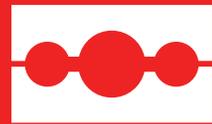




  
**Thomas**<sup>®</sup>  
CONCRETE

WITH



**CARBON  
CURE**<sup>™</sup>

Thomas Concrete with  
CarbonCure creating solutions  
for a cleaner tomorrow



# A greener future one truck at a time.

We at Thomas Concrete Group have a vision to reduce our long term environmental impact in our local communities and across the globe. We continuously strive to develop sustainable solutions for our business in order to make positive contributions to society.

Our mission is to integrate all business measures to align with our sustainable vision. By valuing accountability, compliance, clearly defined objectives, and good dialogue, we desire to be our customer's preferred concrete producer. At Thomas Concrete, good business includes preserving our environment for the next generation.



Thomas Concrete has partnered with CarbonCure Technologies to create a greener future.



The CarbonCure Technology recycles carbon dioxide (CO<sub>2</sub>) to create greener concrete.

- 1 Waste CO<sub>2</sub> emissions are collected from local industrial emitters.
- 2 The purified CO<sub>2</sub> is diverted to Thomas Concrete plants.

- 3 The CO<sub>2</sub> is injected into the concrete mix, where it chemically converts to a mineral.

\*See Technology Process on the next page for details.

- 4 Thomas concrete delivers its carbon-reduced concrete to local construction projects.

# CarbonCure Technologies: Thomas Concrete's green solution

The CarbonCure Technology has been installed in Thomas Concrete plants in order to create greener concrete. The technology injects purified CO<sub>2</sub> collected from industrial emitters into the wet concrete mix. The CO<sub>2</sub> reacts with calcium found in cement and chemically converts into a solid calcium carbonate mineral. This process improves the concrete's compressive strength, which enables Thomas Concrete to reduce its cement content, while maintaining strength and quality standards.

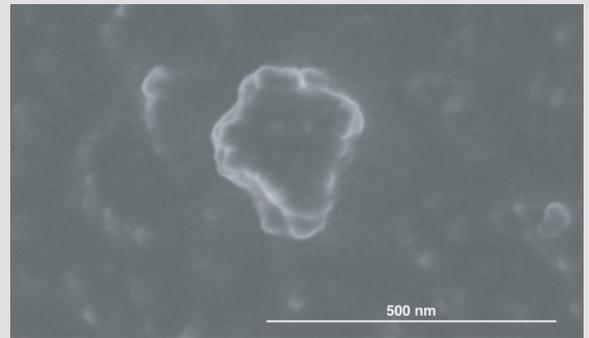
## CARBON REDUCTION

When injected into concrete, the CO<sub>2</sub> chemically converts into a mineral, which means it will never be released back into the atmosphere.

Every 1 lb of cement manufactured results in 1.04 lb of CO<sub>2</sub> emitted into the atmosphere.\* Therefore by using less cement, Thomas concrete is able to significantly reduce the concrete's life cycle carbon footprint.

Between CO<sub>2</sub> recycled and CO<sub>2</sub> avoided, CarbonCure and Thomas Concrete achieve an average net reduction of 25 lb CO<sub>2</sub> per cubic yard of concrete.

\*According to PCA Environmental Product Declaration: Portland Cement. (small print)



The CO<sub>2</sub> converts into nano-sized minerals, as seen in this Scanning Electron Micro-graph image.



Every 75 cubic yards of concrete produced using the CarbonCure Technology saves the equivalent amount of CO<sub>2</sub> as an acre of US forest will sequester in a year.\* This means that every concrete structure has the opportunity to significantly reduce its carbon footprint by specifying Thomas Concrete with CarbonCure.

\*According to the EPA Greenhouse Gas Equivalency Calculator



# Maintaining High Quality Standards

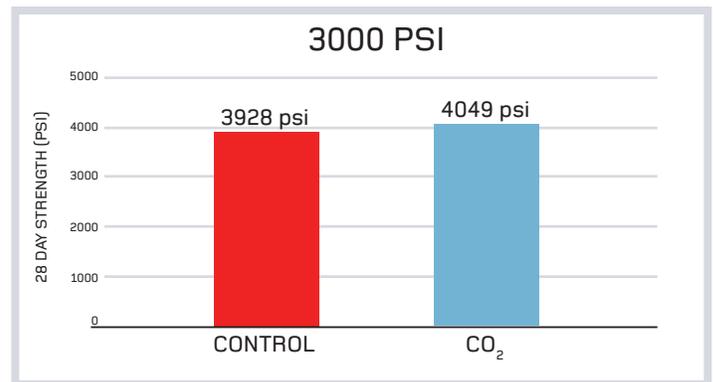
Thomas Concrete conducted extensive testing to confirm that CO<sub>2</sub> maintains the required compressive strength of concrete made with reduced cement content. The results of the case study below have been replicated across all mixes provided by Thomas Concrete with the CarbonCure Technology.

## Case Study: Thomas Concrete mixes with CO<sub>2</sub> used to reduce cement content

### 3000 PSI

50% CEMENT, 25% CLASS F, 25% SLAG

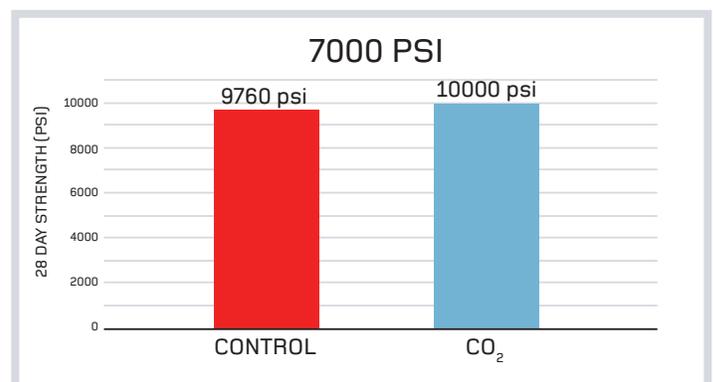
Binder content reduced by **4.3%**  
PSI maintained with addition of CO<sub>2</sub>



### 7000 PSI

50% CEMENT, 13% CLASS F, 37% SLAG

Binder content reduced by **10%**  
PSI maintained with addition of CO<sub>2</sub>



## CONCLUSION

The addition of CO<sub>2</sub> using the CarbonCure Technology enables Thomas Concrete to reduce cement content while maintaining compressive strength requirements.

Further testing has concluded that the addition of CO<sub>2</sub> using the CarbonCure Technology has no impact on fresh properties, including set-time, slump, workability, pump-ability, air content, temperature, and finishing; nor on hardened properties including pH, freeze-thaw, density, color, texture, and durability.

# The Thomas Commitment

In early 2018, Thomas Concrete achieved a significant milestone with the net cumulative savings of 10 million lbs CO<sub>2</sub>.

Moving forward, Thomas Concrete commits to  
Saving at least 10 million lbs of CO<sub>2</sub>  
every year across its US operations.

Over 5,000 acres of US forest  
sequestering CO<sub>2</sub> for a year

## Case Study: 725 Ponce Street

**Completion:** 2018

**Location:** Atlanta, GA

**Architect:** Cooper Carry, Inc.

**Engineer:** Uzun+Case, LLC

**General Contractor:** Brasfield & Gorrie

**Size:** 360,000 square feet

Thomas Concrete delivered 48,000 cubic yards of concrete made with the CarbonCure Technology, diverting 1.5 million lbs of CO<sub>2</sub> from the atmosphere.

That's equivalent to 800 acres of US forest sequestering CO<sub>2</sub> for a year.  
forest in a year.

“Uzun+Case specified Thomas Concrete with the CarbonCure Technology to reduce the carbon footprint of 725 Ponce. We're proud to have saved 1.5 million lbs of CO<sub>2</sub> while maintaining our high quality standards for concrete.”

Rob Weilacher  
Engineer of Record, Uzun+Case





For more information visit:  
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