

A new range of bakeware with a reduced environmental impact has been launched by market leader Guardini, together with partners ArcelorMittal, the world's leading steel and mining company, coated steel manufacturer Cooper Coated Coil (CCC) and coatings manufacturer ILAG.

The result of the four-way partnership and a three-year development process is XBake, a range of sustainable bakeware that is sourced with ArcelorMittal's XCarb® green steel certificates, and made with an innovative PFAS-free, non-stick coating that was developed by ILAG and is applied to steel coils by CCC.

The result is XBake – a range of sustainable bakeware with a brand-new, non-stick coating that is free of per- and polyfluoroalkyl substances (PFAS). XBake was launched at Ambiente, the world's largest and most important international consumer-goods fair, in Frankfurt on 3 February 2023, at a ceremony involving all four companies.

Guardini was prompted to start the project to reduce their products' environmental impact when customers started asking about the level of recycled content in the company's bakeware. Although Guardini actively recycles the unused steel from its processes, the company's management realised it was impossible to quantify the level of recycled content in the new steel it purchased.



From left to right: Florian Pick, Chief Sales Officer for ILAG; Elena Guardini, Managing Director of Guardini; Kevin Tranter, Managing Director of CCC; Yves Koeberlé, CEO of ArcelorMittal Europe – Flat Products; Marco Guardini, Managing Director of Guardini. [© Guardini]

“XCarb® gave us the edge,” explained Marco Guardini, Managing Director of Guardini. “We could openly and reliably tell our customers that the steel was sustainably produced. Our calculations show that by using ArcelorMittal steel with XCarb® green steel certificates, we are reducing the CO₂ impact of our products. That’s very significant and has attracted significant interest from our customers.”

Speaking at the Ambiente fair in Frankfurt, Yves Koeberlé, CEO, ArcelorMittal Europe - Flat Products said: “We are immensely proud to have worked with our customer Cooper Coated Coil, and their customer Guardini, on the development of XBake, which is the first consumer product to place the XCarb® branding onto the product packaging. Our XCarb® green steel certificates represent significant CO₂ reductions in steel production processes and are an important part of our journey to reducing our CO₂ emissions by 35% by 2030 in Europe, and reaching carbon neutrality by 2050”.

For the PFAS-free, non-stick coating, Guardini wanted to offer their customers a solution ahead of the potential PFAS restrictions in the EU and the U.S. Both the European Union and the USA are taking steps to consider a ban of these PFAS chemicals in various consumer applications, including bakeware and cookware. Guardini turned to ILAG – a Swiss-based producer of coatings – to develop a completely new coating.

Bakeware posed some unique challenges notes Florian Pick, Chief Sales Officer for ILAG: “Firstly, we needed to develop a new functional base for the non-stick coating which could withstand the pressing operations used to form the bakeware. Another challenge was getting the coating thickness correct on a high-speed coil coating line. In total it took us three years to develop the new coating.”

Applying and testing the new coating to steel coils was the job of CCC – Guardini’s regular supplier of coated steels - which was a technical challenge. “Guardini needed to be able to press the steel without affecting the coating,” said Kevin Tranter, Managing Director of CCC. “Today CCC is able to consistently produce commercial batches of this material on our high-speed coating lines.”

Today CCC buys the coils from ArcelorMittal with accompanying XCarb® green steel certificates. The coils are then coated with the PFAS-free non-stick coating before they are sold to Guardini. CCC pass the certificates to Guardini with the coil. “This enables us to account for and report a reduction in our Scope 3 emissions in accordance with the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard,” said Marco Guardini.

In addition to the reduced CO₂ emissions and PFAS-free coating, the bakeware packaging is strictly FSC certified, and

the production of the baking moulds 100% made in Italy and comes from an Italian and European supply chain.

Want to know more? Please visit the [XBake page](#) on the Guardini website.