



multicycle

ADVANCED & SUSTAINABLE RECYCLING PROCESSES AND VALUE CHAINS FOR PLASTIC-BASED MULTI-MATERIALS

PROJECT ESSENTIALS

Nov 2018 – Apr 2022: Innovation Action delivering an industrial recycling pilot plant for thermoplastic-based multi-materials allowing selective recovery of pure plastics and fibres from mixed wastes without downgrading

Using patented CreaSolv® process to demonstrate shift to a circular economic model in multilayer packaging / flexible films and fibre-reinforced thermoplastic automotive composites - potential in many others segments

CreaSolv® trademark registered by CreaCycle GmbH

KEY FEATURES

Process upscaling, optimisation and digitalisation for industrial readiness (TRL7)

Recovery of pure plastics and fibres from mixed wastes - direct substitution of virgin resources

Processing and formulation of recovered materials into valuable products – multiple packaging, composite / textile semi-finished and final demonstrators targeted

Confirmation of impacts through techno-economic feasibility and environmental.

IN OUR FINAL YEAR

- Representative industrial scrap and post-consumer wastes extensively sampled, including all major classes of flexible packaging thermoplastics (both single polymer and multi-materials), and automotive carbon and glass reinforced plastic composites.
- MultiCycle pilot plant in operation with successful demonstration of multiple hundred tonne campaign processing of target materials
- Photonics-based packaging and composite waste classification system integrated and validated in industrial pilot (25kg/h) unit
- Recycled single polymer streams undergoing post-processing and evaluation in a variety of circular value chain applications
- Three new patent applications submitted protecting novel elements of enabling technology

