

## TEROSON MS650 and BERGQUIST TGF 3500LVO

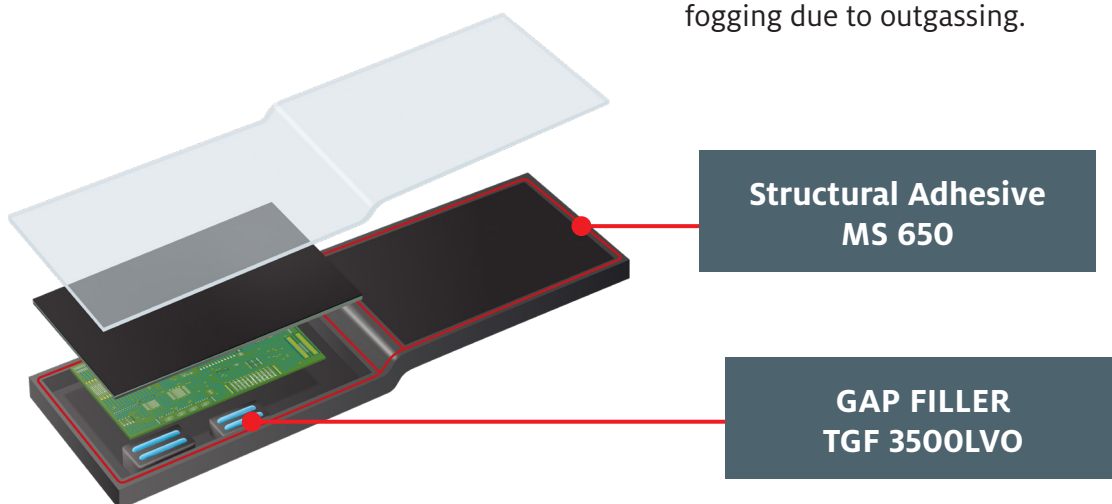
### Structural bonding and Thermal Management for multi-displays with a large curved design

#### 1 CUSTOMER CHALLENGES

- » A Tier 1 automotive supplier designed a new look multi-display cluster panel. The component is thin and curved, but large and rich in design. A one-piece large curved glass panel needs to cover two displays and to be tightly bonded into a similarly curved housing structure.
- » The displays consume a considerable amount of power while controlling state-of-art graphics and providing important information from the ADAS system, which in turn generates a lot of heat. However, supplier wants to lower the electrical hazards from the heat.
- » Despite the unique design, the supplier need to produce the component in serial production to meet the requirements and demands of their customers.

#### 2 RECOMMENDED TECHNOLOGY

- » TEROSON MS 650 was recommended for bonding the dissimilar materials because the elastic, high viscosity, non-silicone and moisture curing adhesive was flexible enough to fill larger and multi-level gaps between the parts of the component, follow different CTE materials and then keep reliable adhesion strength for the large glass cover and the metal housing frame as well as the outer plastic frames of two displays.
- » BERGQUIST GAP FILLER® TGF 3500LVO with 3.5 W/mK was selected for effective heat transmission of the control unit installed in the space of the thinner design display. This gap filler has low volatility and is suitable for circuit boards placed in confined spaces where temperatures can rise easily due to heat, avoiding electrical interference and fogging due to outgassing.



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#### 3 MASS PRODUCTION PROCESS SET-UP

- » The professional advice of our experts, including application engineering and laboratory support for prototyping, helped the customer to find the best possible solution for structural adhesives and thermal management materials in mass production and it demonstrated to the customer that Henkel is a reliable partner for Automotive display technology.
- » This solution enabled the commercialization of high-level graphic control clusters of state-of-the-art design, enabling an annual production capacity of > 150,000 units a year.
- » With its global presence, Henkel can support volume production at any of its customers' production sites.

#### Key Success Factors

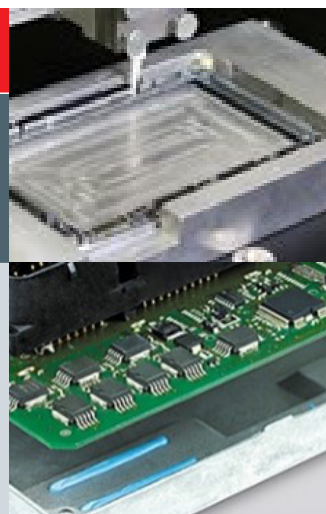
Engineering Support and advice to realize mass production of unique design components

##### Elastic Structural adhesive:

Reliable and strong adhesion for dissimilar materials with large and curved bond lines.

##### Liquid Gap Filler:

Extremely low stress for sensitive circuit boards, effective heat transmission and low volatility.



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