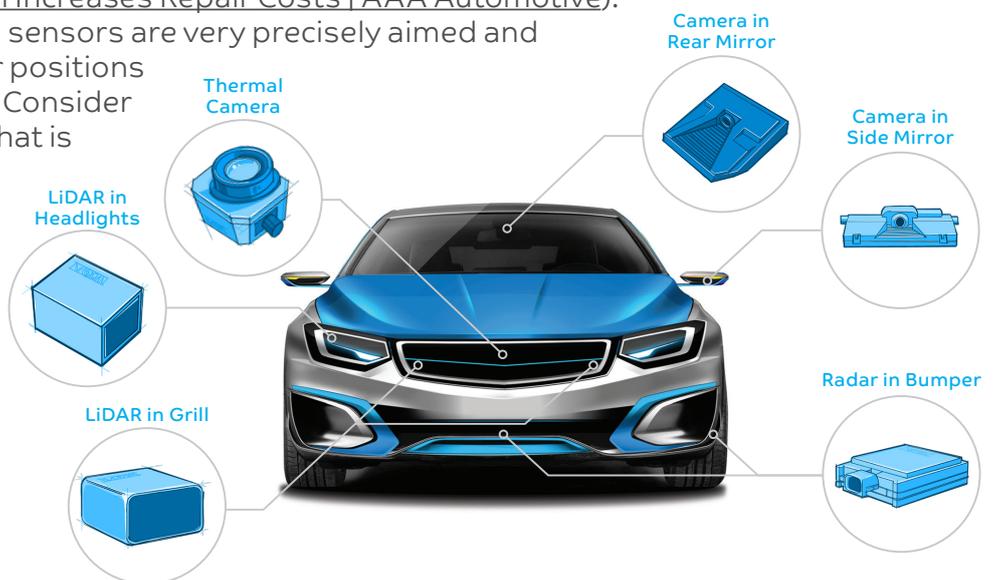


REDUCING ADAS ALIGNMENT ISSUES WITH SABIC'S LOW WARPAGE MATERIALS

Various factors can lead to alignment issues in radar rear housings or brackets, such as accidents and even part warpage. SABIC's **LNP™ THERMOCOMP™ compounds** can decrease warpage versus a standard glass filled PBT by up to 58% throughout the molding process.

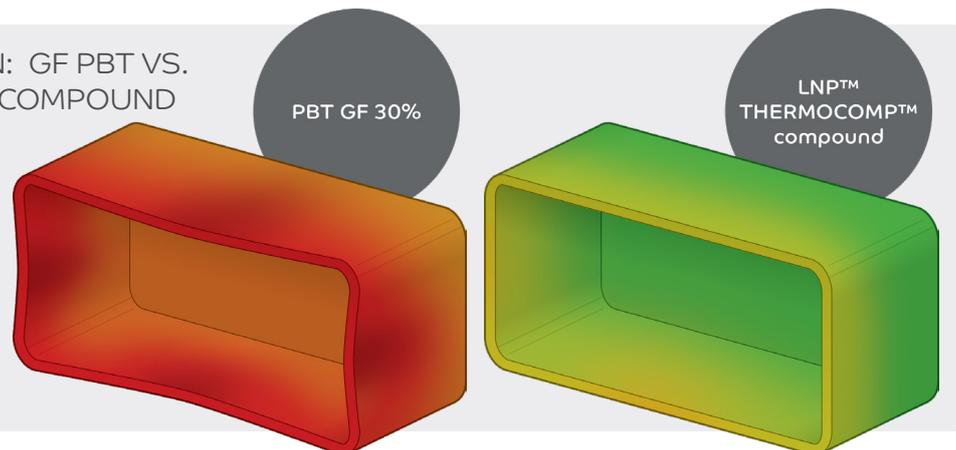
Recalibrating sensor systems can result in increased repair costs, according to a AAA article ([ADAS Sensor Calibration Increases Repair Costs | AAA Automotive](#)).

AAA states: "Most ADAS sensors are very precisely aimed and require calibration if their positions are disturbed in any way. Consider that a sensor on the car that is out of alignment by a fraction of an inch or even one degree will be aimed at an area significantly off axis 50 or more feet down the road". Materials offering low warpage could be critical in end design and hardware functionality.



WARPAGE COMPARISON: GF PBT VS. LNP™ THERMOCOMP™ COMPOUND

Low warpage benefit: Molding with **SABIC'S LNP™ THERMOCOMP™ compounds** can reduce part warpage by up to **58%** vs standard glass filled PBT



Along with the excellent low warp benefits, LNP THERMOCOMP compounds surpass incumbent PBT compounds in Df/Dk performance and can help reduce attenuation of electromagnetic waves passing through the radar covers to help improve image resolution and range. They can also help enhance transmission and minimize side cones of the signal beam for improved image quality. In addition, the new LNP THERMOCOMP compounds provide higher ductility for improved impact resistance, and equivalent moisture and chemical resistance vs. incumbent PBT materials.

SABIC RADAR SOLUTIONS

BACK COVER

EMI Shielding / Mechanical Strength

- LNPT™ FARADDEX™ compound (EMI shielding)
- LNPT™ THERMOCOMP™ compound (chemical resistance, rigidity, low warpage)
- NORYL™ resin (chemical resistance, low moisture and warpage)

MIDDLE PLATES

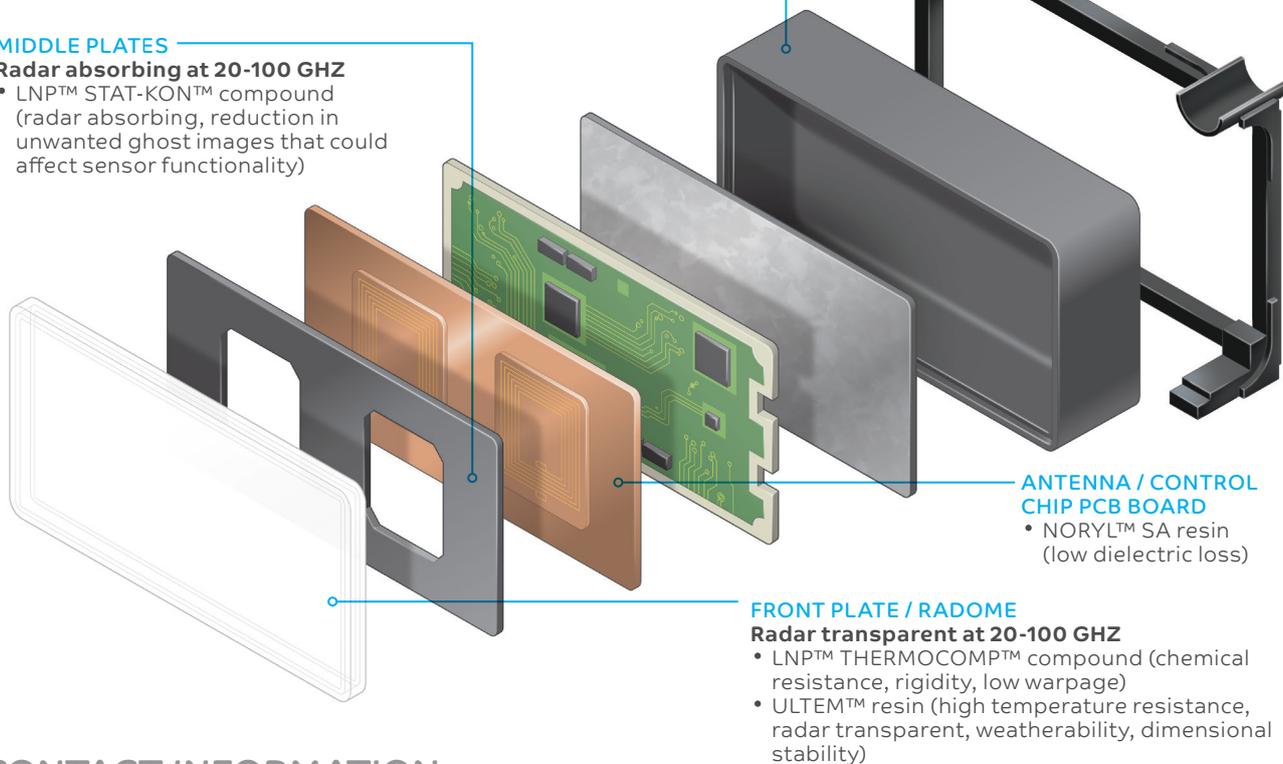
Radar absorbing at 20-100 GHZ

- LNPT™ STAT-KON™ compound (radar absorbing, reduction in unwanted ghost images that could affect sensor functionality)

RADAR BRACKET

Low Warpage / Chemical Resistance

- LNPT™ THERMOCOMP™ compound
- NORYL™ resin



ANTENNA / CONTROL CHIP PCB BOARD

- NORYL™ SA resin (low dielectric loss)

FRONT PLATE / RADOME

Radar transparent at 20-100 GHZ

- LNPT™ THERMOCOMP™ compound (chemical resistance, rigidity, low warpage)
- ULTEM™ resin (high temperature resistance, radar transparent, weatherability, dimensional stability)

CONTACT INFORMATION

AMERICAS

SABIC Americas
E productinquiries@sabic.com
T +1-800-845-0600

ASIA PACIFIC

SABIC Shanghai
E asiaproductinquiries@sabic.com
T +86-21-2037-8118

EUROPE

SABIC Bergen op Zoom
E webinquiries@sabic.com
T +31 164 292 911

SCAN TO CONNECT WITH US



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