

Making our world more productive



More Concrete Volume at Higher Margins

Industrial gases and equipment



Reducing CO₂ Emissions in Concrete Production



The CARBONCURE™ Technology

The CARBONCURE™ Technology introduces recycled CO₂ into fresh concrete to improve compressive strength and enable concrete producers to optimize their mix designs, reduce their carbon footprint and reduce overall costs.

Concrete producers face increasing material costs, tough competition from other building products and strict construction deadlines every day. This competitive atmosphere can make it difficult for producers to investigate and adopt new sustainability initiatives. According to the Dodge Data & Analytics World Green Building Trends 2018 Smart Market Report, green building activity continues to grow across the globe, with dramatic increases expected in 20 countries across five continents between 2018 and 2021. These increasing opportunities make it imperative for concrete producers to pursue sustainable product development.

The CARBONCURE Technology empowers concrete producers to participate in the expanding green construction market by enabling them to provide a reduced-carbon concrete. This technology appeals to the green design community, while improving producers' concrete product quality and profit margins.

CARBONCURE™ Technology Advantages

- Higher quality concrete
- Reduced carbon footprint
- Improved profit margin
- Expanded opportunities in green construction market

Simply Better Concrete

The CARBONCURE Technology injects carbon dioxide (CO₂) during the concrete mixing process. This causes a reaction, forming a nano-sized calcium carbonate mineral which becomes permanently trapped within the concrete. The resultant nanocrystalline material enhances cement efficiency and improves the compressive strength of concrete.

Improve Your Profit Margin

When concrete is strengthened through the injection of recycled CO₂, it enables users to reduce cementitious content. Concrete producers using the CARBONCURE Technology can achieve up to a 7% reduction in cementitious content, which results in significant cost savings and improved profit margins.



Reduce Your Carbon Footprint

Cement manufacturing accounts for as much as 5% of global CO₂ emissions.* Emissions range from 0.73–0.99 pounds of carbon dioxide (CO₂) per pound of cement. Though concrete may have a smaller impact per volume created compared with other building materials, its abundance as the most-used man-made building material makes it worthy of serious consideration.

The CARBONCURE Technology injects CO₂ delivered by Linde into the concrete mix, where it chemically converts into a nano-sized calcium carbonate mineral and becomes permanently trapped within the concrete. The process enables concrete producers to reduce cementitious content, which further reduces the concrete's carbon footprint due to the high embodied energy of cement. The CARBONCURE Technology reduces up to 7% of the carbon footprint of concrete (typically saving about 25-40 pounds of CO₂ per cubic yard).

Easy to Implement

The CARBONCURE Technology is easy to implement and can be retrofitted into existing ready-mix facilities without disrupting operations. Batching is controlled by the producer's batching software in the same manner as other admixtures. The CARBONCURE system injects a precise amount of CO₂ into the concrete for optimal results.



*NOTE: *Report provided by National Precast Association

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