

WITTMANN BATTENFELD at the K 2022

Energy and environmentally friendly production with multi-component technology

Circular economy, digitalization and climate protection using state-of-the-art materials and application technology - to be seen at the WITTMANN BATTENFELD booth in hall 15, booth C06.

WITTMANN BATTENFELD can draw on many years of experience in multi-component technology. At this year's K fair, the company will demonstrate its expertise in this area by the production of a reusable 3-component coffee-to-go cup. This application will also show the advantages and quality improvement achieved by a combination of processes. In addition to multi-component technology, Cellmould structured foam technology will be used to reduce the material input.

In this application, a cup with a lid made of Borneowables™ from Borealis is manufactured on a servo-hydraulic SmartPower 400/750H/210S/525L Combimould with a rotary unit and a mold supplied by HAIDLMAIR, Austria. The Borneowables™ material made of renewable raw materials (i.e., non-petroleum-based feedstock) enables Borealis to meet the quality and sustainability standards required by WITTMANN. The material is food- and dishwasher-safe as well as ISCC PLUS-certified (International Sustainability & Carbon Certification). The feedstock for making Borealis Borneowables™ originates totally from bio-mass, waste and residual substances of the second generation, which are not in competition with the human food chain. Product safety and performance features are on a par with those of modern polyolefins, with a simultaneous significant reduction of the CO₂ footprint. A special feature of the mold from HAIDLMAIR is the use of hybrid elements in the mold plate to optimize cooling. These hybrid elements are manufactured by HAIDLMAIR directly on a laser tech machine in one production step from a combination of conventionally processed tool steel with 3D-printed yellow bronze.

The cup produced in clear optic in the first cavity is over-molded in the second cavity with a shell and provided with an additional insulating effect by foaming the melt with Cellmould technology while reducing the amount of material used. The lid for the cup is injection-molded in an adjacent cavity. It consists of the same material as the main body, but can be individually colored thanks to the special mold technology. The choice of materials was made to suit the cup's function and give it a clear optical appearance. So, the entire cup is not only produced from Borneowables™, but can also be both re-used and 100% recycled in line with the principle of circular economy. The parts are removed and deposited on a conveyor belt by a WX142 robot, then

passed on to a flow wrapping machine and packaged. The packaging material used in this instance also comes from the Borneables™ product family from Borealis.



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WITTMANN at the K: hall 12, booth F23
 hall 15, booth C06
 OA, booth -CE10