

UPM launches UPM BioMotion™ Renewable Functional Fillers (RFF) – a renewable product to significantly reduce CO₂ footprint of rubber and plastics applications

(UPM, Helsinki, 14 October 2021 at 13:00 EET) – UPM BioMotion™ Renewable Functional Fillers (RFF) represent UPM's latest revolutionary development in sustainable solutions. They address the urgent need to reduce CO₂ emissions of rubber and plastics products by offering a truly sustainable alternative to fossil-based carbon black and precipitated silica, the dominating functional fillers used in rubber and plastic products today.

"The RFF portfolio will be produced from sustainably sourced hardwood at our first-of-its-kind biorefinery in Leuna, Germany. The launch of this new product range emphasizes UPM's promise to create a future beyond fossils and marks another step in the company's transformation. With the building of the biorefinery in Leuna progressing, we now start taking visible steps in commercializing our portfolio of innovative renewable chemicals. This is a clear signal to the market that we are going to be a credible and competent partner in transforming our customers' businesses to become more sustainable," says **Juuso Konttinen**, Vice President UPM Biochemicals.

UPM BioMotion™ will enable a radical step forward in the sustainability performance of rubber and plastic products in a variety of end-uses, notably by significantly reducing their CO₂ footprint and weight. They are suitable for use in a broad range of elastomers, thermoplastic compounds, and thermoplastic elastomers (TPEs) in numerous industries such as automotive, flooring or footwear. Mass production of RFF in Leuna will ramp up during 2023. We started product testing and development as well as compounding services in a modern Application Development Centre on site in Leuna, which will officially open later this year.

"Launching RFF marks the culmination point of a 10-year research and development phase. It's a whole new generation in the rubber industry and a future-fit alternative to fossil-based materials. We are confident that RFF will meet the required technical standards and performance criteria. With the UPM BioMotion™ RFF range, our partners will be able to take a step-change in transforming their products to become truly sustainable," says **Christian Hübsch**, Director Lignin and RFF Business, UPM Biochemicals. "We are now working with our partners in the rubber and plastics value chains to develop materials and customized solutions to inspire a new generation of sustainable consumer products and thereby help brands innovate to become more sustainable."

UPM's patent-protected process to produce UPM BioMotion™ RFF is 'new to the world'. It has been developed together with our partners for more than ten years. The process uses wood from sustainably managed forests and side streams from sawmill operations to produce UPM BioMotion™ RFF and other biochemicals. UPM uses certified hardwood from regional forests and has established a tight chain of custody monitoring. This makes the UPM BioMotion™ RFF feedstock truly sustainable and provides a viable economic perspective to forest owners, fully in line with the German Federal Forest Strategy.

Beyond the improved carbon footprint, UPM BioMotion™ RFF help end-use products to become cleaner and yielding an overall enhanced environmental performance due to the higher renewable content. In addition, they guarantee excellent technical performance while enabling weight savings of up to 25% in final rubber products compared to those produced with fossil-based fillers. These weight savings are a clear additional value add, especially for the automotive industry, where lower weight means better mileage, lower costs, and a further reduction of CO₂ emissions.

The product's transformative character and strong environmental performance have been awarded by relevant industry associations and trade media. The European Rubber Journal announced the top 10 projects of new elastomers for sustainability and ranked UPM's innovative Renewable Functional Fillers (RFF) number four. Recently, UPM's Biochemicals investment in Leuna was selected as one of the finalists in the German Sustainability Awards and the Chemical Week's Sustainability Awards.

UPM is currently using test batches of RFF to work with the leading companies in the rubber-processing industry globally on the development, qualification, and pre-industrial production of final products for various industries. UPM's Research and Development and commercial teams are continuously extending their network with partners in the relevant value chains. UPM is finalizing a state-of-the-art test and development facility in Leuna, supporting product development and testing.

The UPM biorefinery will produce renewable monoethylene glycol (bMEG), renewable monopropylene glycol (bMPG) and Renewable Functional Fillers (RFF) from sustainably sourced, certified hardwood with an annual capacity of 220.000 tons.

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UPM Biochemicals

UPM Biochemicals provides innovative, sustainable, and competitive beechwood-based biochemicals as alternatives to previously used precursors made from petroleum, natural gas or coal. UPM's biochemicals are competitive and enhance the sustainability of various end products in a wide range of applications. Renewable glycols are used to produce textiles, PET bottles, packaging materials, coolants, composites, cosmetics, pharmaceutical products, and detergents. Renewable functional fillers are a sustainable alternative to industrial carbon black and silica and are used in various rubber and plastic products. UPM is currently building a biorefinery to produce these next-generation biochemicals from sustainably sourced, certified beechwood at the Leuna chemical complex in Germany. www.upmbiochemicals.com

Follow UPM Biochemicals on [LinkedIn](#) and check the UPM BioMotion™ RFF Portfolio [here](#)

UPM

We deliver renewable and responsible solutions and innovate for a future beyond fossils across six business areas: UPM Biorefining, UPM Energy, UPM Raflatac, UPM Specialty Papers, UPM Communication Papers and UPM Plywood. As the industry leader in responsibility we are committed to the UN Business Ambition for 1.5°C and the science-based targets to mitigate climate change. We employ 18,000 people worldwide and our annual sales are approximately EUR 8.6 billion. Our shares are listed on Nasdaq Helsinki Ltd. UPM Biofore – Beyond fossils. www.upm.com

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