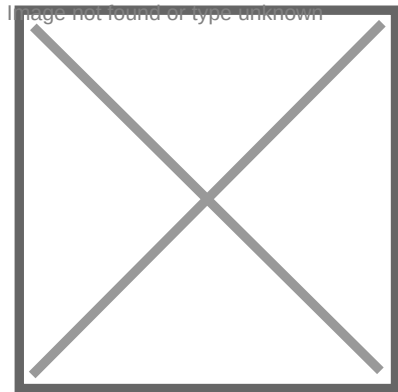




CE-SPIRE-10-2018

MUTILCYCLE

Full Title: Advanced and sustainable recycling processes and value chains for plastic-based multi-materials

Aim:

As part of the shift to a Circular Plastics economic model, MultiCycle will deliver an industrial recycling pilot plant for fossil and bio-based thermoplastic multilayer packaging and fibre reinforced composites using a novel solvent-based selective extraction process, which allows recovery of pure plastics and additives from mixed wastes for reprocessing into value-added applications.

Concept:

Plastics deliver value in consumer products and high-end applications, but single-use, linear consumption is unsustainable, and recycling complex multi-materials is challenging. The MultiCycle industrial recycling pilot plant, based on the patented CreaSolv® process (CreaSolv® is a trademark registered by CreaCycle GmbH), will be demonstrated in two important industrial segments, multilayer packaging / flexible films and automotive fibre-reinforced thermoplastic composites, as indicators for many other segments. The selective, versatile extraction process is being taken to unprecedented scale, optimised and digitised for industrial readiness (TRL 7). Pure plastics and fibres recovered will be processed and formulated in place of virgin resources to target at least fourteen different packaging, composite/textile semi-finished and final demonstrators. The new process impacts will be confirmed by techno-economic feasibility and environmental, social and economic sustainability evaluation

Start date:

01/11/2018

End date:

30/04/2022