CURTAIN WALL GROUTING

The Problem:

Curtain wall grouting is often required when cracks cannot be identified, when the walls are made of material that does not respond well to crack injection (such as masonry, stone and CMU), and when previous leak seal methods have failed. In the photos above, you’ll see curtain wall injection jobs that became necessary after less reliable methods were attempted.

The Solutions:

Curtain wall grouting is the process of injecting water-reactive resin behind the leaking wall in a grid pattern (from negative side). The water on the other side mixes with the grout and cures to a solid mass covering the surface of the wall on the other side (positive side). In addition, you don’t have water pressure dislodging external “patches” over time, as can be the case with other methods. This procedure is best done with either Spetec PUR H100, Spetec PUR H200, Spetec PUR HighFoamer or Spetec AG200.

The PUR series expansive one-component polyurethane resins can be injected through the wall to cut off large flow and high pressure water leaks. The resins react with the water on the other side to form a long lasting, durable seal. Spetec PUR H200 has a high rate of expansion and a little flexibility. Spetec PUR H100 has a lower rate of expansion but a bit more flexibility. Spetec PUR HighFoamer has a high rate of expansion and AND more flexibility. Spetec AG 200 has a very low rate of expansion (only a slight swelling) but a lot of flexibility, and almost-water-thin viscosity ideal for penetration and travel in tight cavities such as between membrane.

Tech Support:
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The Process:

This is a simplified overview of the curtain wall grouting process. For in-depth instruction, contact an Alchemy-Spetec technical support rep.

1. Drill Holes in a Diamond Pattern
2. Grout Circles Will Flow Down
3. Inject from the Bottom Row Up

The Applications:

- Manholes
- Water Treatment Plants
- Catch Basins
- Culverts
- Tunnels
- Elevator Pits
- Dams
- Basements
- Storm Culverts
The Facts:

What Causes Leaks in Concrete?

• Imperfect Construction
  Concrete construction is by no means a perfect science. New construction often requires Leak Seal® treatment follow up work. If the initial construction isn’t properly sealed at the time of construction, leaks are bound to appear sooner rather than later.

• Weather and Wear
  Concrete naturally decays over time. Exposure to extreme hot temperatures and extreme cold temperatures can take their toll over time. Even structures located in mild climates will begin to decay purely due to the aging process.

• Unstable Soil
  Unstable soil can undermine the integrity of concrete structures and cause cracks to appear. Loose soil has four main causes: soil erosion, poor compaction, freeze/thaw cycles, and biological decay. If soil is the main culprit, additional stabilization and slab lifting treatments may be required in order to prevent further cracks from appearing.

How Does Injection Grout Help?

• Water Activation
  Leaking concrete structures can be permanently repaired with concrete crack injection by using a water activated flexible foam.

• Pressure Injection
  Pressure injection of these liquid polyurethane resins forces the material into leaking cracks, joints, and other defects.

• Flexible, Watertight Seal
  After the polyurethane crack injection is complete, the polyurethane resin rapidly reacts with water to form a flexible, watertight seal.

Why Are These Products Safe for the Environment?
  Spetec PUR H100, Spetec PUR H200, Spetec PUR HighFoamer, and Spetec AG200 have been approved for contact with drinking water (NSF 61-5) by Truesdail Laboratories. That means these products can be used anywhere without having an adverse effect on water quality. Having our core products rigorously tested for environmental compatibility is a key component of our commitment to assuring “painless procedures” for customers.

What Are the Results?
  The resins react with the water on the other side of the wall or slab to form a long lasting, durable seal.