PUReSmart

PolyUrethane Recycling Towards
a Smart Circular Economy

Deliverable

D4.3 Lab-scale optimised CAPU flexible foam presenting typical comfort properties (hardness, resiliency, fatigue)

WP4 – Smart design - CAPU foam and its reprocessing

Project Information

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Publishable Summary

This deliverable concerns the design and optimization of a CAPU flexible foam formulation on lab scale. In order to reach this, we rely on WP1 for the design and/or selection of the best CAPU comonomers.

The term “CAPU foam” designates a PU-based polymeric foam containing CAPU comonomers. Two aspects are important when judging if a CAPU foam formulation is successful:

- It should result in a foam with standard flexible foam properties (e.g. hardness, resiliency, fatigue)
- The presence of the reversible/exchangeable bonds should also make it a dynamic network which shows good reprocessability.

At the end of the PUReSmart project, those two aspects could both be satisfied, but only not in one single CAPU foam formulation. It seems that a compromise is needed between the two, which is not desirable for our purposes within PUReSmart.