



Deliverable

D3.6 Pilot scale flexible TDI based polyether PU foams containing maximal level upper phase fulfilling target comfort foam specifications

WP3 – Smart Chemolysis

Project Information

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Publishable Summary

Semi-pilot scale flexible TDI based polyether PU foams were successfully produced with 100% recycled polyol with a minor change in the formulation. The resulting foams also satisfied the standard comfort foam specifications.

The chemolysis of a known conventional PU foam in the pilot-plant of Covestro produced the recycled polyol up to 98-99% purity and yield. The recycled polyol had similar properties like IOH, water content, viscosity when compared to a fossil fuel based conventional polyol.

The recycled polyol was then used up to 100% in a standard conventional Recticel comfort foam formulation and the resulting foams had similar physical properties satisfying the comfort foam specifications when compared to the reference PU foam having 100% virgin polyol. This demonstrated that going from lab scale (300g) to semi-pilot scale (0.4m³; 10kg), the foams containing 100% recycled polyol could be successfully produced and have satisfying comfort foam specifications.