



CASE STUDY VOID FILL & STABILIZATION

Filling Dangerous Voids at a Paper Manufacturing Plant

A critical safety issue arose at a large paper manufacturing plant. Large voids up to 18 inches deep were discovered beneath concrete slabs supporting heavy water pumps. This hazardous condition put both employees and equipment at risk. A geotech specialist was called in to fill the voids and secure the slabs.

Powerful Polymers

The technicians chose AP Lift 475 for the job. This material offers strong load-bearing capacity and cures quickly, minimizing plant downtime. The fast-curing was essential for a swift return to full operation, making AP Lift 475 the ideal solution for this repair task.

Physical Properties - Cured

AP LIFT 475			
Compressive Strength	(ASTM D-1621)	100 p.s.i. or 14,000 p.s.f.	6,895 millibar
Tensile Strength	(ASTM D-638)	100 p.s.i	6,895 millibar
Expansion	(Unconfined)	14-16 times	-
Density	(ASTM-D 1622)	4.5 to 5.0 lb/ft3	72.08 to 80.09 kg/m3
Shrinkage	(ASTM D-1042/D-756)	Negligible	Negligible

Properties will vary depending on application conditions.

Painless Procedures

The repair began with the drilling of 3/4-inch holes. Workers drilled these holes roughly every 3 feet across the affected area. Then, they injected the repair material into each hole until the substance flowed beneath the slab from one drilled hole to the next. This method provided comprehensive coverage of the voids beneath the slabs, ensuring no areas remained untreated.

Rapid Results

The entire repair took only one day to complete. After the work, the slabs were securely stabilized, and the pump equipment and workers were safe. The paper manufacturing company expressed satisfaction with the outcome. Due to the quick turnaround time, minimal disruption occurred. Most importantly, eliminating the dangerous voids created a safer work environment.



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:
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