



How Alia Concreto Reduced the Carbon Footprint of its Concrete

About Alia Concreto

A Better Future

Alia Concreto was founded in Venezuela in 1990 and moved its operations to Panama in 2009. Today, it serves Panama's construction industry through three divisions: concrete, aggregates and coatings. Its concrete division consists of two ready-mix plants, each with a production capacity of 105 cubic yards (80 cubic meters) an hour.

The company is dedicated to creating a better future and operates with a high level of social, environmental and labor responsibility. Its environmental priorities include:

- using advanced technology in production processes
- recycling water in its facilities
- responsible and ecological industrial waste disposal
- caring for native flora and fauna

In 2022 Alia became the first concrete producer in Panama to offer CarbonCure's sustainable concrete solution, a reflection of its commitment to creating a sustainable and better future for all.



The Opportunity

Creating a Competitive Advantage

One of only three countries in the world that are carbon negative, Panama is becoming a global leader in sustainability and is committed to reducing its emissions even further.

To be carbon negative means to offset more carbon, through carbon capture, sequestration, or avoidance, than you contribute to the environment. In Panama's case, the country's forests absorb more carbon than the country emits. Panama also plans to restore 50,000 hectares of national forests, which will contribute to absorbing around 2.6 million tonnes of CO₂ emissions by 2050.

Government spending and private investment in sustainable infrastructure and construction in Panama is increasing, driving the demand for low carbon building solutions.

Recognizing that the cement used in concrete is responsible for 4-8% of global CO₂ emissions, Enrique Alvarez, Director at Alia, started to research global trends in sustainable concrete. "It was a process of investigating what was happening in the world with the concrete industry," said Alvarez. "With concrete being the most consumed man-made product on the planet and with the CO₂ emissions that come from cement, we wanted to think about how we can make concrete sustainable."

The team knew that offering sustainable concrete would give Alia an important competitive advantage in its market. "We have to continue to be innovative and proactive with the environment," said Alvarez.

At a Glance

Company Name:	Alia Concreto
Plant Locations:	Las Mañanitas and La Chorrera
Plants with CarbonCure:	2
Total CarbonCure concrete produced:	19,808 cubic metres
Total CO₂ Savings:	Over 300 tonnes of CO ₂ to date



The Solution

Innovative Sustainability with CarbonCure

Alvarez first heard about CarbonCure's low carbon solution when researching sustainable concrete online. After learning more about the technology and analyzing its economic viability, he submitted a proposal to the board of directors to become CarbonCure's first producer in Panama.

The proposal was well-received. The board and the quality team recognized that partnering with CarbonCure aligned with the company's own environmental commitments and the growing interest in sustainable concrete in Panama. "The whole team agreed on this path of conservation and innovation," said Pietro Gozzo, General Manager at Alia.

Installing CarbonCure at its ready mix plant in Las Mañanitas was simple and straightforward, similar to installing an admixture. Testing the technology came next. CarbonCure's Technical Services & Support team worked with Alia's quality team, supporting them with a testing protocol and evaluating cement cuts. As with installation, this wasn't a challenging process. "The tests are the typical ones that are performed every time there is a new component or any change in the concrete mix," said Gozzo.

Despite some initial concerns about how CarbonCure's technology would perform with sea sand and basalt – aggregates commonly used in Panama – Alia didn't encounter any difficulties. Thanks to CarbonCure acting as a stackable technology that can be applied to a broad selection of mixes, there was no need to replace aggregates in Alia's product.

"The original design remained the same except for the cement reduction," said Gozzo. "We didn't have to make any additive adjustments or anything similar."

Alia's testing found no changes in any behavioral issues or parameters – other than an improvement in mix strength.

The results they saw during testing held true on the job site. "One of the most important things is the performance of the mix on site. We did not see at any time, both in industrial tests and ongoing projects, any changes against the original design," said Gozzo.



The Results

Shifting to new projects and a new sustainable product

Since August 2022, Alia's Las Mañanitas plant has produced 12,036 cubic yards (9,202 cubic meters) of concrete using CarbonCure's sustainable technology. By reducing cement, the company has saved 335,103 pounds (152 metric tons) of CO₂.

That's just the beginning for Alia. It's installing CarbonCure in its second plant and plans to use sustainable concrete in as many projects as possible, including low-income housing, buildings of any height, and all projects without water-cement ratio specifications. It's even branded its sustainable concrete made with CarbonCure and launched it as a new product: GreenTec.

"Our goal is to increase our production of GreenTec concrete and be an environmentally responsible company," said Alvarez. "It is our turn to raise awareness about the use of sustainable concrete."

By being an early adopter of sustainable concrete to Panama, Alia has strengthened its ability to bid competitively for projects, opened up new market opportunities, and positioned itself as an industry leader.

"I believe sustainable concrete is the future within the concrete industry. It allows us to be innovative and proactive with environmental protection and also allows us to reach new markets for green projects."

Pietro Gozzo, General Manager at Alia





Build for the Future. Build with CarbonCure.

CarbonCure has been used on thousands of projects ranging from healthcare to higher education, residential developments, and corporate campuses.

For more information about building with CarbonCure concrete, visit carboncure.com. To get in touch with a CarbonCure representative, send us an email at sales@carboncure.com or give us a call at +1 (902) 448-4100 (Worldwide) or +1 (844) 407-0032 (North America).