

LIGHTER CAN BE LARGER: 2017 BUICK GL8 REAR QUARTER WINDOW

SOLUTION STORY: LEXAN™ GLAZING

HIGHLIGHTS

- Industry's largest-ever rear quarter window in polycarbonate on a production vehicle
- 40% (3kg) weight savings vs. glass
- Window sports design features not possible in glass
- Produced using a two-shot injection compression molding process with LEXAN (clear) and CYCOLOY™ (blackout) resins from SABIC
- Resin combination meets tight dimensional tolerance requirements
- Silicone hard coat protects part against abrasion and weathering
- SABIC provided technical assistance and transferred expertise to tier supplier Shentong on part design, process simulation, equipment selection, testing, prototyping and coating
- Shentong has capability to mass-produce PC glazing parts from its facility in Yuyao City, China





FULL STORY

SAIC General Motors (SGM) sought a lightweight solution for the large rear quarter window of its new-generation Buick GL8 and GL8 Avenir luxury multi-purpose vehicles (MPVs). The GL8 model has been a mainstay of the Chinese market since 2000 with more than 700,000 sold. A conventional glass solution for this large window would come with too much weight and limit design possibilities.

SGM expressed interest in a polycarbonate (PC) glazing solution to address each of these issues. They chose Ningbo Shentong Auto Decorations (Shentong), as its tier one supplier for this key window part.

The window development took place at the same time as Shentong was building a new production line for PC glazing parts at its facility in Yuyao City, China. SABIC provided technical assistance to Shentong and transferred expertise on part design, process simulation, equipment selection, testing, prototyping and coating.

WINNING COMBINATION OF MATERIALS

Shentong used a two-shot injection compression molding process with SABIC's transparent LEXAN™ PC resin for the first shot and CYCOLOY™ resin, a PC/acrylonitrile-butadiene-styrene (ABS) material, for the second shot (used for the blackout area of the window).

This resin combination helps meet the specific needs of the part's design and the tight dimensional tolerance requirements of the large rear quarter window – which measures a record-breaking 1200mm by 450mm.

In the end, SGM met its critical requirements. The large window is 40 percent (3kg) lighter than a comparable glass window and features design elements that cannot be achieved with glass, contributing to the more innovative exterior of the new-generation GL8. A silicone hard coat protects the part against abrasion and weathering. The window is also more impact resistant compared to conventional glass.

WINDOW OF OPPORTUNITY NOW OPEN

With the emergence of the first mass production PC glazing line in China, OEMs in the now have a go-to source in China for the manufacturing of quality, lightweight window parts.

CONTACT US

Reach out and talk to us about LEXAN glazing solutions. Email us at automotivesolutions@sabic.com.