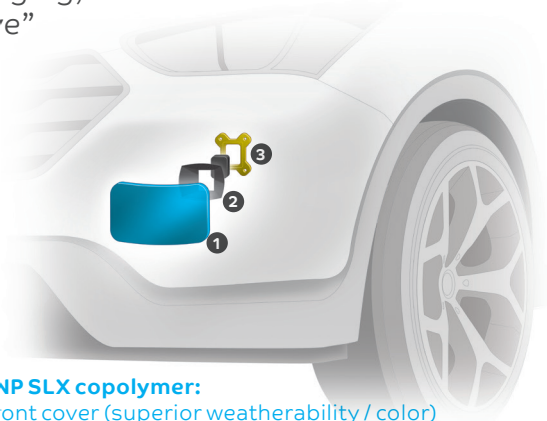


REDUCING GHOST IMAGES WITH SABIC'S LNP™ STAT-KON™ COMPOUNDS

As the automotive industry progresses towards higher levels of autonomy, sensor counts will continue to expand in terms of absolute numbers and varieties, including radar. This will lead to further developments centered around the sensor suite's ability to provide the drivers, passengers and pedestrians with a safer experience by allowing features such as automatic emergency braking (AEB), lane assist, and blind spot monitoring to function without interference from other sensors on the road.

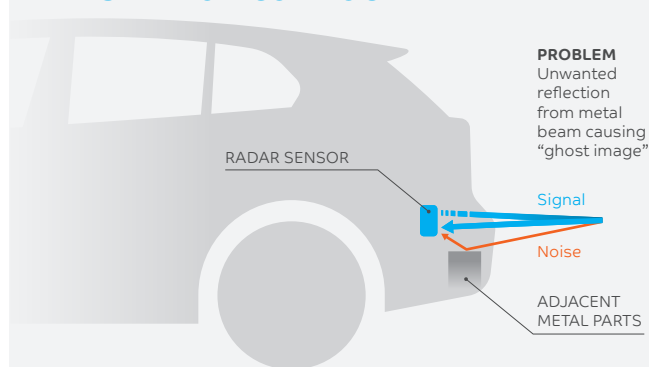
A significant challenge for ADAS radars is ghost imaging, which can cause sensors to act on “false positive” information due to erroneous radar frequencies entering the sensor lens. Addressing this issue will become increasingly important as the ADAS component numbers in cars are expected to increase dramatically over the next 10 years with as many as 7 to 8 radars per car. SABIC's LNP STAT-KON compound has excellent radar absorbing properties that can help to reduce the number of ghost images when deployed within the ADAS unit or as an absorbing cone or sheet, as shown below.

Along with the robust radar absorption properties of LNP STAT-KON compounds, the material can be compounded with a variety of base resins and fillers for additional benefits such as electrical conductivity, dimensional stability, and flame retardancy. Our formulations can also be tailored to meet specific application requirements and our global R&D teams are ready to assist customers with any design or material challenges that they may be facing.



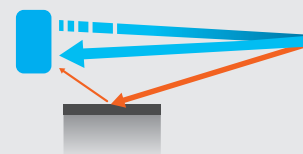
- 1 **LNP SLX copolymer:**
Front cover (superior weatherability / color)
- 2 **LNP STAT-KON compound**
(radar absorbing cone)
- 3 **LNP STAT-KON compound / THERMOCOMP™ compound:** bracket (absorption / low warpage)

RADAR ABSORPTION WITH LNP STAT-KON COMPOUND



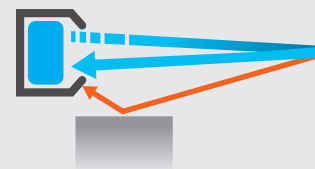
POTENTIAL SOLUTION Absorber Sheet

GOAL:
Reduce reflection



POTENTIAL SOLUTION Absorber Cone

GOAL:
Block and reduce reflection



POTENTIAL SOLUTIONS FOR AUTOMOTIVE RADAR

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

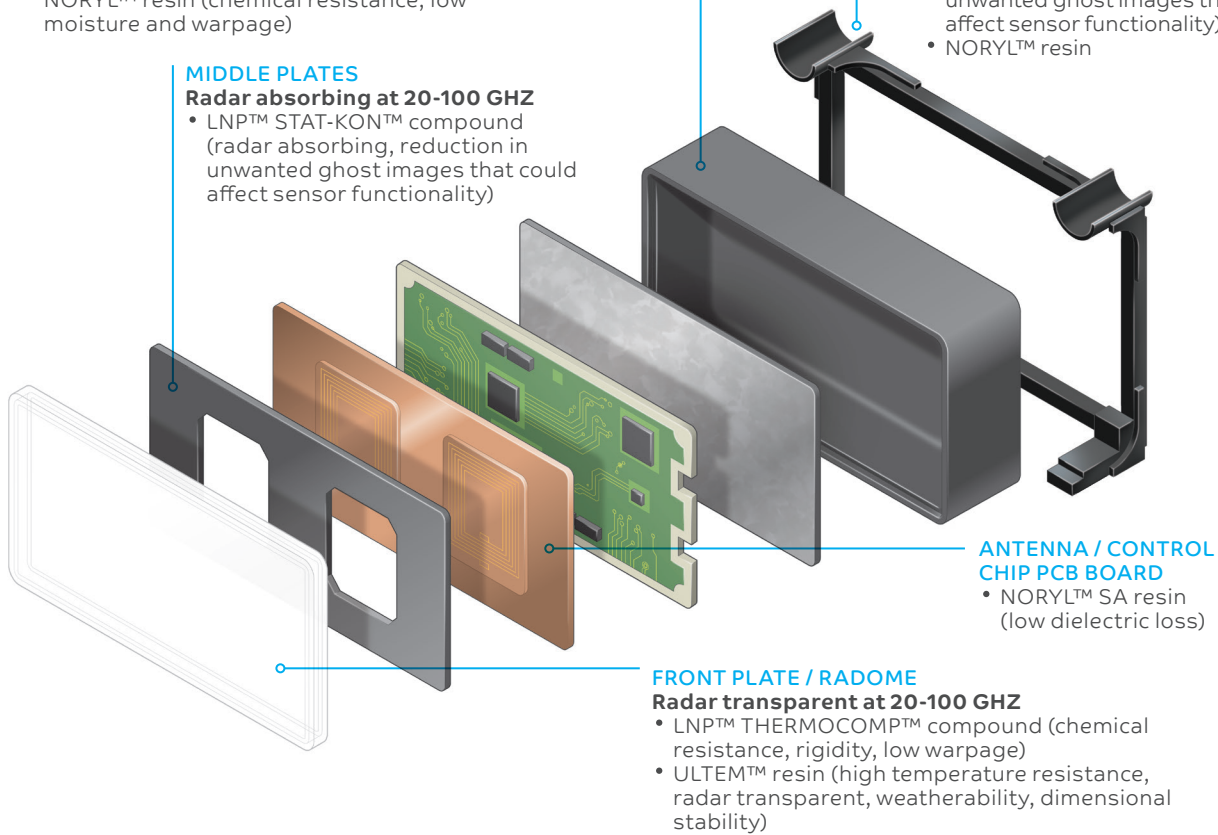
Radar absorbing at 20-100 GHZ

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

SABIC SPECIALTIES BUSINESS

AMERICAS

E: Specialties.Americas@sabic-hpp.com
T: +1 800 845 0600

ASIA PACIFIC

E: Specialties.Asia@sabic-hpp.com
T: +86 400 833 1033

EUROPE

E: Specialties.EMEA@sabic-hpp.com
T: +36 1 288 3040



SABIC MATERIAL FINDER
Find the right Specialties material
for your application ▶



MOBILITY

DISCLAIMER: ANY SALE BY SABIC, ITS SUBSIDIARIES AND AFFILIATES (EACH A "SELLER"), IS MADE EXCLUSIVELY UNDER SELLER'S STANDARD CONDITIONS OF SALE (AVAILABLE UPON REQUEST) UNLESS AGREED OTHERWISE IN WRITING AND SIGNED ON BEHALF OF THE SELLER. WHILE THE INFORMATION CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right. SABIC and brands marked with [™] are trademarks of SABIC or its subsidiaries or affiliates, unless otherwise noted.

© 2023 Saudi Basic Industries Corporation (SABIC). All Rights Reserved. Any brands, products or services of other companies referenced in this document are the trademarks, service marks and/or trade names of their respective holders.