



**KraussMaffei**

Pressemitteilung / Press release

**SUBSTRATE, FUNCTIONAL SURFACE AND SENSOR INTEGRATION IN ONE PROCESS CYCLE**

## Luminescent, heatable, pressure-activated, touchable: breakthrough for innovative surfaces

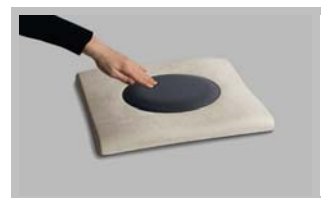
**Zurich, June 8, 2010** – Complex plastic components now light up or heat up at a touch, they react to stimuli and are pleasant to touch. Innovative, cost-competitive production processes and materials are opening up new applications for plastic components with integrated electronics and functional surfaces. As part of an international project under the aegis of the KraussMaffei-led PRIMUS Network, mold maker Georg Kaufmann Formenbau AG has worked with raw materials and lighting system suppliers and the Technical University of Chemnitz to take the production processes to series readiness using a KraussMaffei injection molding machine its own purpose-built molds.

“This process gives plastics processors the potential to expand into new applications and add more value to their products,” emphasized Dr. Dietmar Straub, CEO of KraussMaffei AG. With this innovative combination of injection and reaction molding in high-precision molds, plus application specific automation, plastics processors can now integrate production of the functional surfaces, substrate and sensor technology in a single process cycle. Georg Kaufmann Formenbau, headquartered in Switzerland, has begun prototype production of components integrating three properties – lighting, sensors and touch. “Why shouldn’t plastics components be intelligent? It opens up a whole new world!” says CEO Roger Kaufmann. The company has already developed and launched new production processes for back injection and back compression molding of decor materials. The focus is on controlling the cost of producing high-value, multifunctional parts by integrating previously separate process steps into one highly automated production process.

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**Innovation in functional integration:  
injection molding complete with sensor  
functionality and luminescence in one  
production process**



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Using Duo-Lamination and other proven technologies, processors can integrate functional surfaces and various sensors in plastic components. Connected to a power supply, the sensors trigger defined effects in response to external stimuli, for example, on/off, blinking, or dimming.

In addition to light effects in any color, the new process also offers the option of integrating a heat source in the part. A carmaker is already using this process for the passenger compartment of its cars. “Equally, the process can be used to produce heatable seat surfaces for ski lifts or sports stadiums, for heated surfaces in the home or in business or office environments,” points out Roger Kaufmann. Touch is another important property; here a multitechnology process, combining injection and reaction molding, produces attractive haptics with surfaces that are very pleasant to touch. It’s possible to produce cool, warm, grained or smooth surfaces and optical depth effects.

Major partners in the international network of the PRIMUS project include materials specialist Evonik Röhm GmbH, electroluminescence specialist Lumitec AG, and the Technical University of Chemnitz. The project partners will use the K 2010 to showcase more cutting edge technology projects using the new process.

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