Interreg Vlaanderen-Nederland
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BIO-CAPPP

Using bio-aromatics in coatings

David De Smet

The BIO-CAPPP project aims to develop sustainable chemical building blocks that can be used in various products, including those in the construction and textile sectors. By doing so, BIO-CAPPP is actively contributing to the shift towards a circular economy.

Currently, manufacturers of plastics, paints, adhesives, insulation foam, and textiles rely heavily on aromatics to enhance the quality of their products, providing properties such as scratch resistance, UV resistance, and adhesive strength. It is worth noting that approximately 40% of all chemicals are aromatic in nature, totaling 122 million tons annually and valued at €120 billion, with a yearly growth rate of 5%. Unfortunately, these aromatics are predominantly derived from fossil raw materials, which has a detrimental impact on the environment. However, there is an alternative solution: aromatics can also be produced from renewable sources such as lignin, a substance that provides strength to trees and is obtained as a by-product from the paper industry, or from non-edible residual sugars from the agricultural sector.

The BIO-CAPPP project aims to develop renewable aromatics and incorporate them into real-world products in collaboration with companies, experts, and students. By working together, the project partners will facilitate the commercial production of bio-aromatics and promote the market for sustainable products that possess exceptional qualities. Within the BIO-CAPPP project, companies can collaborate with knowledgeable professionals and students under favorable conditions, such as innovation vouchers specifically designed for SMEs.

This collaboration allows for the application of bio-aromatics in various sectors, including construction and textiles. The use of bio-aromatics not only enhances the sustainability of these products but also improves their functionality by providing premium properties. Centexbel is currently examining properties such as plasticizing, UV absorption, and flame retardancy.

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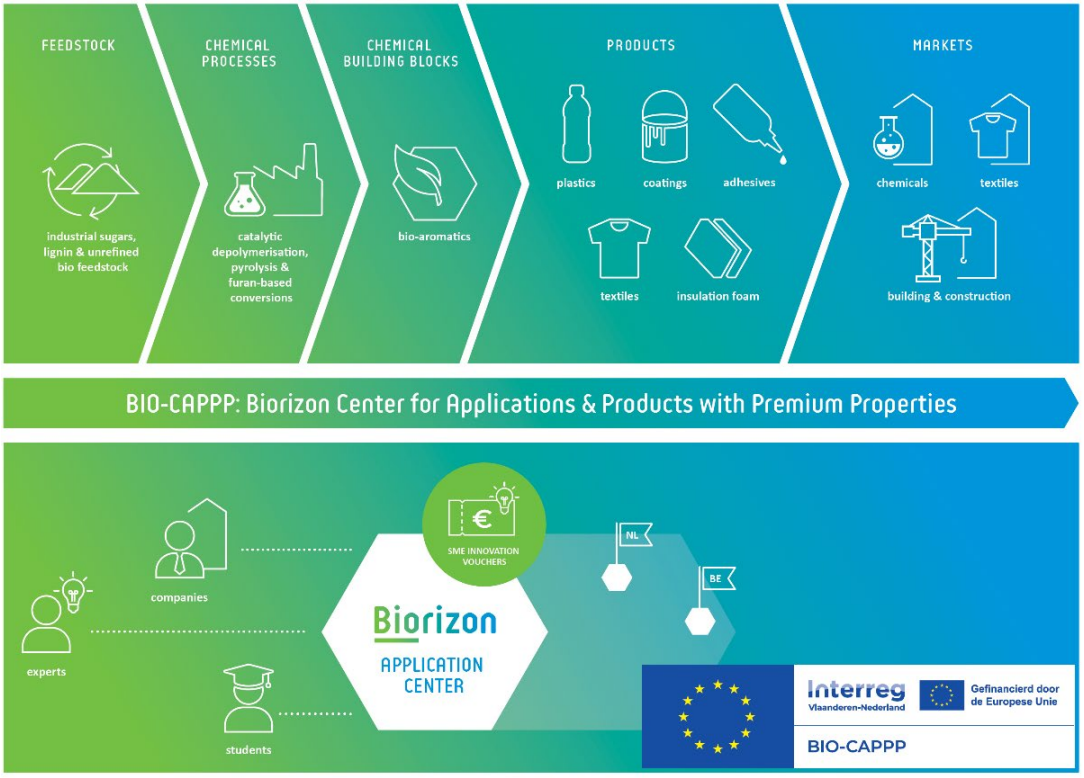

In the BIO-CAPPP project, partners from Flanders and the Netherlands are working closely together.

VITO and **TNO**, as project leaders, are focusing on the technological development of bio-aromatics derived from sugars, lignin, and unrefined waste streams.

CENTEXBEL and **Avans University of Applied Sciences** / **MNEXT** will be responsible for developing innovative applications in the construction and textile sectors using lignin- and sugar-based building blocks.

Kamp C will play a crucial role in informing, inspiring, and supporting end users, the building sector, and local authorities in adopting sustainable innovations.

The **Green Chemistry Campus** will serve as the project's central meeting place, facilitating collaboration between entrepreneurs, governments, and knowledge institutions to scale up bio-based and circular innovations.

Additionally, citizens will have the opportunity to experience the transition towards sustainability at the campus's experience center.

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The BIO-CAPPP project has a total budget of €4.3 million and is co-funded by Interreg Flanders-Netherlands, the cross-border cooperation program with financial support from the European Regional Development Fund, VLAIO, the provinces of Antwerp, East-Flanders and North Brabant and the Dutch Ministry of Economic Affairs and Climate Policy.

For more information about the BIO-CAPPP project and the possibilities to test bio-aromatics in actual products, please contact BIO-CAPPP project manager David De Smet.

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