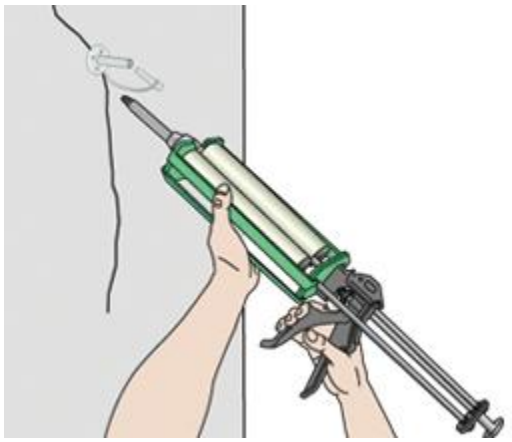
Polyurethane Foam - Crack Injection



Injecting polyurethane foam resins is the best way to stop a foundation water leaks. This is because the liquid urethane fills the entire foundation crack. Once in the concrete crack, it begins to foam (expand) inside the basement crack. The expanding foam completely fills the basement crack and prevents future water leaks. Water will now remain outside of the basement wall and not be able to penetrate the wall.

One of the main advantages to ECP Polyurethane Resins is their ability to remain flexible. This flexibility allows the resin to move with the wall during expansion and contraction of the surrounding soils.

Specially formulated ECP polyurethane resins can even be injected into actively leaking cracks, stopping water within minutes. These resins actually seek out water and expand on contact to stop the water in its path.

Opposed to concrete patches that covers the inside surface of a foundation crack, ECP Polyurethane resins seal the leak. Concrete patches are a weak repair that the water can push off of the wall and allow water to leak into the basement.

Epoxies are used for structural repair of concrete foundation cracks and to stop water from entering these cracks. The cured epoxy resin will completely fill the concrete crack and return the basement wall to its previous strength. ECP recommends that a professional engineer inspects and diagnoses all concrete cracks before any repairs are performed. Failure to properly repair basement wall cracks can lead to foundation failure and basement flooding.

Advantages of Polyurethane Resins

- Remains Flexible
- Seals Foundation Walls
- Eliminates Air Leaks
- Application Completed from Inside
- Stops Active Leaks
- Reduces Humidity and Water Vapor Permeation
- Available in Cartridge and Bulk Form

ECP Polyurethane Resins are a innovative blend of hydrophobic/hydrophlic polyurethane resins designed to provide the ultimate solution for crack repair and void grouting applications. In contact with water, ECP Polyurethane Resins will expand up to 20 times its original volume creating a permanent, flexible and water-tight seal.

Technical Data

ECP PFLV
Performance Properties
Test/Test Method Results

Water Absorption ASTM D-2127	<1%
Shrinkage ASTM D-2126	<0%
Color	Amber Clear
Viscosity	400 cps
Density ASTM D-1622	60lbs/ft
Tear Strength ASTM D-624	400 psi
Tensile Strength ASTM D-638	2000 psi
Elongation ASTM D-638	100%

ECP PF1C
Performance Properties
Test/Test Method Results

Water Absorption ASTM D-2127	<1%
Shrinkage ASTM D-2126	<0%
Color	Clear
Viscosity	600 cps
Density ASTM D-1622	65lbs/ft
Tear Strength ASTM D-624	400 psi
Tensile Strength ASTM D-638	2200 psi
Elongation ASTM D-638	400%

ECP Epoxy
Performance Properties
Test/Test Method Results

Thin Film Set-Time @ 77˚	3-5 hr
Full Cure Time	24 hr
Comp. Strength	14480 psi
Tensile Strength	8315 psi
Tensile Elong. ASTM D-638	8.9%
Coefficient of Shrinkage	<.001
Heat Deflection Temp.	>120˚
Shore D Hardness	80-75
Water Absorption	.1989%
Mixed Viscosity	LV 150 cps MV 650 cps HV 13000 cps
Color Mixed	Amber
Mix Ratio	2:1

ECP HYFO
Performance Properties
Test/Test Method Results

Viscosity	
Shear ASTM D-273	230 cps
Tensile ASTM D-1623	175 psi
Elongation ASTM D-1623	375 psi
Color	410% Milky

Crack Injection Steps

- **Install Injection Ports** – Injection ports are thenozzle that accepts and directs the injection compound to the crack. Injection ports are generally spaced 8”-10” apart, based on wall thickness.
- **Apply Crack Paste** – The crack paste seals the surface of the crack to direct the resin deep into the crack.
- **Inject Resin** – Whether using a adjustable low pressure injection machine or hand dispenser, the resin is injected through the port into the crack void. The injection process starts at the lowest point of the crack and is continued to the top of the crack.
- **Seal Ports** – Each port is sealed after it is injected.
- **Remove Ports** – The injection ports can be removed once the resin has had time to cure.