole while others remove the entire packer prior to patch. In some remote injection applications packers even remain in place permanently. A final cleanse of the face of the crack is necessary to remove cured product via wire brush, pressure washing, etc. The substrate is now ready for final finish.
Flush all dispensing equipment with initially with a small amount of solvent such as xylene or acetone to cut the product. Do not use solvent for the final flush as it will diminish the life of your equipment drastically. Do not clean with water. Store for next use.

CLEANING-UP

Pressure Injection tools and other equipment maybe cleaned with Sealbond Reducer while the mixture has not yet hardened. Wash off hands with detergent and warm water.

Health & Safety

Avoid contact with eyes and skin and avoid breathing its vapor. This product may cause severe skin irritation after prolonged or repeated exposure. Keep containers tightly closed and store in a cool dry place.

Product is for Professional use only.

Storage/ Packaging

SEALBOND PU-418 F *is available in pail*

This product must be stored dry, protected from sun and rain.

Product Limitations

Product can withstand heavy load but cannot withstand excessive abrasion.

Additional Information - Disclaimer

The information and in particular, recommendations relating to the application and end-use of Sealbond products, are given in good faith based on Sealbond's best knowledge and specialty on construction chemical formulations. Products are properly stored and handled in accordance with Sealbond's endorsements. Hence, subject to the care and method of application, deviations (from published values) in performance may occur. In practice, to different materials used, as well as varying working conditions and environments beyond our control Sealbond Chemical Industries Inc. strictly recommend carrying out intensive trials to test the suitability of the product with regards to the required processes and applications. Therefore, any liability for such recommendations or any oral/verbal advice is expressly excluded unless we have acted wilfully or by gross negligence. Sealbond Chemicals Industries Inc. is not liable for installation or faulty installation. It is always the responsibility of the installer/applicator/purchaser to guarantee and certify the installation of materials.

All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the Product Data Sheet for the product awareness, copies of which will be supplied on request and is free of charge.

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