



# OZINGA®



## CARBON CURE™

## Frequently Asked Questions for Designers & Architects

### What is CarbonCure?

CarbonCure is leading an initiative to reduce the carbon footprint of the concrete industry. CarbonCure technology enables designers, developers and architects to reduce the carbon footprint of concrete products used in construction projects without impacting the concrete's quality.

### How does CarbonCure impact sustainability?

The most sustainable principle of design is to construct buildings that are built to last. Concrete is crucial for the development of sustainable buildings, as it provides the strength to build tall, resilient, well-insulated structures. With CarbonCure, designers, developers, and architects can capitalize on the unique qualities of concrete they rely on with a reduced carbon footprint.

On average, 25 pounds of CO<sub>2</sub> per cubic yard of concrete are saved using CarbonCure technology.

### How is the CO<sub>2</sub> sourced?

CO<sub>2</sub> is sourced from emitters by industrial gas suppliers, who collect, purify, and distribute the CO<sub>2</sub>. CO<sub>2</sub> is used for a number of different applications, including carbonated beverages. In most circumstances, there is no net benefit to the environment as the CO<sub>2</sub> eventually returns to the atmosphere. Conversely, CO<sub>2</sub> injected into concrete chemically converts to a mineral and will never re-enter the earth's atmosphere. Ozinga harvests our CO<sub>2</sub> from the United Ethanol plant in Wisconsin.

## **Can CarbonCure help obtain LEED points?**

CarbonCure helps reduce the carbon footprint of concrete by approximately 5%. This carbon footprint reduction may contribute to the LEED v4 Materials & Resources credit: “Whole Building Life Cycle Impact Reduction (option 4).” This credit asks the project team to show a 10% footprint reduction in three impact categories, including CO2 emissions, compared to a reference building.

Concrete products made with CarbonCure technology that have issued third-party verified EPDs may validate this carbon reduction. The EPDs may additionally count for further LEED points under the LEED v4 Materials & Resources credit for environmental product declarations.

## **Has CarbonCure considered the “carbon costs” involved?**

CarbonCure has conducted extensive Life Cycle Analysis calculations to determine the “carbon cost” involved in its process. These “costs” include additional CO2 emitted from the collection, purification and distribution of the CO2, as well as the manufacturing and shipping of the CarbonCure technology. While the cost impact varies on a case-by-case basis, the amalgamated CO2 cost is roughly 0.2 lb CO2 per cubic yard of concrete (compared to total carbon savings of approximately 25 pounds CO2).

## **Will this affect the finish/color/texture of the concrete product?**

No, the addition of CO2 in concrete using CarbonCure technology has no effect on the concrete’s finish, color or texture. The concrete looks exactly as it would if it did not have recycled CO2.

## **What happens to the CO2 at the end of the building’s life-cycle?**

Once introduced into concrete, the CO2 chemically converts into a calcium carbonate mineral. This mineral is permanently bound within the concrete. If that concrete became demolished at the end of its life-cycle, there is no risk of CO2 “escaping” as the CO2 no longer exists. In this instance, it would simply become crushed up gravel.

## **Can CarbonCure be used on my commercial project?**

CarbonCure can be used in residential and commercial projects. Ozinga has CarbonCure technology installed at four of our Chicagoland locations. For more information on CarbonCure and your project, contact us at 312.432.5700.