

CELLULAR FOAM CONCRETE (CFC)

The Smarter Structural Base for Hardscapes & Landscapes



KEY BENEFITS

- ✓ Self-leveling structural Base
- ✓ Self-compacting
- ✓ Pumpable into tight spaces
- ✓ Permeable or impermeable options
- ✓ Eliminates settlement
- ✓ Reduces labor and compaction

6 WAYS LANDSCAPERS USE CFC

1 Retaining Wall Bases



- ✓ Self Leveling
- ✓ Solid Permanent Base
- ✓ Self Compacting

2 Retaining Wall Backfill



- ✓ ZERO Lateral Load
- ✓ Can Be Drainable
- ✓ Absorbs Freeze Expansion

3 Paver & Hardscape Bases



- ✓ Stable Solid Sub-base
- ✓ Allows Water Drainage
- ✓ No Compaction Required

4 Faux Rock & Stone Structures



- ✓ Easy To Sculpt
- ✓ Can Build Over Forms
- ✓ Color With Dyes
- ✓ Hand Excavatable

5 Partial Fill for Large Planters



- ✓ Reduces Weight
- ✓ Can Be Water Reservoir
- ✓ Pumpable For Easy Placement

6 Drainable Dry Stream Bases



- ✓ Easily Excavatable
- ✓ Eliminates Mud
- ✓ Allows Water Drainage

Cellular Foam Concrete (CFC) for paver sub-bases and retaining wall backfill cuts labor, dramatically reduces callbacks, and outlasts everything else. Lightweight CFC eliminates shifting, settling, and most failures — and it's fast and easy to install. It's self-leveling, self-compacting, and pumpable several hundred feet. And it can be made permeable for water management in both paver and wall applications.

Cellular concrete can help you deliver a complete high quality landscape installation while reducing your labor cost.

Cellular foam concrete isn't a one-trick solution — it solves problems across your entire service menu. Use it as partial fill in oversized decorative planters to dramatically cut weight, protecting decks and patios from structural overload while keeping planters repositionable. Form it into lightweight faux boulders and stone features that look completely natural but require no heavy equipment to place or reposition. Build dry stream beds with a permanent, stable CFC base that keeps rock and stone exactly where you put it — season after season — while still draining freely. Stabilize and level pool deck surrounds without full tear-out, using a lightweight sub-base that handles moisture and freeze-thaw cycles without heaving or cracking. Wherever your work involves fill, weight, drainage, or long-term stability, CFC delivers a faster install, a better result, and a finished product that holds up long after the competition's work has started to show its age.



RICHWAY
Solutions

CFC is a lightweight concrete made by adding air to a Portland cement and water slurry. The air is added by using a detergent type foam to precisely control the density and other properties.

It can be made to be very flowable to fill even the smallest void and be made either self-leveling or stiffer to stay where it is placed. It is always self-compacting and when cured behaves like full density concrete, but at a lower density and strength.

Production of CFC requires a foam generation and metering system to produce consistent quality. RichwaySOLUTIONS makes small portable Cretefoamers to produce CFC for landscaping work, priced at under \$10,000. Labor savings alone can pay for an LV series Cretefoamer in just a few installations.

CFC has been used for many years for large geotechnical fill projects. Projects like bridge and overpass fill, abandoned mine filling, road sub-bases, sinkhole fill, soil replacement and utility trench fill to name only a few. Richway is the premier provider of equipment for these uses, with machines that produce up to 100 cubic yards of CFC **per hour**.



The RichwaySOLUTIONS Cretefoamer™ Model LV-3 (above) produces 3 cubic yards/hour of lightweight cellular concrete. A Portland cement and water slurry is fed into the hopper on the right, which is mixed with detergent type foam to provide the density reducing air. The CFC is discharged from the hose on the left of the Cretefoamer. There is also a 6 yard per hour model, the LV-6. Both models are priced at under \$10,000 and operate on 12 volt DC power for easy on-site use.

Why Smart Contractors Use Cellular Foam Concrete Behind Every Retaining Wall

Retaining walls fail from the back, not the front.

Hydrostatic pressure, soil movement, freeze-thaw cycling, and poor compaction behind the wall are responsible for the majority of retaining wall failures — and most of them are entirely preventable. Cellular foam concrete (CFC) changes how you build from the ground up.

For smaller, light-duty walls, CFC is a revelation for the base. It's self-leveling and self-compacting, meaning no tampers, no plate compactors, no layer-by-layer lifts. Pour it in, let it flow, and it finds its own level — filling every void and cavity completely without any mechanical effort. That alone can cut hours off a typical installation.

But the real story is backfill — this is where CFC separates itself from every traditional option on the market.

Eliminate the Forces That Destroy Walls

Traditional backfill — whether it's native soil, gravel, or crushed stone — is heavy. That weight translates directly into lateral pressure against your wall. Over time, especially through freeze-thaw cycles, that pressure builds, shifts, and eventually wins. CFC weighs a fraction of conventional backfill, and because it is concrete exerts no force the wall has to resist. Less pressure means less stress on the block, the base, and the geogrid. The wall simply has less to fight against — every single day for the life of the structure.

Water is the other silent killer. Saturated backfill becomes exponentially heavier and more destructive. CFC's open cell structure allows water to drain freely and consistently, preventing the buildup of hydrostatic pressure that buckles and blows out even well-built walls. No more guessing whether your drainage aggregate is performing — CFC manages water by design.

The Labor Math Changes Everything

Yes, CFC costs more per yard than gravel or compacted fill. But material cost is only one line on the job cost. Consider what you're eliminating: multiple compaction passes, equipment rental or wear, labor hours managing lifts and grades, and the time spent troubleshooting drainage details. On a mid-size retaining wall project, those savings routinely offset the material cost difference — and often come out ahead.

Your crew works faster, with less physical strain, and finishes the job cleaner. That means you're on the next project sooner, with more margin in your pocket.

Build Walls That Last — And Protect Your Reputation

A retaining wall is a long-term investment for your customer. When it holds perfectly five, ten, and twenty years down the road, that's a referral. When it leans or cracks after the third winter, that's a warranty call, a reputation hit, and a job you're eating. CFC gives you the backfill solution that matches the quality you're putting into the wall itself.

**Lightweight. Draining.
Permanent. Self-compacting.**

It's not just a better way to backfill — it's a better way to build.

The Smarter Sub-Base for Paver Contractors

A paver job is only as good as what's underneath it.

And if you're still relying on compacted gravel sub-bases, you're leaving money on the table — and callbacks on the calendar.

Cellular concrete delivers a uniform, stable sub-base that won't shift, wash out, or settle unevenly over time. Its open cell structure allows water to drain freely, eliminating the pooling and hydrostatic pressure that heave and crack traditional bases through freeze-thaw cycles. When the ground freezes and expands, a properly installed cellular concrete sub-base flexes with it — then holds its position when it thaws. Season after season, it stays put.

And unlike gravel, it doesn't migrate, erode, or compact differently over time. It cures to a permanent, lightweight mass that gives your pavers a foundation built to last decades — not just until the next hard winter.

Your crew gets off the job faster too. No more labor-heavy grading, compacting, and re-checking depths. The material is self-leveling and flows into place, freeing your team to move to the next job sooner.

Cellular foam concrete density and permeability can be varied by changing foam amount and foaming agents. If ever necessary, it is easily excavated, even with hand tools.

Expanded Landscape Applications

Cellular foam concrete (CFC) expands what landscapers can build—while simplifying how it gets done. In large planters and decorative pots, CFC reduces weight without sacrificing support, making placement easier and eliminating long-term settling concerns. For faux rock and sculpted features, variable density allows realistic shaping and carving with less labor and greater consistency than natural materials.

Lightweight fill. Full structural support.

Stable Bases for Features

CFC creates stable, erosion-resistant bases for fire pits, fireplaces, and outdoor ovens, while also providing thermal insulation and heat retention. In dry stream beds and drainage channels, it forms a firm sub-base that maintains shape over time. For ponds, fountains, and water features, CFC flows into place to create continuous support beneath liners or shells—eliminating voids that lead to settlement or leaks.

No voids. No settlement. No callbacks.

Built for Challenging Conditions

In soil stabilization applications, CFC fills voids, reinforces weak subgrades, and distributes loads evenly to reduce future movement. Its air-void structure provides strong freeze–thaw resistance and helps absorb and attenuate vibration from traffic and equipment, reducing stress on surrounding structures. At the same time, its low density reduces loads on soft soils, making it ideal for backfill and support wherever weight matters.

Freeze–thaw resistant. Load reducing.

CFC has been used for many years for large geotechnical fill projects. Projects like bridge and overpass fill, abandoned mine filling, road sub-bases, sinkhole fill, soil replacement and utility trench fill to name only a few. Richway is the premier provider of equipment for these uses, with machines that produce up to 100 cubic yards of CFC per hour.

LABOR SAVINGS A BIG PLUS FOR USING CFC

CFC delivers immediate, measurable labor savings across virtually every landscape application. Because it is pumpable, self-leveling, and self-compacting, it eliminates the need for hauling, placing, and mechanically compacting multiple lifts of stone or soil. Crews can place large volumes quickly with minimal manpower, reducing equipment needs, jobsite congestion, and installation time. For backfill behind walls, paver bases, planters, and features, CFC flows into place and achieves uniform support without callbacks for settlement or rework. The result is faster project completion, lower labor costs, and more predictable outcomes—allowing contractors to take on more work with the same crew while delivering higher quality installations.

THE BOTTOM LINE

Overall, CFC provides landscape professionals with a reliable, adaptable solution that improves installation efficiency, enhances long-term performance, and expands creative design possibilities across a wide range of applications.

CFC is a lightweight concrete made by adding air to a Portland cement and water slurry. The air is added by using an detergent type foam to precisely control the density and other properties.

It can be made to be very flowable to fill even the tiniest void and self-leveling or stiffer to stay where it is placed. It is always self compacting and when cured behaves like full density concrete, but at a lower density and strength. It's low strength means it can be excavated later using only hand tools.

Production of CFC requires a foam generation and metering system to produce consistent quality. RichwaySOLUTIONS makes small portable Cretefoamers to produce CFC for landscaping work, priced at under \$10,000.

RichwaySolutions
PO Box 508
Janesville, Iowa 50647

RichwaySolves.com
319-596-5941
319-269-0378 (cell)

Cretefoamer is a Richway Industries trademark