



OZINGA[®]



CARBON
CURE[™]

Frequently Asked Questions for Contractors

What is CarbonCure?

CarbonCure technology enables contractors to reduce the carbon footprint of concrete products used in construction projects without impacting the concrete's quality or price.

CarbonCure technology injects a precise dose of carbon dioxide (CO₂) recycled from an industrial emitter into concrete during mixing. Once introduced to the mix, the CO₂ becomes permanently embedded in the concrete. The process improves the concrete's compressive strength, which enables concrete producers to reduce their cement content while maintaining strength requirements.

How does CarbonCure affect fresh properties such as workability or pump-ability?

The addition of CO₂ has no impact on the fresh properties of concrete, including workability or pump-ability.

How does CarbonCure affect hardened properties?

The addition of CO₂ using the CarbonCure technology has no impact on the hardened properties of concrete, including durability, density, pH, freeze-thaw, temperature, texture or color. CarbonCure has conducted extensive durability testing in collaboration with leading universities and found that the addition of CO₂ has a neutral effect on durability properties.

Will finishers have issues due to the reduced cementitious content and addition of CO2?

CarbonCure has conducted blind testing with finishers and in every instance found that finishers saw no difference between concrete that has and has not been treated with CarbonCure.

Does CarbonCure impact cycle time or set time?

CarbonCure technology has no impact on a concrete producer's cycle time, which means it does not affect construction timelines. In some cases, contractors have reported a slightly faster set time with the addition of CO2, but set time is generally considered to be unaffected.

Does the CO2 pose any health implications for concrete placers?

Purified CO2 in a non-enclosed environment is a safe substance – it's the same CO2 that is used to make carbonated beverages. Once injected into the concrete mix, the CO2 chemically converts into a calcium carbonate mineral (commonly known as limestone) within minutes, often before the truck leaves the concrete production site.

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, developers can capitalize on these unique qualities of concrete they rely on with a reduced carbon footprint.

On average, 25 pounds of CO2 per cubic yard of concrete are saved using CarbonCure technology.

How is the CO2 sourced?

CO2 is sourced from emitters by industrial gas suppliers, who collect, purify, and distribute the CO2. CO2 is used for a number of different applications, including carbonated beverages. In most other circumstances, there is no net benefit to the environment as the CO2 eventually returns to the atmosphere. Conversely, CO2 injected into concrete chemically converts to a mineral and will never re-enter the earth's atmosphere. Ozinga harvests our CO2 from the United Ethanol plant in Wisconsin.

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.