

Geofoam SP

PERVIOUS CELLULAR CONCRETE

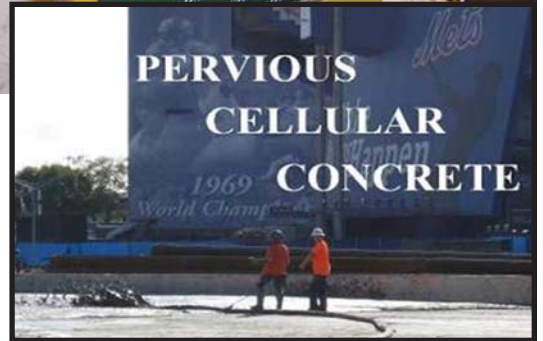
Use of cellular lightweight concrete continues to increase worldwide. New products from the Innovations Lab of Cellular Concrete LLC are helping to drive this powerful trend, including the introduction of Geofoam SP, a synthetic foaming agent for producing pervious cellular lightweight concrete, which helps developers, specifiers, and project owners to economically meet the goals and demands of sustainable, effective land use.

Geofoam SP produces an engineered, permeable, open-cell lightweight concrete, able to stabilize soil without disturbing or redirecting natural water flow. Geofoam SP pervious cellular lightweight concrete provides proven geotechnical solutions for fields and golf courses, parking lots, roads and runways, pipe and conduit bedding, and retaining wall backfill applications requiring drainage capacities exceeding those obtainable from compacted soil or controlled low strength material (CLSM).



Major League Material

Geofoam SP pervious cellular lightweight concrete performs – in the lab and in the field – building the new Citi Field stadium for the New York Mets.



Environmental Performance Advantages

Geofoam SP pervious cellular lightweight concrete is environmentally safe, has no flash point, and supports sustainable development.

Testing by Middle Tennessee State University documents the ability of Geofoam SP pervious cellular lightweight concrete to enhance the environment by filtering contaminants that can adversely affect soil and water. Various chemicals and solids were placed on Geofoam SP pervious cellular lightweight concrete and then rinsed with increasing amounts of water (0.5 inches to 30.0 inches) over a given surface area. Test results showed Geofoam SP pervious cellular lightweight concrete filtered 78% of the hydrocarbons and heavy metals. When the Geofoam SP pervious cellular lightweight concrete was tested for oil retention, 97% of the oil remained on the pervious cellular lightweight concrete test specimen.



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Geofoam SP Applications

Use Geofoam SP for any geotechnical application requiring drainage capacities exceeding those obtainable from compacted soil or CLSM, including:

- Self-leveling fill
- Drainage structures
- Scour protection
- Sports fields/golf courses
- Tunnel backfill
- Underground tanks and pipelines
- Soil stabilization
- Permeable road base
- Foundation drains
- Gabion retaining systems
- Annular backfill
- Load-reducing, engineered fill over underground structures
- Water retention
- Pipeline beds
- Greenhouse floors
- Fill for abandoned mines
- Impact absorption
- Bridge approaches and landslip repair fills.

LEED Credits

Using Geofoam SP pervious cellular lightweight concrete can help increase the number of points awarded to a building in the LEED system. By allowing water to soak through and infiltrate, Geofoam SP pervious cellular lightweight concrete helps reduce stormwater flow and site pollutant loads, which may contribute to LEED Credit SS 6. By helping to integrate paving and drainage, less site area may need to be used to manage stormwater, allowing a more compact site development footprint, which may contribute to LEED Credit SS 5. When incorporating fly ash in the mix design, Geofoam SP pervious cellular lightweight concrete substitutes partially for cement, which may contribute to LEED Credit M 4.

Geofoam SP Mix Design

Mix design determines the strength and density of Geofoam SP pervious cellular lightweight concrete. Engineered cement slurry mixes can range from 50 to 200 psi, with wet cast densities from 20 to 30 pcf. Geofoam SP is very durable, allowing the use of bottom ash in the mix design, which supports sustainable development objectives and may increase the number of points awarded to a building in the LEED system. Sand or other aggregate can be used in Geofoam SP™ pervious cellular lightweight concrete mixes. However, lab mixes should be run to determine acceptable flowability.

When site conditions or project schedules require faster set times, set accelerating admixtures – if approved by Cellular Concrete LLC – can be incorporated into the mix.

Cellular Concrete LLC: Pre-Formed Foam Quality

The pre-formed foaming agents produced by Cellular Concrete LLC for its engineered Geofoam and Mearlcrete lightweight concrete systems are considered the most stable pre-formed products in the cellular concrete industry. The durable cell structure of Cellular Concrete LLC products is not affected by long pump runs, extended mixing, or most fly ashes. Product innovation, unmatched quality, and superior technical and service support have been the leadership hallmarks of Cellular Concrete LLC, from the 1940s through today.



Geofoam SP, before it is mixed with cement slurry

Visit www.cellular-concrete.com for information about other innovative Cellular Concrete LLC foaming agent products.