

TEROSON MS650 and BERGQUIST TGF 3500LVO

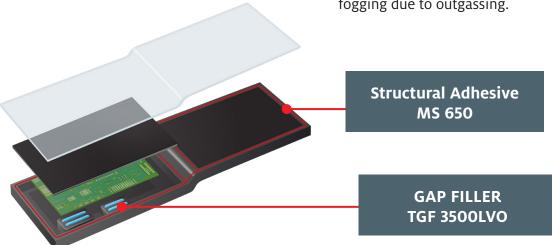
Structural bonding and Thermal Management for multi-displays with a large curved design

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 controling stateof 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 disimilar 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 > 150,000unitsa 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.



TO FIND OUT MORE ON, VISIT: www.henkel-adhesives.com/automotive-electronics Or click / scan the QR code for a direct link to our Automotive Display web page.



The information provided herein, especially recommendations for the usage and the application of our products, is based upon our knowledge and experience. Due to different materials used as well as to varying working conditions beyond our control we strictly recommend carrying out intensive trials to test the suitability of our products regarding the required processes and applications. We do not accept any liability regarding the above information or with regard to any verbal recommendation, except for cases where we are liable of gross negligence or false intention. The information is protected by copyright. In particular, any reproductions, adaptations, translations, storage and processing in other media, including storage or processing by electronic means, enjoy copyright protection. Any exploitation in whole or in part thereof shall require the prior written consent of Henkel AG & Co. KGaA. Except as otherwise noted, all marks used in this document are trademarks and/or registered trademarks of Henkel and/or its affiliates in the US, Germany, and elsewhere. © Henkel AG & Co. KGaA, DSGN0008640 09/2020

