Depolymerization WG Meeting

PET Depolymerisation
Working Group

ctober 19th, 2023

www.petcore-europe.org

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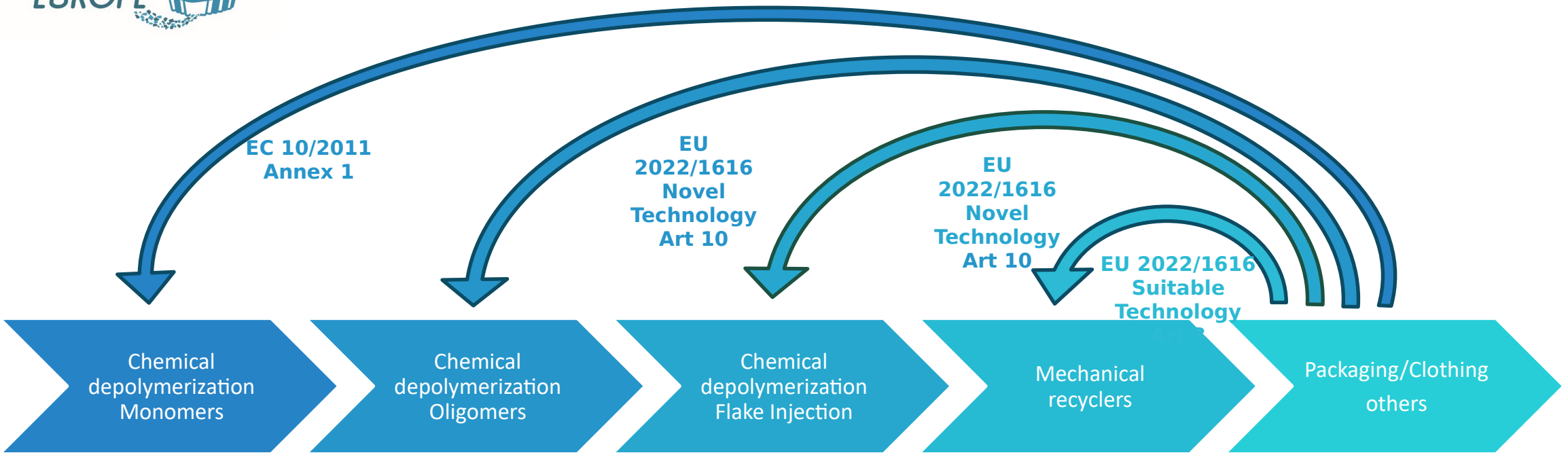
PET Depolymerisation Working Group

Who are we ?

The activities



PMC, PET Europe
PETCORE Europe
BHET TF

BHET Registration under EC 10/2011 and REACH REGISTRATION

PETCORE Europe
BHET TF

Novel Technology Development under EU 2022/1616. Registration and Monitoring, journey towards authorization as a suitable technology

PET Europe
FI Consortium

Novel Technology Development under EU 2022/1616. Registration and Monitoring, journey towards authorization as a suitable technology

Individual Recyclers

Registration done. Awaiting individual authorization decisions

Introduction: Who we are

- Representing all the technologies that depolymerize PET (aka Polyester in the textile industry)
- Depolymerization uses a major chemical or biological reaction in one solvent (hydrolysis, methanolysis, or glycolysis) to produce a finite number of monomers or shorter polymer chains (oligomers), that are stable, that can be isolated, quantified and traceable.
- This is different from pyrolysis and gasification
- Depolymerization has high yields and easily traceable materials
- We have all the technologies represented within the group
- New members: Depoly (Hydrolysis) and Polymetrix (Glycolysis)
- All working to meet the market as early as 2025 and beyond

What are we doing today: Packaging

Depolymerization is key to meet recycle content for the packaging

- The depolymerization group is focusing on feedstock that cannot be recycled by thermomechanical processes to be circular and are complementary to them
- We will have an update on regulation, which is still evolving (recycled content calculation and chain of custody)
- Last October 1616-2022 cleared the way for some technologies but it is still unclear for the ones coming back to monomers falling under EU n°-10-2011
- BHET Task Force to address authorization and registration of the oligomers
- We will also update on flake injection

What are we moving to: Textile

Textile circularity the next big deal for Depolymerization

- We have launched a textile WG to prepare the use of textile as a feedstock and support the EU on their plan to make textile circular
  - Waste Framework directive: textile collection by 01/01/2025 and EPR impact
  - REACh: restriction and limitation on textiles chemicals (PFAS)
  - EU strategy for sustainable and circular textiles
  - Waste Shipment Strategy: waste transport within EU and limiting exportation
  - Ecodesing for sustainable products Regulation
  - Packaging and Packaging Waste Directive: reduction of packaging waste and soon a regulation
  - Textile labelling regulation: improve labelling on textiles (physical and digital)
- We will have an update on the working group tasks
- At last, but not least, all the technologies represented will give an update on their developments and achievements in the past 12 months

Conclusion

Depolymerization will contribute to SUP

- Thanks to everyone for their contribution and supporting the development of recycling depolymerization technologies
  - Enhanced circularity, new feedstock (trays, colored flake, multi-material, textile), high yield, good LCA… are key contributors to their developments
- We clearly see their complementarity to mechanical recycling and their potential for EU to meet the circularity and recycling targets
  - We have work to do with the commission (SUP wave 2)
  - Define a mass balance model for the recycling content calculation
- We have work in progress to continue get our technologies known and positioned within the recycling industry
  - Position paper under writing, including AUDITABLE and TRANSPARENT Chain of custody → **TRUST**
- More will come on the textile side as there is a huge feedstock to recycle