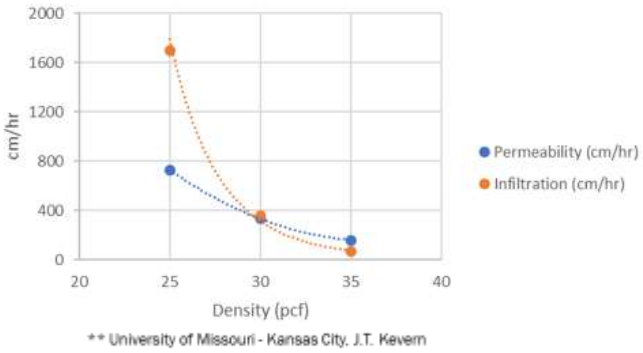
Aerix Industries™
Advanced Engineered Foam Solutions

T E C H N I C A L B U L L E T I N

Bulletin 17-0206 Permeable Low-Density Cellular Concrete and Buoyancy

Permeable Low-Density Cellular Concrete (PLDCC), blended with Aquaerix foam, is generally placed between 25 lbs/ft³ (400 kg/m³) and 35 lbs/ft³ (561 kg/m³) and in order to obtain the best permeability.

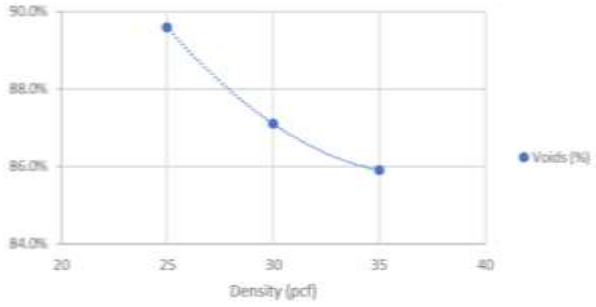


** University of Missouri - Kansas City, J.T. Kevern

Placing PLDCC material should be done only if a site can be de-watered until the material has set, prior to exposing the permeable cellular concrete to any infiltration of water. It is suggested that the appropriate amount of overburden is placed over the material, after it has cured a minimum of 24 hours, to avoid any concerns with buoyancy factors.

If there is a unique situation where a placement is outside the recommendation of Aerix Industries documents, please contact the technical department.

It is important to consider the buoyancy forces of each individual project. Any materials under 62.4 lbs/ft³ (1000 kg/m³) will tend to create an uplift. However, PLDCC can assist in the design by allowing water to infiltrate and assist in adding some weight when high water conditions exist.



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As calculated under laboratory conditions, the PLDCC open cell structure has a substantial number of voids, but when looking at the buoyancy and the factors of safety, consider a 50-55% infiltration rate into the overall mass. It is suggested that specific project mix designs be tested for infiltration rates.

Additional Bulletins that may be of interest:

- Bulletin 16-1204 Utilization of Silt Fabrics with PLDCC
- Bulletin 13-1707 PLDCC in Landscape Applications
- Bulletin 13-1807 PLDCC under Permeable Pavement

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