



Media Release

Clariant and Floreon announce collaboration to expand high-performance biopolymer applications to additional markets

- **Enhanced material performance of biopolymers based on Floreon's proprietary know-how to meet demanding material requirements**
- **Broad range of Clariant additives such as stabilizers, flame retardants and processing & surface aids allows bespoke property extension for specific industry / application needs**
- **Combination of technologies, technical capabilities and know-how will support the development of a credible renewable material alternative to fossil-based plastics for industries such as Packaging, Consumer Goods, Automotive and Electrical and Electronics**

Muttenz, March 18, 2020 – Clariant's Additives business and Floreon-Transforming Packaging Limited announce an exciting new collaboration to further extend the performance properties and market potential of biopolymers, whilst preserving their environmental benefits.

By integrating the benefits of Clariant's additives with Floreon's proprietary material solutions, the collaboration aims to open up additional possibilities for plastic manufacturers and brand owners to consider biopolymers as a viable, low carbon footprint alternative to fossil-based plastics for both single-use and durable applications. Markets set to benefit from the new enhanced grades include rigid and flexible Packaging, Electrical & Electronic equipment (E&E), Hygiene products, Consumer goods and Automotive.

Floreon develops and markets proprietary compounds based on PLA and containing 70-90% renewable, plant-based raw materials, thus containing carbon sequestered from the atmosphere by plants. They are typically mechanically tougher than traditional PLA and can deliver significant energy savings in processing. Floreon compounds are recyclable and they can also be composted via industrial composting. That makes Floreon's materials viable for applications where, at this stage, contamination with food waste and organic matter make mechanical recycling unfeasible.

Clariant's industry-leading portfolio of sustainable additives includes a wide range of bio-based additives, which reliably deliver both high performance and sustainability to the plastics value chain.



Introduced at the K 2019 Plastics Trade Fair under the Exolit® OP Terra, Licocene® Terra and Licocare® RBW Vita trade names, they help to reduce fossil resource intensity and enable more sustainable material choices. Clariant's experts will support the Floreon development team to enhance the performance possibilities and processing characteristics of bioplastics.

The scope of benefits is vast. Examples include achieving less energy use and faster cycle times by increasing the processing efficiency or adding completely new properties to the material. Product manufacturers will have the possibility to tailor compounds to suit specific processing technologies and applications, including in some cases those where bioplastics have so far not been able to meet the challenges of demanding conditions or environments.

Shaun Chatterton, CEO, Floreon-Transforming Packaging Limited, said: "Brand owners and plastic converters are seeking more sustainable material solutions to offer their customers, driven by goals ranging from recyclable solutions and improving waste management to lowering carbon footprint and reducing resource use. Floreon can really contribute towards these goals. As a small business, our team is very excited to be able to take the benefits of biopolymers to new heights by drawing on Clariant's extensive capabilities in developing additives focused on the performance needs of the plastics industry. Floreon has the potential to transform not just packaging but many industries, and we expect to launch our first product from this collaboration into market during the first half of 2020."

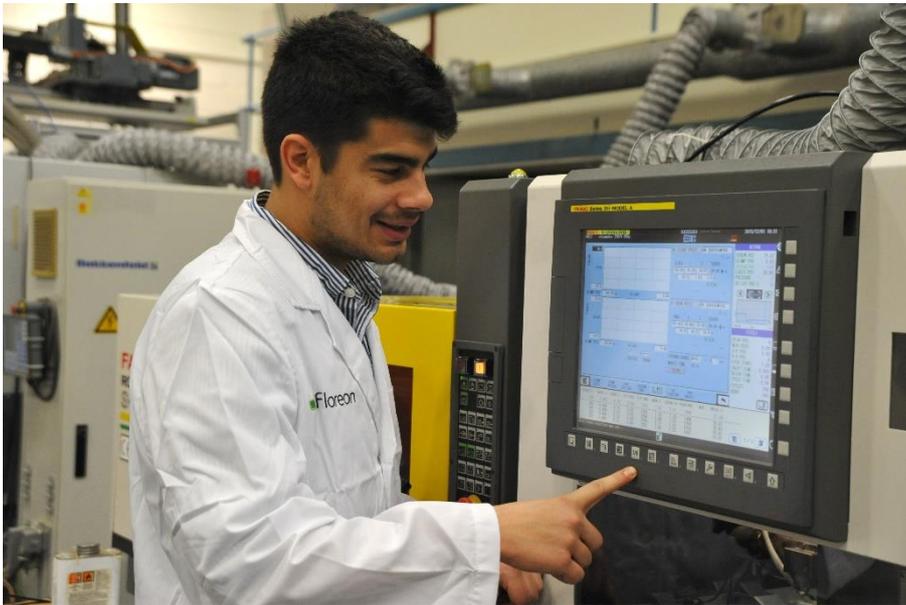
Stephan Lynen, Head of Business Unit Additives, Clariant, commented: "We are excited to be working together with Floreon using the advantages of our range of sustainable additives to close the performance gap between biopolymers and other materials. This is just another way we can contribute to giving the plastics value chain a greater choice of options for meeting sustainability targets and consumer demands, and in doing so, support the transformation to a circular economy. For society, our environment, and future generations, it is our responsibility to continuously improve sustainability performance and reduce carbon footprint and waste."

Clariant's collaboration with Floreon constitutes together with Clariant's EcoCircle, a corporate-wide initiative supporting the transition from a one-way plastics value chain to a circular plastics economy, another step forward to jointly develop new circular materials and technologies together with partners from the entire value chain to enable a circular economy.

To learn more about Clariant's EcoCircle initiative visit: www.clariant.com/ecocircle.

For an overview of Clariant's sustainable additive solutions visit: www.clariant.com/additives.

Further information on Floreon is available at <http://floreon.com>.



Combining technologies, technical capabilities and know-how to improve the performance properties of high-performance biopolymers for demanding plastic applications. (Photo: Floreon)



Supporting the development of a tool box of credible renewable material alternatives for industries such as Packaging, Consumer Goods, Automotive and Electrical and Electronics. (Photo: Clariant)



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

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Clariant is a focused and innovative specialty chemical company based in Muttenz, near Basel/Switzerland. On 31 December 2019, the company employed a total workforce of 17 223. In the financial year 2019, Clariant recorded sales of CHF 4.399 billion for its continuing businesses. The company reports in three business areas: Care Chemicals, Catalysis and Natural Resources. 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.

floreon.com

Floreon is a specially formulated compound, which is added to standard bioplastic, polylactic acid (PLA) to create an innovative material with a sustainable origin and a range of end of life options. It was created from a desire for a greener, safer form of plastic. Unhappy with the options available we decided to develop our own. After four years and a Knowledge Transfer Partnership (KTP) with the University of Sheffield a unique, environmentally friendly, fully compostable and high performing bioplastic was born.