



Since 2013 CyBe has been working together with their partner Korodur for the development and production of mortar.



# DEVELOPMENT AND PRODUCTION OF MORTAR FOR 3D CONCRETE PRINTING

Creating construction 4.0 since 2013

▲ *CyBe Mortar sets in only 3 minutes and achieves structural strength in 1 hour.*

**Dutch technology provider CyBe is active all over the world with their 3D Concrete Printing solutions for the construction industry and universities. The company, established in 2013, offers besides its own in-house developed software, hardware, and educational materials also their own material: the CyBe Mortar. CyBe established a one-stop-shop for all things regarding 3D Concrete Printing.**

“We have learned it is not about the technology, but about the solution to solve global problems like housing shortage, resource shortage and skilled labor shortage”, says Berry Hendriks, CEO and founder of CyBe.

The company’s mission is to push 3D Concrete Printing technology to enable a sustainable and affordable development in the construction industry – worldwide. The integrated system combining hardware, software and material is the key within this technology. Certainly, the development took some years and needed the expertise from different parts of industry. For example, in regard to the material technology CyBe started a partnership with the German manufacturer for building materials Korodur International GmbH. Korodur, a family-owned company, founded 1936, is a market leader for heavy duty industrial floors and has a long-term expertise for concrete technology.



“When I met Nikola, it was clear to me that Korodur will be a partner with an open mindset and a huge drive for innovation”, added Berry Hendriks, and continued: “As two family-owned companies, our strengths are a high degree of flexibility, quick decisions and a so-called hands-on mentality. It would have been much more complicated if we worked together with a big company”.





■ CyBe Mortar can be used for architectural, structural, industrial, and design projects regarding 3D Concrete Printing applications.

In close cooperation with CyBe, Korodur's R&D department developed a printable and fast-setting 3D mortar technology – the CyBe Mortar. During the first “live” printing trials in 2013 and projects in the following years Korodur optimized the formulation according to the requirements of the system. Thus, the 3D CyBe Mortar family was born. The goal was a perfect interaction between robotics, software, and intelligent mortar. Besides the technical high performance of the 3D mortar, it was also important for all parties to develop an eco-friendly material. CyBe mortar is based on a CO<sub>2</sub> reduced cement technology.

“In 2013 we met Berry and were thrilled by his vision to revolutionize the construction industry with 3D Concrete Printing. We knew that one day – 3D printing will take construction to a next level. Besides the necessary technical know-how and industry knowledge, Berry also had the right mindset to bring this vision to life”, says Nikola Heckmann, Managing Director of Korodur. The family business is convinced that, in addition to good ideas, it always needs an entrepreneurial spirit, courage and perseverance to drive innovation. The company realized early that 3D Concrete Printing is an exciting technology.

For both companies, sustainability is very important. CyBe Mortar is developed under the economic and ecological as-



■ Berry and Nikola in front of 3D Housing 05 in Milan, Italy. Printed by CyBe using Korodur's material technology.

pects as well as high quality standards. It is understood that shipping materials all over the world is cost and time consuming. That is why it is possible to produce CyBe's 3D mortars locally. The 3D mortar can be adapted to individual properties of regional raw materials. CyBe and Korodur support customers through all phases of the process.

[www.korodur.de](http://www.korodur.de)  
[www.cybe.eu](http://www.cybe.eu)