



CASE STUDY  
LEAK SEAL

### Sealing Residential Basement Leaks in Alaska

A homeowner in Alaska reached out to a specialty contractor about leaks in their basement. The basement was built with insulated concrete form walls that are typically installed in colder climates. Despite being an excellent solution, problems can arise if not installed properly during construction and the home was suffering from leaks due to poorly consolidated concrete within the walls. During construction, these specially designed walls provide insulation with concrete filling the hollow cavities. However, whenever concrete is poured it requires vibration to ensure it is properly consolidated. The walls in this home did not contain properly consolidated concrete and thus were leaking.

#### Powerful Polymers

After conducting a thorough inspection, the crew found issues with the membrane around the perimeter of the house and proposed injecting Alchemy-Spetec’s Spetec PUR Highfoamer into the walls to make up for the weakly consolidated concrete and seal the leaks. This durable polyurethane was perfect for this job due to its low cost and high expansion rate.



SPETEC® PUR HIGHFOAMER Uncured (Appearance brown liquid)		
Viscosity at 77°F (25°C)	(ASTM D4878-98)	± 215 cP (± 215 mPa.s)
Density	(ASTM D3505-96 [2000])	± 65.9 lbs/ft³ (± 1.12 kg/dm³)

## Painless Procedure

The job only required a small three-man crew and some light equipment. Starting their injection procedure from the bottom, the crew worked all the way around and up the entire basement wall to ensure all affected areas were sealed. The homeowner's only other effective alternative would have been to excavate around the entire perimeter of the home and completely redo the membrane (something they wanted to avoid due to the high costs).

## Rapid Result

The injection process took a fraction of the time a full membrane replacement would have taken. The homeowner was thrilled to have the leaks sealed and the basement walls fortified.

## About Alchatek

Alchatek is an international leader in the manufacture and supply of chemical grouts and construction products for Geotechnical, Leak Seal, and Seawall Repair applications. Providing solutions from its headquarters in Tucker, Georgia and its manufacturing facility in Reno, Nevada, Alchatek specializes in advanced construction technologies for sealing leaks, stabilizing soils, lifting concrete, and protecting infrastructure and seawall structures. To best serve its customers, Alchatek is organized onto three divisions:

**The Leak Seal Division** combines a full system offering of polymer chemical grouts and equipment with perhaps the most experienced technical team in the industry. It specializes in preventing water ingress through concrete infrastructure including parking garages, culverts, basements and foundations, and sewer manholes.

**The Geotechnical Division** offers a complete line of single component products for soil stabilization as well as two component polyurethane foams for concrete lifting, void filling, and stabilization of infrastructure. This includes lifting sunken structures such as warehouse floors, back into place.

**Seawall Repair Network®** is the only national network of certified contractors in the repair, preservation, and protection of Seawalls waterfront barriers. Its proprietary methods and materials are environmentally friendly and safe for use in all marine environments and provide a non-destructive solution for seawall repair at 80% less than the cost of replacement.

Tech Support:  
404-618-0438  
[www.Alchatek.com](http://www.Alchatek.com)

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