



## Low-Density, Low-Strength Concrete

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Engineered to dramatically and uniformly reduce the weight of concrete, ELEMIX<sup>®</sup> ExB<sup>™</sup> concrete additive leverages its dynamic structure and dispersion characteristics to become an integral part of the concrete matrix. This results in reliably consistent lightweight concrete no matter how high or far it is pumped. ELEMIX additive can be used in a variety of applications including geotechnical underground engineering as a low-density, controlled, low-strength material.

### BACKGROUND

Cellular concrete mix designs create a low-density and relatively lower compressive strength concrete when compared to conventional concrete. The typical density range of neat cement cellular concrete mixes is 20 - 60 lb/ft<sup>3</sup> (320 - 961 kg/m<sup>3</sup>), which develops a corresponding compressive strength range of 50 psi - 930 psi (345 - 6408 kPa).

### MIXES

Mixes with ELEMIX ExB additive can be designed to reach densities lighter than soil but with equivalent or higher compressive strengths. This allows the concrete to flow into areas that are difficult to reach, yet still provides an equivalent 100% compaction.

Mixes designed for low strengths are able to be excavated using hand tools or machinery. The low unit weights provide low resultant pressures on any retaining structure.

Mixes of ELEMIX ExB additive can be designed with densities ranging from 36 pcf to 100 pcf and compressive strengths ranging from 200 psi to 1200 psi. The actual strengths and density of the ELEMIX ExB additive low-density concrete is determined by the quantities of ELEMIX ExB additive placed in the mix.

Mixes can be tailored to the exact specifications required by the engineer for the specific application. ELEMIX ExB additive may be added at the ready-mix plant or on the job.

### WHY ELEMIX ExB ADDITIVE?

ELEMIX ExB additive can improve the physical characteristics that make low-density concrete successful – highly flowable/pumpable, with load-bearing capacity – and add the element of consistency batch-to-batch, job-to-job, anywhere in the world.

ELEMIX ExB can achieve superior low-density, low-strength concrete by using a high volume of ELEMIX additive with minimal engineering.

The versatility of the ELEMIX ExB additive allows the ready-mix producer to control the quantity of ELEMIX ExB added to the truck. This allows for the mixing of load sizes from a full truck to a short load.

On the jobsite there is no additional equipment required from traditional concrete placement. For remote or hard-to-reach locations, a concrete pump can be used for placement as well.