

Commercial Scale-Up Begins for Formaldehyde-Free Adhesive Alternative

Sustainable materials innovator reaches industrial production milestone as demand accelerates ahead of tightening formaldehyde regulations

LONDON, UNITED KINGDOM, July 10, 2026 /EINPresswire.com/ -- BindEthics, the UK-based sustainable adhesive company founded by chemist Victoria Garcia, has announced a major commercial milestone with the successful transition of its flagship bio-based adhesive, Ecohesive™, from laboratory development into industrial-scale production.

The achievement marks a significant step forward in BindEthics' mission to eliminate toxic formaldehyde-based resins from global construction and furniture supply chains, while enabling greater recyclability and circularity across the engineered wood sector.



Victoria Garcia

The company has now moved beyond research and development into commercial scale-up, progressing from laboratory testing to producing 40-litre production-grade batches with a validated pathway to 2,000-litre manufacturing volumes. Commercial discussions and customer interest currently represent potential industrial demand exceeding 6,000 tonnes.

Initial commercial production batches are earmarked for industrial trials with major Tier 1 manufacturers and specialist eco-plywood fabricators across Europe.

"Reaching commercial-scale production is a defining moment for BindEthics," said Colin Warburg, Commercial Lead at BindEthics. "We are scaling our operations to meet growing market demand driven by increasingly stringent environmental regulations. This milestone

demonstrates that sustainable materials innovation developed in the UK can compete at industrial scale while helping manufacturers transition to a toxin-free future."

A Sustainable Alternative to Formaldehyde Resins

Ecohesive™ is a 100% bio-based, formaldehyde-free adhesive developed specifically for engineered wood applications. Derived from purified and refined industrial bio-waste, including by-products from the brewing industry, the adhesive delivers high-performance structural bonding without relying on fossil fuels or petrochemical feedstocks.

Unlike conventional adhesives, Ecohesive™ is designed as a drop-in solution compatible with existing industrial mixing and pressing equipment, eliminating the need for manufacturers to invest in costly new production infrastructure.

The technology is expected to enable up to 90% of engineered wood products, including furniture panels and construction boards, to become fully recyclable, helping to advance circular economy goals across the sector.

Industry at a Regulatory Turning Point

The commercial scale-up comes at a critical time for manufacturers as governments intensify restrictions on formaldehyde emissions.

Traditional urea-formaldehyde (UF) and phenol-formaldehyde (PF) resins face increasing regulatory scrutiny across Europe and internationally due to concerns over carcinogenic emissions and environmental impacts. New EU REACH regulations due to take effect on 6 August 2026 will introduce significantly stricter formaldehyde emission limits for wood-based products, creating growing pressure on manufacturers to identify compliant alternatives.

Ecohesive™ provides a future-ready solution by eliminating formaldehyde and other toxic petrochemicals while maintaining structural performance requirements. The adhesive enables manufacturers to exceed current regulatory standards, reduce VOC emissions and minimise compliance risks as regulations continue to tighten.

In addition to environmental benefits, the transition to bio-based adhesives offers significant occupational health improvements by removing hazardous carcinogens from manufacturing environments.

Applications Across Construction, Manufacturing and Logistics

Ecohesive™ is designed for a wide range of engineered wood applications, including:

- Plywood manufacturing
- Oriented Strand Board (OSB)
- Mass timber products
- Acoustic and sound diffusion panels
- Furniture manufacturing

Beyond construction materials, BindEthics is also developing and testing Ecohesive™ for freight

and logistics applications where structural integrity and durability are essential under demanding transport conditions.

Building Commercial Momentum

BindEthics has received scale-up, laboratory and commercial support from the Biorenewables Development Centre (BDC) in York through its European Regional Development Programme. The company is also collaborating with Bangor University, which is providing advanced testing capabilities to accelerate product development and validation.

The company's progress builds on several key milestones:

- 2022: Initial trials at the Biorenewables Development Centre established the foundations of the first minimum viable product.
- 2023: BindEthics was awarded the prestigious Armourers & Brasiers Venture Prize, recognising excellence in materials science innovation with strong commercial potential.
- 2026: Transition to industrial-scale production and commencement of commercial customer trials.

The market opportunity is substantial. The UK particleboard sector alone consumes approximately 1,000 tonnes of urea-formaldehyde adhesive every day, representing an annual market worth an estimated £388 million. Globally, the urea-formaldehyde resin market is valued at approximately £9.5 billion with projections anticipating it to reach £14 billion over the next decade.

Industry Endorsement

"By partnering with BindEthics to manufacture their Ecohesive™ technology at scale, we are providing our customers with a transformative, formaldehyde-free alternative that does not compromise on industrial performance," said Stuart Francis, managing director at Chemique Adhesives. "We are excited to leverage our production expertise to help bring this circular solution to market and support manufacturers in meeting the next generation of environmental standards."

"At Highland Heritage Woodworks, we love both the science and the ethos behind BindEthics," said Will Inglis, Advisory Board Member at Highland Heritage Woodworks. "Their bio-based adhesive represents the cutting edge of timber bonding technology and perfectly complements our own mission to add value to home-grown UK timber through innovative, low-carbon manufacturing."

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