



"To Go" salt/pepper pot with integrated bottle opener from Vandborg, Denmark, manufactured from soft-touch polypropylene

A Comfortable and Secure Grip

Soft-touch Polypropylene. Along with the optical design of high-quality appliances, haptics is a factor that should not be neglected. It is often a product's smooth touch and secure grip that decide whether it will be chosen. These requirements are satisfied by a newly developed soft-touch polypropylene.

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Where ergonomic aspects are important, consumers often use their sense of touch to decide on the secure grip and manageability of an appliance. They have a very emotional attitude to the surface texture of convenience goods. A surface that is too sleek is perceived as cold and repellent, one that is too rough, as unpleasant and harsh. Softell, a new polypropylene (PP) from LyondellBasell Industries, allows high-quality surfaces to be produced without additional coating or painting.

This product already has numerous applications, particularly in the automotive industry for vehicle interior trim. In this case, there is a focus on the driver's wellbeing. Besides perfect surface, design and color matching of the individual plastic surfaces, an extremely pleasant haptics is also crucial for an elegant appearance without scratches. The low emission of the material also con-

tributes to a welcoming atmosphere. But this soft-touch PP is also finding increasing applications in convenience goods. "Softell is a product characterized by high freedom of design. With its high impact strength and pleasant surface, without painting, it is also ideally suited for trim on high-quality consumer products," says Marc Swatosch, head of product management for advanced polyolefins at K.D. Feddersen in Hamburg, Germany. "We have already been able to realize numerous handle solutions for knives, tools or thermos jugs," continues Marc Swatosch.

A Treat for the Senses

Scandinavian design is renowned around the world for its simple elegance and functionality, but also its quality of workmanship. Vandborg Plastic- og Værktøjsfabrik ApS near Aarhus, Denmark, was looking for a material with a pleasant-touch surface for the redesign of its popular 20-year-old line of corkscrews (Fig. 1), bottle openers, and salt and pepper pots (Title photo). The tested TPE material was unsuitable for this application, since it was just too soft.

It is very expensive to produce the part from ABS and then coat it with a soft-touch surface.

"We were looking for a material with the strength to withstand the severe stresses that these applications are subject to, but which is nevertheless handy. Because of the wide range of colors of our product program, we also placed a high priority on the material being homogeneously pigmentable and cost-effective to process," said Søren Thielke Pedersen, CEO of Per Vandborg ApS.

In November 2008, Mads Meilvang, sales manager at the Danish sales office of K.D. Feddersen Norden AB, obtained the briefing from the customer and recom-

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"Periferi" line of corkscrews and bottle openers from Vandborg with soft-touch polypropylene handle

mended Softell. After extensive processing tests at Vandborg, the material's processing properties were found persuasive and the material was recently cleared for production.

"We manufacture these household goods for our customers from different material combinations," says Søren Thielke Pedersen. "But even in this short time, we have found that our customers

use not only their eyes when choosing a product, but all their senses." The Softell products are already in high demand," is the conclusion to be drawn from Vandborg's statistics.

Optimized Processing

According to processors, this soft-touch PP can be injection molded in only a one

step process to produce finished parts that meet challenging requirements, with up to 40 % lower costs and simplified process workflows. Other advantages include its homogeneous pigmentability, problem-free processing by the two-component processing and 100 % recyclability. The product is unreinforced with a hardness of up to 75 Shore A, and 20 % and 25 % glass fiber reinforcement.

The Softell distributor considers this material to have a great deal of potential for many applications outside the automotive industry. In sanitary applications, for bath faucet handles, shower handles, medical equipment or walking aids, but also for various sports equipment such as Nordic walking poles, ski poles, (ice) hockey sticks or climbing grips. The material is also ideal for use in high-quality household appliances, such as irons or hand mixers, beauty and wellness products, such as hairdryers, shavers or epilators. ■

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