

REPOXYBLE – Biobased multifunctional recyclable epoxy based composites

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We will present REPOXYBLE project, which we have the pleasure to coordinate. It will be explained the interdisciplinary approach that we are following. Our team is multidisciplinary and cross functional, integrating all the needed expertise both from material development and manufacturing, and from recycling and safety and sustainability, ensuring a holistic and collaborative approach.

REPOXYBLE background has its roots in the EU Strategic Research and Innovation Plan for safe and sustainable Chemicals and Materials (SRIP), that “highlights current research and innovation areas crucial for accelerating the transition to chemicals and materials that are safe and sustainable”. The Safe and Sustainable by design concept has been introduced in EU R&I policies with the Chemical Strategy for Sustainability (CSS) towards a toxic-free environment and more recently with the publication of the Safe and Sustainable by Design Framework. The concept is discussed also at international level, as shown by the work of OECD (SSIA, Steering Group on Safer and Sustainable Innovation Approach). Considering safety and sustainability since the early stages is emphasised also in different industry -led initiatives, such as the Advanced Materials Initiative 2030 (AMI2030) and the work of the European Chemical Industry Council (CEFIC) on the matter.

Advanced materials are enablers for a diversity of industrial sectors, and crucial for EUs technology leaderships and strategic autonomy. As emphasised by AMI 2030, their development need, “a strong European Materials ecosystem driving the green and digital transition as well as a sustainable inclusive European society through a systemic collaboration of upstream developers, downstream users and citizens and all stakeholders in between”.

In this context, the Horizon Europe framework programme has funded a series of projects dealing with the implementation of SSbD approaches in advanced materials development, including REPOXYBLE, that will lead the way to integrate this approach in future R&I activities.