

SABIC Innovative Plastics helps OPEL set the trend for ingenuity with the new 2007 Corsa

Creating “feel good” interior and panorama sunroof using SABIC Innovative Plastics’ resins with versatile molded-in color

When OPEL designed the new Corsa, the company wanted to create a trend-setting small car with fresh design and innovative technology for a lot of driving fun and a high level of quality. Specifically, OPEL sought to create a stylish yet warm interior to make it inviting. The new high-quality interior offers plenty of space, comfort and opportunities for individualization. In addition, based on the popularity of the panorama sunroof that is an option for the 2005 Zafira compact van, OPEL wanted to offer a similar roof choice for the Corsa.

At the same time, because the Corsa is positioned as a unique and fun small car, OPEL needed to find cost-effective material solutions for these diverse trend-setting applications. To enable design differentiation combined with system cost reductions in a range of components for the 2007 models, OPEL worked with SABIC Innovative Plastics.



Challenge

Enhancing design while controlling costs

OPEL was founded in 1862 in Rüsselheim, Germany and joined the General Motors family of cars and trucks in 1929. When OPEL began planning its new Corsa model for 2007, the automaker had a goal of delivering a small car with style, roominess and high quality. The fourth generation of OPEL's popular model has sold more than 9.4 million units alone in Europe since 1982. Studies had shown that European consumers want compelling design and an array of innovative technology features – even in less-expensive vehicles. Therefore, OPEL set out to show Europe that smaller size doesn't have to mean reduced style.

With the “feel good” factor in mind, the automaker chose to focus on the inside of the Corsa. OPEL focused on quite a few things

- Designing a more spacious passenger and embracing ambience
- Having a wide range of interior motifs in corresponding colors, materials and décor including piano lacquer-finished surfaces
- New decorative rings for air nozzles and ashtray, a new gearshift frame, as well as cool new translucent knobs and switches that would glow in night optical conditions.

At the same time, OPEL wanted to repeat the success of its panorama sunroof, an option for the Zafira compact van, by offering a similar sunroof as an upgrade for the Corsa.

To ensure all of these new elements, while stylish and fresh, would help maintain the Corsa's positioning as an affordable vehicle line, OPEL needed plastics that would meet the set criteria while also keeping system costs under control. Therefore, the automaker sought materials that could provide dramatic color effects without costly secondary operations.

Solution

Molded-in color for custom styling without secondary operations

Working closely with SABIC Innovative Plastics, OPEL selected Lexan® FXD123 resin from the company's Visualfx® resin line of special-effects materials for switches and knobs on the center stack area and the door interiors. These components are backlit with LED bulbs for nightlight conditions. It was especially challenging to find the right color effect; SABIC Innovative Plastics not only created the precise daylight color OPEL sought, but also fine-tuned the amount of translucence to ensure the same tone at night, when the parts are lit from behind. Lexan FXD123 resin provided the desired

Lexan* resin and Visualfx* special effects resins / OPEL

translucence and a consistent warm golden color under different lighting conditions. Further, because Visualfx special effects resins are formulated with the color and effect inherent in the pellet to create colorful and exceptionally rich-looking parts out of the mold, OPEL did not have to incur the cost and extra cycle time of a secondary coloring operation.

For the air nozzle rings, door handle pull covers, ashtray ring and gear shift frame, OPEL decided to give consumers a color choice. The company selected high-gloss Lexan 123 resin and Lexan FXD123 resin, and specified two custom colors that SABIC Innovative Plastics matched at its Customer Innovation Center (CIC) in Bergen op Zoom (BoZ) the Netherlands. One color, "Piano Black," is a dark hue with a very high depth of image for richness. The other, "Asian Blue," is a light color with a special effect of metallic flakes. As with the translucent parts, these materials are formulated with the color and effects inherent in the resin, avoiding the need for an additional color step.

Finally, the optional panorama roof was created featuring Lexan SLX film, a product from the portfolio of environmentally progressive technologies from SABIC Innovative Plastics whose inherent color and gloss eliminate the need for secondary painting and coating operations that can impact the environment. With a gloss rating of 110 – far exceeding that of painted steel – Lexan SLX film provides a highly polished look that echoes the glass insert.

"This diverse group of auto components showcases the tremendous color resources of SABIC

Innovative Plastics, which allow us to meet multiple requirements from different Tier 1 suppliers for specialized colors and effects – and do it all quickly and precisely," said Stefan Keller, SABIC Innovative Plastics' Platform Leader for GM Europe. "Visualfx and color-matched resins offer a huge array of choices for design innovation and competitive differentiation."

Benefits

Broader consumer appeal for a competitive advantage

Through the use of SABIC Innovative Plastics' resin and film products, OPEL was able to achieve fresh and exciting styling upgrades – both inside and out – for the three- and five-door Corsa models while keeping costs and cycle times under control.

In addition, avoiding the need for secondary paint and coating operations helps to reduce the emission of volatiles into the environment – an important consideration for OPEL.

Details at

opel.com

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