



PRESS RELEASE

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The BlackCycle consortium announces the world's first production of sustainable carbon blacks

- The BlackCycle consortium announced the world's first production of sustainable carbon blacks (sCB) for tire applications.
- An important step towards a truly circular process.
- A major technological breakthrough made possible by the BlackCycle partners

After its first 18 months of existence, the consortium of the BlackCycle project welcomed on the 22nd of November 2021 at Michelin's technology center at Ladoux (France), 120 international industry leaders, academics, H2020 project coordinators, politicians, and institutional representatives from 20 countries to exchange ideas and discuss the deployment of circular economy initiatives in Europe.



During the workshop, the BlackCycle consortium announced the world's first production of sustainable carbon blacks (sCB) for tire applications on a conventional carbon black furnace reactor by using oils derived from an end-of-life tire pyrolysis process. This novel production of a sustainable material from end-of-life tyres represents a truly circular process.

The usage of pyrolysis oil (supplied by Pyrum Innovations, Germany) as carbon black feedstock was **successfully evaluated** in the Innovation department of Orion Engineered Carbons. Orion concluded that **replacing in a rubber compound a fossil fuel-based carbon black with a carbon black made from oil derived from the ELT pyrolysis will not change its properties.**

Therefore, even the most demanding applications will maintain a high-performance regarding properties such as durability, conductivity, rolling resistance and other characteristics.

The processing of the rubber compounds will be unchanged according to the analysis of the green compounds.

Hence, we can assume that sCBs are an easy drop-in solution without the need to adjust the formulations of the rubber compounds or process parameters for instance in mixing, molding, or curing. Because the carbon black content of elastomeric materials is relatively high with about 30 weight % on average, the technology applying pyrolysis oil as feedstock for CB production is a major leap towards a more sustainable rubber industry.

This major technological breakthrough was made possible by the BlackCycle value chain driven by the stakeholders of the project.



Orion, Sustainable Carbon Black

About the BlackCycle project:

BlackCycle (Grant agreement No 869625) is one of the R&D research and innovation projects funded by the European Commission under the EU's Horizon 2020 research program to implement the concept of circular economy to the end-of-life tyres at the European level. The BlackCycle project has an upcycling ambition, targeting to create a circular economy of the end-of-life tyre (ELT) into technical applications like tyre industry by producing high technical second raw materials (SRMs) from ELTs. These SRMs will be used to develop new ranges of passenger car and truck tyres, which will be sold commercially in European and global markets. The BlackCycle project consortium is formed by 12 partners from 5 different countries (Orion, Ineris, Quantis, Icamcyl, Aliapur, CSIC, CPERI/CERTH, Sisener, Pyrum, Estado, Hera, and Axelera) and led by the French world leader in tyre manufacturing Michelin, <https://blackcycle-project.eu/>

 **Michelin – Aliapur – Axelera – Ineris**  **Orion – Pyrum – Estado**  **CPERI/CERTH**
 **CSIC – Sisener – Hera – Icamcyl**  **Quantis**