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Bio-Based Continuous Production for Sustainable Polyurethane Industry

Bio4PURConti

NH_2

Developing the world's first continuous production process for bio-based aniline, a drop-in building block for a more sustainable polyurethane industry.

ABOUT

Bio4PURConti is an EU-funded project developing the world's first continuous production process for bio-based aniline.

Aniline is a key raw material for polyurethanes, notably through MDI, and today relies almost entirely on fossil resources.

Using plant-based sugars from biomass and a continuous fermentation technology, the project produces a bio-based aniline that is fully drop-in compatible with existing polyurethane value chains.

OBJECTIVES

Continuous fermentation demonstrated at semi-industrial scale for a high-volume platform chemical.

A significant improvement in the product carbon footprint (PCF) of aniline is targeted, compared to fossil-based production.

A transferable platform for the continuous bio-based production of bulk chemicals, strengthening Europe's position in bio-based chemicals.

APPLICATIONS

The project focuses on four targeted end-use applications in which polyurethanes derived from bio-based aniline could offer significant benefits:

1. Building insulation

2. Lightweight automotive components

3. Wind turbine manufacturing

4. Electromobility solutions





