

Preview adhesion Issue 02.2022

COVER STORY

Precision and ultra-fine cleaning

Particulate and filmic component cleanliness must be met in series production in a process-safe and efficient manner, especially when manufacturing, joining and coating technologies change. In addition, the requirements are growing due to ever stricter regulatory specifications. In addition to the cleaning and drying processes designed to meet requirements and suitable plant technology, the software implementation and the cleaning environment must also be adapted accordingly.

STUDIES AND ANALYSES

Circular Economy and Adhesive Bonding Technology, Part 3

How can adhesive bonding technology contribute to the circular economy? The third and final part of the series of articles based on a study by the Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM is devoted to the various strategies in the field of adhesive bonding technology with regard to resource efficiency and recycling.

APPLICATIONS

Silicone-based thermal conduction materials for electric vehicles

In electric vehicles, the drive battery, electric motor and power electronics require efficient thermal management. Silicone-based thermal interface materials are particularly suitable for this purpose: They are extremely durable and can be individually adapted in terms of their Shore hardness and flow properties.

Adhesion safety evaluation by means of holistic fracture analysis

In order to create high-quality bonded joints, a safe and stable bonding process is required. DIN 2304 regulates quality assurance measures and the professional implementation of bonding processes. However, its lack of linkage to fracture analysis is its greatest shortcoming, especially in the area of safety and economic verification. A novel, holistic approach to adhesive evaluation promises a solution.

ADHESIVES AND SEALANTS

UV acrylates with moisture post-curing

Electronics production often requires adhesive systems that can be cured in seconds without heat input. For this purpose, acrylate systems with moisture post-curing are used, as they can be cured process-safely in shadow areas without the electronic components having to be subjected to thermal stress in an oven process. How are these systems dispensed or cured - and what are their physical properties?

DATES

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