

GOLDBECK, Holcim and Paebbl complete carbon-storing concrete floor project in Germany

GOLDBECK, Holcim and carbon mineralisation company Paebbl have completed what the companies describe as Germany's first commercial-scale industrial floor slab produced using carbon-storing ready-mix concrete.

The 420 m² floor was installed at an e-commerce logistics facility in southern Germany for a multinational technology company. According to the companies, the concrete mix replaced 15% of conventional cement with Paebbl Rebond, a supplementary cementitious material (SCM) designed to permanently store captured CO₂ through accelerated mineralisation.

The companies state that the modified concrete achieved a 13% reduction in embodied carbon compared with a reference CEM II/B-M mix. The final mix reportedly reached approximately 200 kg CO₂e/m³, compared with a baseline value of 228 kg CO₂e/m³, while meeting the required C30/37 strength class specification.

Holcim produced the ready-mix concrete at its Offenburg plant, incorporating the Paebbl Rebond material into a standard CEM II/B-M design. GOLDBECK managed the placement and construction works using conventional installation methods. According to the project partners, the concrete showed comparable workability, setting behaviour and finishing performance to the reference mix,

without requiring changes to construction schedules or standard placement procedures.

Paebbl supplied the carbon-storing SCM from its Rotterdam facility. The company's mineralisation technology converts captured CO₂ into stable mineral form for use in construction materials.

The companies said the project was completed within six months, from the initial concept phase to the final concrete pour.



Photo Credit: Paebbl

Ana Luisa Vaz, VP Products at Paebbl, commented that collaboration across the construction value chain would be important for the wider adoption of lower-carbon building materials. Bengt Steinbrecher, Head of Holcim MAQER Ventures, said the project demonstrated the integration of carbon-storing materials into conventional building solutions, while Dr. Pamela Zuschlag, Development Engineer at GOLDBECK, highlighted that the concrete met standard project requirements regarding performance and construction timelines.

Paebbl, founded in 2021, develops mineralisation technologies that convert captured CO₂ into construction materials. Holcim and GOLDBECK are continuing to explore lower-carbon concrete solutions and industrial-scale implementation pathways for decarbonised construction materials.

www.paebbl.com

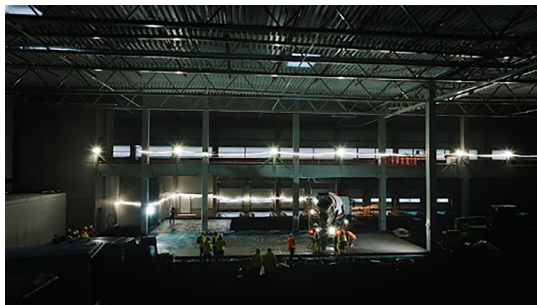


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