

## About us

**Polymer Technology USA** is owned and operated by an inventor of proprietary intellectual property [patent # US 9,790,655](#) (Mixing Device Method for Silt Fine Soil and Soil Stabilization). This proven delivery method of soil stabilization utilizing polymers has been tested and verified at depths in excess of 100'.



### Services

- Sinkhole Repairs
- Soil Stabilization
- Seawall Repair
- Concrete Lifting
- Foundation Repairs
- Dam Repairs



## Chemical Grouting

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## Innovative Delivery Method

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We are the only company in the world to successfully address the unstable, sub soil conditions, using chemical grout at depths in excess of 10 feet below grade level.

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This proven delivery method of soil stabilization has been tested and verified at depths in excess of 100'.

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***[www.PolyTechUS.com](http://www.PolyTechUS.com)***

## Advantages and Benefits

There are lots of advantages to polyurethane / chemical grouting as compared to other methods of repair, such as slab jacking, grinding & replacement. Used mostly in infrastructure and industrial markets for many jobs, such as, lifting and stabilizing interior floors, **Polyurethane Grouting is almost unquestionably the best repair process available.** Polyurethane grouting is:

- **Cleaner:** Polyurethane grouting is the cleanest concrete lifting and stabilization process. Because the injection equipment is mechanically connected to the slab or structure.
- **Less Disruptive:** Polyurethane grouting is the quietest and fastest process for stabilizing and raising settled concrete slabs. Because of the small hole size, drilling is fast and quiet,. The equipment for polyurethane grouting is self-contained in a box truck.
- **Immediate Traffic:** Foot traffic during work is functionally OK, and immediate resumption of vehicular traffic after work is completed can be expected.
- **Fast:** Polyurethane grouting crews can lift up to 12 times faster than standard slab jacking or mud jacking crews in many situations. Because of the small hole size and ability to lift larger areas per hole, polyurethane grouting is much quicker than slab jacking.
- **Lightweight:** Lightweight material reduces the overburden on underlying soils, reducing the chances for resettlement. This reduces the amount of additional burden weight placed on the underlying soils. Geotechnical polyurethanes are an excellent choice for lightweight fills, because of their exceptionally low unit weights (down to 2 PCF) and fast cure times (few minutes)
- **Waterproof:** High density polyurethane is waterproof, so treated slabs are thoroughly undersealed. Polyurethane can also be installed in water, so flow testing or water stop applications with active flows are not a problem. Because of the near-immediate curing, water stopping jobs are fast and easily tested on site to ensure efficacy of the repairs.

## FAQ's

### 1. What is the delivery method?

A two part polyurethane material is delivered via a small 2 inch diameter drill made to reach the desired depth and mixes at the tip. The material hardens within seconds and fills the void. A single perforation can apply material to an area of 10' to 30' in diameter.

### 2. Is this system more cost effective?

It certainly is because it does not require demolition and is significantly less labor intense. A simple 2" diameter drill can cover an area up to 30 feet in diameter.

### 3. What would be the main difference with the current delivery methods?

Currently only grout can be delivered at depths below 10' and polyurethane (foam) can only be delivered up to 7-10'. Our delivery method ensures that we reach the desired depth and does not allow the material to harden before we reach the affected area. Therefore our delivery method can be used not only to fix sinkholes, but can fix dams or inject material into an underwater vessel that needs to be floated.

### 4. Is the process environmentally friendly?

Yes indeed!. This system is less destructive and more environmental friendly than any current method. Current (fast injection delivery used for less than 10' deep) uses tubes that cannot be recovered and must be cut at surface and left buried. With our delivery method, the tubes used for injection are recovered. The use of mortars and grouting suspensions is dangerous to the environment because the toxic components can pollute the karst aquifer and cause long lasting hazardous impacts on underground species.

### 5. How long does the injection process takes?

Every project is different and depends on the soil condition. However, due to the fact that there is no demolition required, this method can be delivered very quickly. Also, because our product reacts (hardens) within seconds (even on the presence of water and other solutions) the area is ready for traffic by the time we leave the premises.

### 6. Is there any specific chemical grout material that must be used?

Absolutely not. In fact with polyurethane injection delivery, the engineer has the freedom to select the product or combination desired, depending on the soil condition and properties of the material required.