



Save the climate: Now

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Building sustainably with Cobiax: Climate protection in the construction industry by CO₂ reduction not tomorrow but NOW!

The federal government has set the ambitious goal of achieving an inventory of buildings in Germany that has a neutral impact on the climate by the year 2050. From the current perspective, this will only be possible if both the rate of refurbishment of the stock of old buildings is increased massively, and there is also a continued focus on energy efficiency and saving CO₂ in new buildings. Standards like the BNB (evaluation system for sustainable building), the certification system used by the DGNB (German Society for Sustainable Building e.V.) or the Efficient Building Plus Standard of the BMI (Federal Ministry of the Interior) start early in the life cycle of new buildings. It's not just energy-efficient operation once the building is complete, but saving CO₂ even during the construction phase and the use of environmentally-friendly building materials are also all finding their way into the evaluation systems. In terms of building materials, the production of cement is a particularly weighty issue, as in Germany alone it is responsible for almost 16

million tonnes of CO₂ emissions out of a total of 798 million tonnes per year. With our products, we have been making a contribution towards reducing the amount of concrete and therefore of cement in new buildings for years now. With our „Save the climate: Now“ initiative, we have launched a campaign to promote construction technology that saves resources and optimises the use of CO₂, because sustainable building is not just a utopia - it is already possible today.

During discussions about the sustainability of buildings, cement in particular is always mentioned as a negative factor. Globally, the total amount of cement produced is about 4 billion tonnes per year, which creates around 2.8 billion tonnes of CO₂ every year, which corresponds to 8 % of the global emissions of greenhouse gases. These figures are of course also reflected in the carbon footprint of a building, which means that there are various approaches in terms of reducing or even completely avoiding the use of



According to calculations carried out by Cobiax, around 50 million m³ of concrete are used in structural engineering in Germany every year. Image: © pixabay_768815_free-photos

cement, and so improve the environmental impact of a new building. Cobiax void former modules have been used in the construction industry for over 20 years, which has led to demonstrable savings of concrete and therefore also of CO₂. Since then we have continued to develop our product, both in terms of the potential to make savings, as well as looking at how easy it is to handle and its compatibility with alternative building materials such as recycled or carbon concrete.

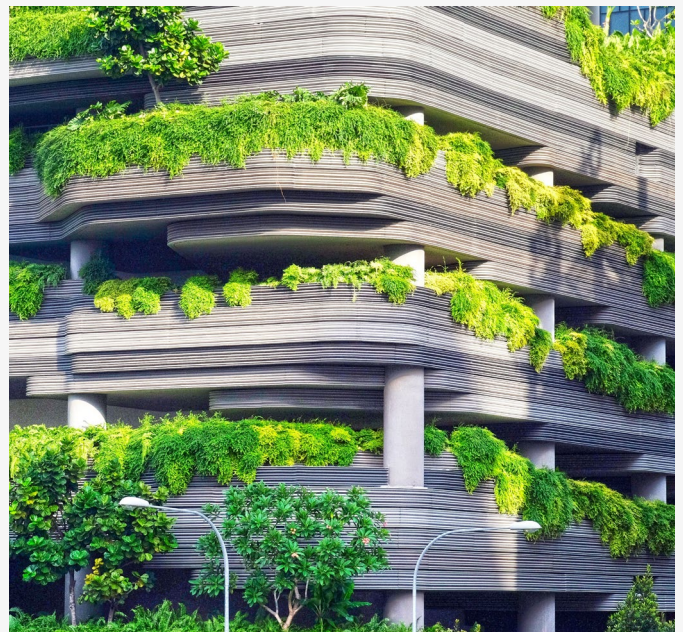
Product development with a focus on sustainability

Our aim was to bring a product onto the market that could significantly reduce the amount of concrete and reinforcing steel that had to be used in the construction of a building. As a result, we are able to save up to 35 % of the concrete and 20 % of the reinforcing steel on each floor by using our technology. On average, around 20 % of environmentally harmful pollutants can be saved by using our void formers, starting from the manufacture of cement through to needing fewer deliveries to the building site. The sustainability of our Cobiax modules has been established as part of a life cycle analysis, starting from the use of recycled plastic through to saving space in transport. In addition the product has been assessed for compliance with ISO 14025 for environmental labelling, with ISO 21930 for EPDs for construction products and with EN 15804 relating to product category rules (PCR) for construction product EPDs and therefore has an environmentally-friendly product declaration. Overall, these properties and effects have a positive impact on compliance with the requirements of the BNB, DGNB and the Efficient Building Plus Standard.

Multiplying effects in combination with other

solutions

What is known as recycled concrete has now been available on the market for about 20 years. The gravel used in concrete is replaced by concrete granulate or mixed rubble granulate from reclaimed concrete. Recycled concrete can be used alongside our Cobiax void formers without any negative effects on the structural engineering of the building. In terms of reducing CO₂ and sustainable building, this even creates a multiplying effect. Under the name of carbon concrete, a product has been coming onto the market for some years now that is based on replacing steel reinforcement with carbon fibres. As carbon does not corrode, the amount of concrete can be reduced accordingly, as no additional material is needed as a protective layer for the reinforcement. In addition to a reduction in weight, experts expect carbon reinforcement to offer up to five times greater strength compared to conventional structures with steel reinforcement. A 220 m² experimental building will be finished in Dresden by the end of 2020, which will contribute to research into the suitability of the new construction material for use in buildings. As soon as we have reliable information about the long-term behaviour of concrete that has been reinforced with carbon fibre in structural engineering, we will also be able to consider using this in combination with our void for-



The Federal Government has set the ambitious goal of achieving an inventory of buildings in Germany that has a neutral impact on the climate by the year 2050. Image: © pixabay_1149542_free-photos



Globally, more than 14 million square metres of Cobiax voided flat slabs have been produced to date. This corresponds to a saving of 2 million tonnes of concrete and a reduction of 180,000 tonnes of CO₂. Images: © Heinze Cobiax Deutschland GmbH

mers. We can see enormous potential savings here, if both technologies are used together.

Cobiax for building sustainably and protecting the climate

There are numerous ideas for how we can reduce CO₂ and build sustainably, but most of these are not yet ready to be put on the market or they have not yet become established. According to our calculations, in structural engineering, around 50 million m³ of concrete are needed in Germany every year, of which up to 20 million m³, i.e. 35 % to 40 %, is used in the construction of floor slabs in reinforced concrete. This corresponds to 48 million tonnes. By using our void formers, up to 35 % of the amount of concrete could be saved here, which corresponds to a volume of 7 million m³ or 17 million tonnes. This results in a potential reduction in CO₂ of almost 1.5 million tonnes in the production process for the cement required for this purpose alone. „With our void formers, we can offer an effective solution for saving CO₂ that meets all the requirements of a product for sustain-

able construction, so that climate protection is not a future goal, but can already be actively achieved today,“ explains our Managing Director Volkmar Wanninger.

„With our ‘Save the climate: Now’ sustainability campaign, we want to reduce CO₂ emissions in reinforced concrete construction by a total of 1 million tonnes over the next 5 years, through the use of our products and helping people change their minds towards sustainable construction.“

Weitere Informationen
green.cobiax.de



The Chop-Chop-Needs-To-Be-Out-There-Window



+++ New property report:
 Jungnhof Plaza in Frankfurt + stop + All facts coming soon right here + end +++

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cobiax
 wider scopes

Further information. The Cobiax-Experts like to help.

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