

# Media Release

## **Clariant MEVOPUR<sup>®</sup> Additive Technology Facilitates Laser Welding of Medical Devices**

- **‘Laser-friendly’ masterbatches and compounds at MD&M West**
- **Medical-grade materials manufactured in ISO-13485-certified plant**
- **Systems approach ensures successful welding**

Muttenz, February 5, 2019 – Clariant, a world leader in specialty chemicals, is exhibiting at MD&M West 2019 and displaying medical devices and components made of new MEVOPUR polymer materials formulated to improve laser-welding performance. The medical design and manufacturing tradeshow is taking place February 5-7, 2019, in Anaheim, CA. Clariant is exhibiting in Booth 2049.

“Laser welding is increasingly preferred in production of medical devices because it provides speed, and reliability, can handle complex structures and avoids some of the downsides of other methods, such as solvent residues,” explains Eric Rohr, Medical & Pharmaceutical Segment Manager, North America. “However, because medical devices are frequently made of transparent or translucent materials, the polymer’s ability to absorb the laser energy often needs to be enhanced using additives.”

Clariant has offered such additives for many years, and in 2016 began using them in MEVOPUR masterbatches and compounds used in laser-marking applications. Welding presents additional challenges because laser marking involves only one polymer, while laser welding involves two – one that is transparent to the laser energy and the other absorbing energy to create the weld. The process is further complicated by any pigments or fillers, which can change the way the plastic reacts to the laser.

“For that reason, we take a ‘systems approach’ in our laser welding solutions,” Rohr says. “At MD&M West, we will be displaying welded products that appear to involve two parts made of identical materials. In fact, we developed two different formulations to achieve laser transmission in one and absorption in the other so that they can be reliably welded together. Clariant’s formulation experience and skills are the real key to success.”

## **TWO DIFFERENT FORMS**

Another important factor in achieving a good weld is the even distribution of the additive throughout the polymer matrix of the final part. In some cases, a concentrate or masterbatch can be dosed at the injection-molding machine, which then mixes it sufficiently into the polymer melt before molding. Injection-molding machines, however, are not always ideal for dispersing the concentrate into the host polymer. In some applications, the machine, the material or the part design may cause inconsistent distribution and lead to unreliable welding.

Clariant solves this by also offering compounds where the job of distribution of the laser-absorbing additive, along with any other pigments or additives, is performed on highly efficient compounding lines. The injection molder then can use this all-in-one material without further dilution, knowing Clariant has already taken care of the formula and quality control.

Like all MEVOPUR masterbatch concentrates and finished compounds, the new laser-friendly materials are manufactured at a dedicated facility in Lewiston Maine, and at two other sites in Malmo, Sweden, and Singapore. All three plants have been certified compliant with ISO13485-2016, the latest quality management system for medical devices. As the 3-year grace period comes to an end, all new device submissions must now prove certification to the 2016 standard. The MEVOPUR brand assures device manufacturers that, from USP Class VI, ISO10993 pre-tested raw material ingredients to final product, the Clariant processes are controlled, consistent and compliant.

MEVOPUR-brand products and services help medical device and pharmaceutical packaging producers minimize risk at every stage of design, production and approval. Clariant's global team of specialists from R&D, production, sales and marketing, and customer service, works closely with individual customers from the concept stage through to production to pre-test materials and assess risk in order to develop compliant, targeted color and functionality for each application.

MEVOPUR® IS A TRADEMARK OF CLARIANT REGISTERED IN MANY COUNTRIES.

## **GLOBAL TRADE MEDIA RELATIONS**

### **STEFANIE NEHLSSEN**

Phone +41 61 469 63 63  
stefanie.nehlsen@clariant.com

### **CAROLINE SCHMID**

Phone +41 61 469 63 63  
caroline.schmid@clariant.com

Follow us on [Twitter](#), [Facebook](#), [Google Plus](#), [LinkedIn](#).

[www.clariant.com](http://www.clariant.com)

Clariant is a globally leading specialty chemicals company, based in Muttenz near Basel/Switzerland. On 31 December 2017 the company employed a total workforce of 18 135. In the financial year 2017, Clariant recorded sales of CHF 6.377 billion for its continuing businesses. The company reports in four Business Areas: Care Chemicals, Catalysis, Natural Resources, and Plastics & Coatings. Clariant's corporate strategy is based on five pillars: focus on innovation and R&D, add value with sustainability, reposition portfolio, intensify growth, and increase profitability.