

Press Release

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TTP LAUNCHES PROPELLANT-FREE ELECTRONIC AEROSOL TO CONSUMER PACKAGING INDUSTRY

Controllable droplet size ensures accurate spray behaviour

Cambridge, UK, 25 June 2007. The Technology Partnership (TTP) has launched its innovative, propellant-free electronic aerosol technology, TouchSpray™, which will replace traditional aerosol and trigger-spray technologies in consumer packaging applications. The patented technology provides electronic control for a precise and consistent droplet size and creates a spray plume with a flexible format, allowing novel packaging shapes and sizes.

Current aerosol-can technology has limited performance, due to a high variability in delivered droplet sizes that impact the way the spray performs in application, and a dependence on the amount of propellant left in the can. Similarly, the performance of trigger spray depends on how far and how hard the trigger is pulled. In contrast, the TouchSpray™ technology enables a consistent plume and very narrow droplet distribution, just by touching a button.

The TouchSpray™ technology is highly adaptable. The flow rate can be electronically controlled and the droplet size and plume shape can be customised to the application. For example, TouchSpray™ technology can deliver small droplets in a wide and soft spray applicable to personal care products or deliver larger droplets with a direct and focused spray more suited to surface cleaning or coating applications. TouchSpray™ can also deliver viscous or concentrated solutions and suspensions as well. TouchSpray™ is a truly platform technology applicable to a wide variety of markets.

TouchSpray™ will have a significant impact on new product design in the consumer packaging market. As well as enabling delivery of concentrated liquids making the packaging more compact, the flexible form factor and un-pressurised reservoir will enable manufacturers to move away from the traditional cylindrical metal can typically used with aerosols to design innovative products in new shapes and materials.

The core of TTP's TouchSpray™ technology is an ultrasonically vibrating perforated membrane. It incorporates a low profile piezoelectric actuator and a thin, perforated membrane. The membrane is manufactured using a novel laser micro-machining technique developed at TTP to produce an array of precision, micron-sized nozzles. The actuator is driven at ultrasonic frequencies which causes the membrane to vibrate, ejecting millions of precisely sized droplets each second. TTP's extensive expertise in ultrasonic technology and micro-machining has enabled it to engineer TouchSpray™ technology for the very low cost and high performance required by high volume consumer dispenser markets.

TTP has been working with a number of partners to realise this technology in the consumer sector. James McCrone, TTP, explains: "With the recent change in the consumer opinion towards acceptance of batteries in the fast moving consumer goods market (razors are a prime example of this), we felt that the time was right to push this product and generate more interest in developing it for the key consumer markets. For our development partners, increasing legislative, environmental and consumer pressure to remove unnecessary chemicals and materials from household products have meant that they needed to find new ways to package their products".

The announcement comes following the success of the product in the medical sector, where the technology's ability to provide precise, consistent droplet size and use concentrated liquids has made it ideal for the nebuliser market.

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ABOUT TTP

TTP (www.ttp.com) is Europe's leading independent product and technology development and licensing company. TTP's primary objective is to create new business based on advances in technology. TTP specialises in medical products, communications, digital printing, microdevices, optics, vision, consumer and industrial products. The company, established in 1987, is headquartered in Melbourn (near Cambridge, UK) and employs 300 scientists and engineers.

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