

CarbonMix™

Sequestering CO₂
in the built
environment.



PERFORMANCE

CarbonMix sequesters CO₂ in concrete and mortar in a stable mineralized form while maintaining and potentially improving certain characteristics. Mix designs that incorporate CarbonMix show comparable performance characteristics.

ECONOMICS

CarbonMix is competitive in price with standard admixtures, but includes the potential benefits of better environmental performance. Potential savings may result from using more supplementary cementitious materials (SCM) and by reducing the Portland cement required.

CarbonMix. Sequestering CO₂ in concrete, using an admixture.

With LEED (Leadership in Energy and Environmental Design), the global community of architects, engineers and contractors (AEC's) led the way in changing the construction industry to be more efficient in its use of water, energy and materials. AEC's, developers and project owners are now turning their attention and buying power to the biggest environmental threat: excess CO₂ and climate change.

We know that the manufacture of Portland cement is responsible for 6% of all industrial CO₂ emissions--and that carbon emissions are accelerating global warming. We see the hurricanes and droughts on cable television. But what can concrete producers, mix design specifiers and project owners do about it?

The product engineers and designers of CarbonMix took their cues from nature and biomimicry to create a practical option for the concrete industry. CarbonMix aims to become the first admixture that permanently "mineralizes" CO₂ into concrete. This means it takes the gas (CO₂) and makes it into a chemically-bonded solid, like limestone. Using advanced analytical tools, the scientists behind CarbonMix will be able to tell AEC's exactly how much CO₂ is being sequestered in each of their projects. For the first time, project owners will be able to get a Certificate of Carbon Offset--with precise CO₂ savings measurements--by specifying CarbonMix for their concrete.

CarbonMix aims to reduce the amount of Portland cement required in a mix design, by increasing the early strength. In addition, CarbonMix can be used with or without Supplementary Cementitious Materials (SCM) like fly ash, slag or silica fume--enabling even higher Portland cement replacement, while preserving a mix design's target plastic and hardened concrete properties.

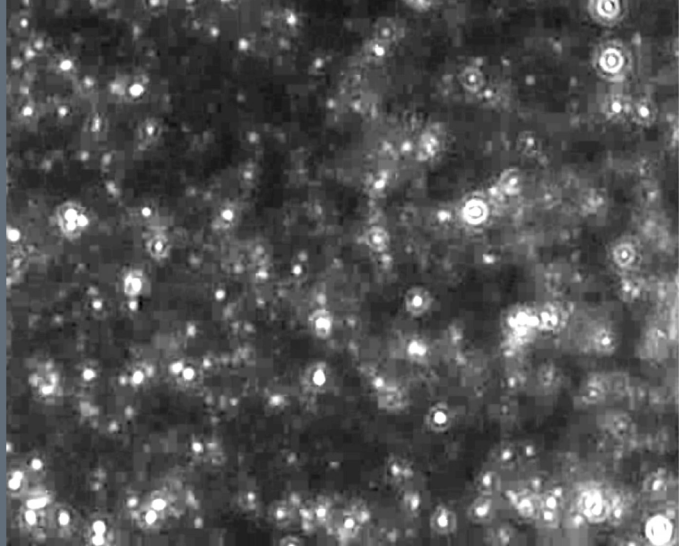
The CarbonMix team is interviewing qualified AEC's throughout California and North America to join its Early Adopter Pilot Program, as part of its pre-commercial R&D effort. CarbonMix will be used specifically in precast concrete and ready-mixed concrete projects at pilot-scale in low risk applications.

To learn more about opportunities to demonstrate your company's leadership in the industry through participation in pilot projects with Blue Planet, contact Luke Pustejovsky at luke@blueplanet-ltd.com or by phone at (650) 283-2156.



IMAGE, RIGHT

Light scattering images of liquid condensed phase (LCP™) droplets of 30–100 nanometers in diameter. The field of view is approximately 300 x 200 micrometers. The LCP™ phenomenon is promoted and enhanced by various concrete-compatible additives and allows for enhanced carbon capture and storage for eventual entrapment in concrete mix designs.



CONTACT

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