LUVOTECH® eco meets LUVOBATCH®

What could be more obvious than combining available technologies and materials, ideally from a single source?

The background: In close cooperation with Scherdel Wiesauplast and other industrial partners, a particularly sustainable smartphone holder from the company FESCHD was planned and implemented. FESCHD created a fully recyclable construction and placed great value on reusable and sustainable materials. For the plastic components, the decision was made to use LUVOTECH eco PA6/66 GF50 HS BK, a technical recycled plastic. After the successful market launch, further potential for reducing the use of materials and for saving resources should now be examined.

Further optimization: Extensive foaming tests were carried out with a combination of the blowing agents LUVOBATCH PA BA 1001 and PA BA 1002 optimized for polyamide systems. This showed, among other things, that in comparison to compact injection molding:

- Up to 7% mass reduction is possible without significant surface changes on the component
- The component mass can be reduced by up to 20% *
- The injection pressure/holding pressure could be reduced by 25%
- Cycle times can be reduced

* Here, any structural deviations that may occur on the component surface must be compensated for by texture adjustments in the tool.

Of course, resource conservation is not just limited to the use of materials! In the present case, the injection pressure could be significantly reduced thanks to the flow-improving properties of LUVOBATCH. This results in lower energy consumption for the injection molding machine, also due to the lower mold clamping forces required. The tool service life can be extended due to the lower mechanical forces during the process and the service intervals can be extended. The wear on the injection molding machine itself is also reduced due to the lower load. In addition to these advantages, the improved flow properties often also reduce the cycle time, so that the output can be increased. As part of a process-wide consideration, blowing agents can therefore have a positive effect on the total energy. More detailed investigations are of course necessary in individual cases.

Conclusion: For the smartphone holder, it has been shown that the use of materials can be significantly reduced and that energy savings can be implemented at the process level.

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LUVOCOM eco PA6/66 GF50 HS BK
benchmark part

Part with LUVOCOM eco +
LUVOBATCH PA BA 1001
and PA BA 1002

Significant weight and energy
savings can be achieved by adding
LUVOBATCH blowing agents.

About FESCHD

The young company FESCHD has set itself the goal of developing a multifunctional holder that integrates a whole range of functions. In addition, the declared goal from the outset was to make the product as sustainable as possible, i.e. to leave the smallest possible carbon footprint. The special thing about this project is the social commitment. Part of the proceeds from the sale of the smartphone holders are used to finance bicycles in developing regions. To make this possible, FESCHD works together with the World Bicycle Relief Organization. More information at www.feschd.com/mission.

About SCHERDEL Wiesauplast

For almost 60 years, the name SCHERDELWiesauplast is known for experience, competence and innovation in the field of plastics technology. During this time, the company has developed into an internationally renowned system supplier for leading key industries for complex technical components and systems made of plastic. The service portfolio ranges from development and mold manufacturing through series production to finishing and complete device construction - and all of this at the highest level of quality. www.wiesauplast.de

About LEHVOSS

The LEHVOSS Group under the management of Lehmann&Voss&Co. is a group of companies in the chemical industry that develops, produces and markets chemical and mineral specialties for various industrial customers.

The Customized Polymer Materials (CPM) division has been a partner to industry since 1984 in terms of material development, production and support, from design to part production. LEHVOSS offers customized solutions for challenging applications that are unique and stand out in the market.
LUVOCOM® high-performance compounds, LUVOTECH® and LUVOTECH® eco-technical compounds expand the possible uses of plastics and ensure in many industries that products made from them reliably fulfill their function even under high requirements.

Quality, experience, and expertise in chemistry – a winning mixture that characterizes LUVOBATCH and LUVOADD. They deliver high-quality masterbatches and additives for practically every application in the plastics industry, from vehicle component through to packaging film. The LUVOBATCH endothermic and exothermic blowing agents, along with a wide range of functional masterbatches, are part of them.

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