


PREFORMS

PREFORM *products*

New mould part coating

MHT AG, based in Hochheim am Main, Germany, in cooperation with the Lüdenscheid Plastics Institute, is conducting basic research into a new type of coating for moulded parts. The first results were recently examined and evaluated. What can injection moulders expect in the near future?



A thin-walled, thermal barrier layer of ceramic has been shown to be a solution with great potential: It reduces heat penetration capacity into the shaping tool components, resulting in temperature balance optimisation. Due to the thinness of the ceramic layer, there is a short-term temperature-induced viscosity change of the PET. Over a longer period, the plastic remains in a flowable state, so that even thin-walled, long preforms can be filled quickly. The overall good cooling rate of the MHT-typical conformal cooling remains unaffected by the thinness of the layer. This is how MHT AG ensures a high cooling rate over the entire injection moulding cycle.

After initial series of tests, the engineers are convinced that the concept can be realised: An optimisation of the attainable flow path length as well as the filling of the moulded part could be demonstrated. In future, injection moulders will enjoy lower material consumption for the production of thin-walled, long preform geometries, and this will be accompanied by reduced energy input. Further research on coating is aimed at determining optimum layer thickness and achievable surface quality.