



Stabilizing a Failing Pond Spillway

A property owner reached out to a geotech contractor for help with a leaking retention pond. The pond feeds into a creek via a concrete spillway. Over the years water has worked its way through the earthen dam and under the spillway, causing large voids and soil loss under the concrete.

Powerful Polymers

The technicians selected AP Fill 720 as the repair material for this job. AP Fill 720 is a single-component, closed-cell, hydrophobic, water-reactive, phthalate-free, low-viscosity polyurethane injection resin for cutting off large water leaks and filling voids around structures. This high-strength durable material will react and expand quickly upon contact with water and is one of the top soil stabilizers on the market.



AP FILL 720 Cured		
Tensile Strength	(ASTM D-1623)	43 psi (2,965 mb)
Tensile Elongation	(ASTM D-1623)	3.8%
Shrinkage	(ASTM D-1042/D-756)	Negligible
Compressive Strength (with fine sand)	(ASTM C-39)	1,803 psi (124,313 mb)

Painless Procedure

The spillway was about 15 x 15 feet in size, with one 15-foot side bordering the pond. After soil probe testing it was decided that the crew would inject AP Fill 720 directly next to the spillway on the pond side and then directly underneath the spillway via 5/8 inch drill holes in the concrete along the border with the pond. All injections were completed to a depth of four to five feet.

Rapid Result

This project was completed within a day. The AP Fill 720 structural polymer was cured within a couple of hours after injection. The homeowners were thrilled to see their pond system, which they were heavily invested in, finally functioning as it was designed.

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.

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