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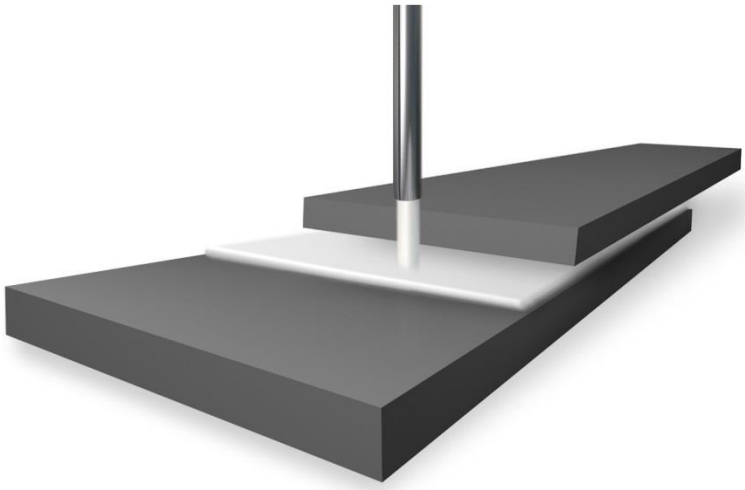
# 2C polyurethane adhesives for the automatic gluing of components

**The Sonderhoff Group, which belongs to Henkel AG & Co. KGaA since the beginning of July 2017, will highlight its new adhesive systems of the Fermaglue product family at the eleventh Bondexpo in hall 6, stand 6419, from 9 – 12 October 2017 in Stuttgart, Germany.**



(Source: Sonderhoff)

Fermaglue adhesive systems cure under room temperature to become solid and permanent adhesions

According to Sonderhoff, the company formulates the two-component polyurethane adhesives for a wide variety of requirements and industries. The scope of parts ranges from switch cabinet construction, electronics, lighting, automotive, air condition, filters, photovoltaic to household appliances. The gluing process with Fermaglue will be demonstrated live on the Sonderhoff stand. The Smart dispensing cell, developed by Sonderhoff, automatically applies the two-component polyurethane adhesive to prepared substrate samples.

**Wide range of applications**

Polyurethane as the basis for the two-component adhesive systems Fermaglue offers a large modular system for a recipe assembly adapted to different applications, says the company. For instance, the sealant, adhesive and potting specialist has developed the Fermaglue adhesives in various degrees of hardness that can be modified according to the customer's requirements. This gives the user exactly the adhesive hardness that matches the expansion behaviour of the substrates to be bonded to one another. In the event of possible material stresses due to different expansion behaviour of the substrates because of temperature, Fermaglue has a balancing effect.

The adhesive systems also offer a wide range of viscosities ranging from liquid to stable. This allows the application of glue beads of different sizes. With Fermaglue, a broad spectrum of tensile strength and elasticity can be covered that meets the high demands for the different gluing applications. Solid and permanent adhesive bonds are formed under curing at room temperature. The curing speed is variable over the formulation in wide ranges. The hardening can be accelerated by gentle heating in the tempering furnace or by infrared irradiation.

The adhesive systems have very good adhesion to thermoplastics or thermoset (also fiber-reinforced) plastics, SMC plastic, metal or glass, says Sonderhoff. There are a large number of components in the vehicle construction sector for example: KTL coated metal frames for sliding glass roofs, PMMA or PC with scratch-resistant coatings, gluing of headlight housings, fibreglass sandwich constructions, roof panels, trim and spoilers as well as ABS or PP-based tailgates.

**System-2 – the application process with material and machine from a single source**

The formed-in-place dosing technology for the gluing of components from different substrates is used in many industrial sectors. Applied with the same mixing and dosing systems from Sonderhoff, it is also the production standard for foam sealing and potting.

Adherence to a precisely defined mixing ratio of the two Fermaglue material components is a prerequisite for an optimal adhesive result. This is ensured by the mixing and dosing systems from Sonderhoff, which can be integrated very well into fully automatic serial production.
The exact positioning of the mixing head of +/-- 0.1 mm above the component ensures a repeatable adhesive application. Precise plant engineering is a prerequisite for this – and a systematic process monitoring with a traceable documentation of each processing step is provided by the dosing system at any time, says Sonderhoff.

The Fermaglue recipes are designed in such a way that the pot and reaction times can be adjusted flexibly. Thus the adhesives are adapted to different process requirements and production concepts in their reaction behaviour.

The System-2 concept from Sonderhoff offers material and machine, which are precisely coordinated with one another, from a single source. This makes it possible to produce optimal adhesions in repeatable quality, says the manufacturer.

*www.sonderhoff.com*