



A Safe, Sustainable
and Performant Design towards
the future lightweight materials
repoxyble
BIO-BASED MULTIFUNCTIONAL RECYCLABLE COMPOSITES
Newsletter



Dear [first name] [last name],

we are pleased to present the **white papers** series on *Transition to sustainable composites: use, recycling, upscale & remanufacturing*.

The white papers **build on the knowledge and results** generated throughout the experience of the REPOXYBLE project, in close collaboration with the [EcoComposites Cluster](#) projects [r-LightBioCom](#), [FOREST](#), [FURHY](#), [MC4](#), and [SUSPENS](#), as well as [RECREATE](#).

The European need for circularity

«The **global composite market is expanding rapidly** toward an estimated 291B\$ by 2035, with thermoset matrices maintaining over 60% percent of this market due to their superior mechanical strength, durability, and thermal resistance in aerospace, automotive, and energy applications. However, – says REPOXYBLE Coordinator Julio Gómez Cordón – the European composite industry faces an existential challenge: with over 900 kton of composite waste generated annually in Europe, conventional thermoset materials remain locked in linear disposal routes, predominantly ending up in landfills or incineration plants where valuable resources are permanently lost. **We can no longer delay the transition to circularity**».

REPOXYBLE engineered the technological breakthrough required to solve this bottleneck, a **paradigm shift in material design**. By combining commercial epoxy resins and high-performance fibres with proprietary **depolymerizable building blocks** based on cleavable hardeners, REPOXYBLE created a **novel epoxy system engineered for low-energy chemical recycling**.

An advanced materials system that meets the technical requirements and specifications of demanding sectors such as automotive and aerospace, while combining lightweight properties, multifunctionality and chemical **separation, recovery and remanufacturing**.

This process adheres to **ISO 59004 circularity principles**, and offers European manufacturers a powerful shield against fluctuating foreign raw material markets and critical supply dependencies.

The three White Papers outline an industrial and policy roadmap for adopting these innovations across manufacturers' operations.

[Download the white papers here](#)

White papers topics



Together, the three white papers explore key aspects of the transition towards more sustainable and circular composite materials:

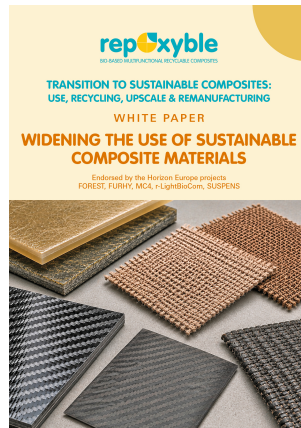
1. ***Widening the use of sustainable composite materials***
2. ***Recyclability, end-of-life and circularity in composite development***
3. ***Upscale and circular business models***

They highlight that **achieving greater circularity and recyclability requires coordinated technical, industrial and policy actions**. This is essential to ensure that new composite materials offer performance, functionality, and costs that are competitive with the fossil-based solutions currently in use that are not designed for a circular economy.

[Meet with REPOXYBLE partners](#)

Do you want to know more about our white papers, our project solutions, and collaboration opportunities? **Book a meeting with REPOXYBLE partners writing at info@repoxyble.eu.**

[Book a meeting](#)



Widening the use of sustainable composite materials

Accelerating the transition to circular and sustainable composites requires coordinated action across the value chain. This includes fostering collaboration between academia, industry and government; integrating circularity from the design stage of materials and establishing appropriate standards; promoting sustainable composites through public procurement, raising public awareness and skills.

The document is endorsed by r-LightBioCom, FOREST, FURHY, MC4, and SUSPENS projects, involved in the EcoComposites Cluster.

[Download the white paper](#)

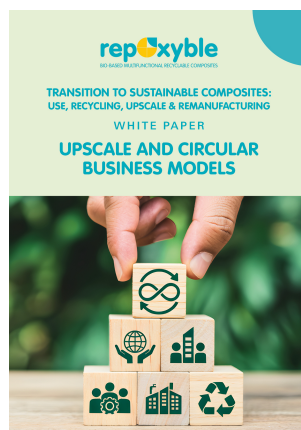


Recyclability, end-of-life and circularity

Circularity and Safe and Sustainable by Design (SSbD) principles should be integrated from the earliest stages of circular advanced materials and sustainable composites development, alongside targeted research to adapt both recycling technologies and waste collection systems to different composite types. Circular solutions should be assessed from a whole-life perspective, while coordinated European action is needed to support competitive circular business models in globally connected markets.

The document is endorsed by r-LightBioCom, FOREST, FURHY, MC4, and SUSPENS projects, involved in the EcoComposites Cluster, and RECREATE.

[Download the white paper](#)



Upscale and circular business models

Rethinking business models is essential to align the entire value chain with circular economy principles and maximise benefits of materials and processes advancement. Extending product lifetimes and designing for disassembly of composite materials can reduce raw material demand and energy consumption, while enabling new circular business models based on long-term performance contracts and “Product-as-a-Service” approaches.

[Download the white paper](#)

Do you want to contribute?

Contributing is easy: please, download the white paper you are interested in and share any feedback to info@repoxyble.eu by **15th December 2026**. We will then update the white paper based on relevant comments.

We appreciate your interest in REPOXYBLE. Please, pass on this newsletter to those who you think would like to join this growing community. We are looking forward to the journey ahead.

[Subscribe here](#)

The Consortium

REPOXYBLE brings together 16 partners, including 7 SMEs and a large company, 5 universities, one RTD, and two clusters, from 8 countries: Spain, United Kingdom, Italy, Switzerland, Austria, Grece, Slovenia, and Portugal.

Together, we cover the entire value chain of the material lifecycle, and includes experts in safety, sustainability assessment, data management, and dissemination, communication and exploitation.



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