



## Press Release

April 28, 2017

Henkel Smart Health Patch Technology, Structural 3D Materials Continue to Impress

### **Printed Electronics Innovations Provide Streamlined Functionality for Medical, Automotive, Consumer Products**

Düsseldorf, Germany – Building on momentum from the recent European debut of several new technologies, Henkel Adhesive Technologies' electronics group will share details of these breakthrough materials with IDTechEx delegates during the May 10 – 11 exhibition in Berlin, Germany. With the development of holistic material systems that deliver new levels of form and function, Henkel has pushed medical diagnostics and product design latitude to the next generation. During IDTechEx, Henkel Booth #H20 will feature the company's solutions for smart health products, as well as new formulations that enable in-mold electronics applications.

#### **Real-time Data for Improved Health and Diagnostics**

Measuring human vital signs for optimal health moves from the physician's office to the patient's fingertips with Henkel's material systems designed to support smart health products. The first commercial material set was debuted last month, generating significant interest among event attendees who were able to view live demonstrations of the heart rate smart patch. The technology combines a functional Loctite conductive electrode ink within a disposable patch; a skin-compatible, pressure-sensitive adhesive; a printed circuit board (PCB), which is connected to the electrode patch using Henkel's electrically conductive inks; and Henkel conformal coatings on the PCB which is overmolded with a [Technomelt](#) hot melt material for environmental protection.



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Together, these materials allow collection of real-time, wirelessly-accessible data for a variety of human vital signs, though the first commercial product measures and reports heart rate for recreational purposes. Medical certifications are in-process.

IDTechEx visitors are invited to learn more by visiting the Henkel booth, and are also encouraged to attend a presentation on the technology. Henkel's Inge van der Meulen, Ph.D., Product Development Manager for Inks and Coatings, will discuss the smart health patch material system in her "Material Set for On-body Smart Patches" technical presentation on Thursday, May 11, 15:40, Track 3 – Room 1.

### **Structural 3D Materials Integrate Function, Eliminate Knobs and Buttons**

As the name implies, in-molded electronics embed functional performance within a product's structural design. Protruding switches, buttons and wires are no longer required, as the electronic capability is integrated directly into plastics and molding materials. Imagine automotive dashboards with no knobs for temperature or infotainment control; or consumer electronics such as household appliances that eliminate buttons to manage power or system settings. This is the role of in-molded electronics and made possible by Henkel's thermoformable conductive inks, conductive adhesives and Technomelt low pressure molding materials.

Henkel's conductive and dielectric thermoformable inks are stretchable, allowing deposition onto a flat, 2D flexible substrate which is then thermally processed to create a 3D structure. In addition, and to offer the complete material set needed, compatible Loctite conductive adhesives or solders can be used to attach components to the circuit and Technomelt to protect sensitive elements. IDTechEx show delegates can get a first-hand look at samples of in-molded electronics products, as well as functional, foil-type PTC heating technology, at Henkel booth #H20.



To schedule a meeting with a Henkel technical specialist during IDTechEx, send an e-mail to [electronics@henkel.com](mailto:electronics@henkel.com). For more information about Henkel's next-generation printed electronics solutions, visit [www.henkel-adhesives.com/electronics](http://www.henkel-adhesives.com/electronics).

#### **About Henkel**

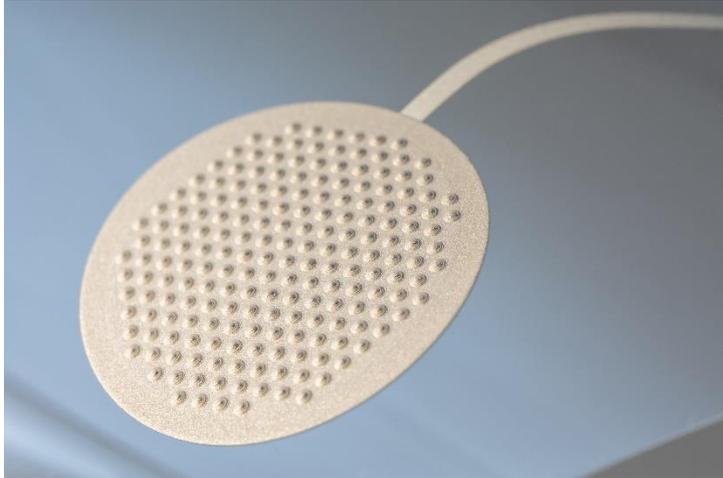
Henkel operates globally with a well-balanced and diversified portfolio. The company holds leading positions with its three business units in both industrial and consumer businesses thanks to strong brands, innovations and technologies. Henkel Adhesive Technologies is the global leader in the adhesives market – across all industry segments worldwide. In its Laundry & Home Care and Beauty Care businesses, Henkel holds leading positions in many markets and categories around the world. Founded in 1876, Henkel looks back on more than 140 years of success. In 2016, Henkel reported sales of 18.7 billion euros, adjusted operating profit of 3.2 billion euros. Its three top brands, Persil (detergent), Schwarzkopf (hair care) and Loctite (adhesive) generated more than 6 billion euros in combined sales. Henkel employs more than 50,000 people globally – a passionate and highly diverse team, united by a strong company culture, a common purpose to create sustainable value, and shared values. As a recognized leader in sustainability, Henkel holds top positions in many international indices and rankings. Henkel's preferred shares are listed in the German stock index DAX. For more information, please visit [www.henkel.com](http://www.henkel.com)

**Photo material is available at <http://www.henkel.com/press>**

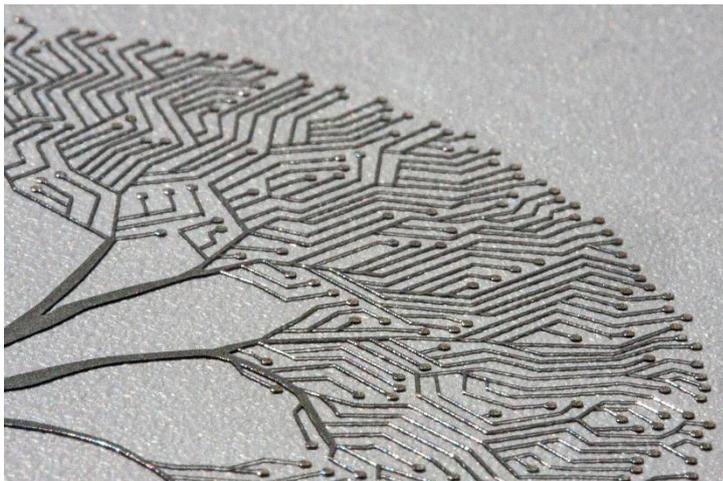
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Henkel AG & Co. KGaA

**The following material is Available:**



Wearable patch with a skin-compatible, pressure-sensitive adhesive.



Printed Electronics Inks