



What Is Cellular Concrete?

Cellular concrete is a low-density fill material that is mostly used for geotechnical applications. It is made from liquid cement mixed with water, foam, and air to turn it into a concrete product that is much, much lighter than regular concrete.

Pound for pound, cellular concrete stacks up at a fraction of the weight.

- Cellular Concrete = **30lbs/cu ft**
- Water = **62lbs/cu ft**
- Dirt = **100lbs/cu ft**
- Regular Concrete = **150lbs/cu ft**

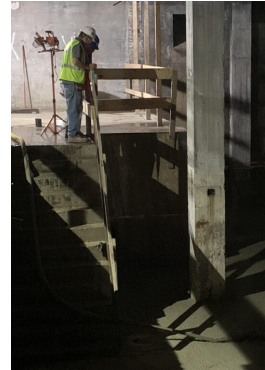
How Do We Use It?

We use cellular concrete (similar to the large Styrofoam blocks you may see on road construction projects) as lighter-weight fill that still has the strength of the soil. Since it is so much lighter, there is less settling and underlying soil consolidation as compared to regular concrete, dirt, or gravel. You can crumble it with your fingers or encase underground utilities with it and use a shovel to excavate.

We can make cellular concrete as light as 25 lbs/cu ft and up to 70-80 lbs/cu ft if you want to displace water.

We modify the ingredients in the cellular concrete mix through our state-of-the-art trailer pump (capable of pumping over 50 cubic yards (CY) per hour of cellular concrete) to achieve different densities. Our team of engineers works closely with the owners to determine the proper mix weight and design for their application.

Cellular concrete can be pumped which makes it ideal for projects where you can't access the area with traditional construction equipment. For example, filling in the pool in the basement of the Warrior Hotel in downtown Sioux City was easier to do because we could pump it. It was a better solution for the Warrior since it was lighter weight and caused less settlement. And at a lower cost, cellular concrete is a more economical option than other solutions.



Why We Use It

We've been using cellular concrete for several years. We have the expertise to do the job right the first time and avoid costly mistakes.

- You have to know a lot about concrete because you're making it.

- It's a liquid and it needs to be pumped for long distances, so it takes an expert in pipes and underground utilities.

- You'll need to know how to mix the product, what proportions of ingredients to use, and what the proper mix design is for the specific application you're working on. That all comes from an in-house engineer.

We can do all of that, so, why wouldn't we?

Cellular is more complex than it appears, it takes a team of highly-knowledgeable people to be successful - which is what we have. That's what makes us one of Sioux City Metro's best construction & engineering companies.

Why You'll Love It

Several market segments benefit from using cellular concrete including municipal/governmental, industrial, and private/commercial. The DOT will choose cellular concrete over other materials because they know the value it brings when compared to grout, flowable fill, rock, sand, or soil. When a pipe goes under the interstate or an old roadway, it must be removed if it is abandoned. We can connect right to the pump and fill it with cellular concrete. It flows as easily as water because it's so lightweight which makes it great for filling voids.

It's also ideal for shoring. When we've used dirt in the past, it imparts higher active loads to the shoring wall. Cellular concrete is lighter so it causes less loading on the wall and we can make the shoring walls smaller.

Clients love it because it's more economical than hiring a large crew to haul buckets of rock, gravel, or dirt up to the 2nd or 3rd floor of a building or down into the basement.

Work With Cellular Concrete Experts

We are the tri-state area's choice for cellular concrete. Give us a call today to discuss your project and how we can provide the solutions you need.



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