

Speaker:

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Titel:

Advanced recycling of post-consumer PVC waste and legislation

Abstract

PVC recycling is challenged by complex formulations, legacy additives, and heterogeneous waste streams that limit the effectiveness of conventional mechanical recycling beyond controlled applications. To unlock higher circularity, a shift is required from polymer-focused recycling towards a multi-component resource recovery approach, viewing PVC waste as a source of polymer, additives, minerals, and embedded critical elements.

This presentation introduces fit-for-purpose recycling pathways tailored to waste composition. Compliant PVC streams can be mechanically recycled, while legacy-containing waste requires advanced treatment to produce virgin-like PVC resins and recover secondary value streams. These include the separation of mineral fractions and trace elements, as well as the conversion of legacy plasticisers into valuable products.

By combining sorting, targeted processing, and modular system design, this approach enables improved resource efficiency, regulatory compliance, and higher-value outcomes, supporting the transition from waste management to value-driven PVC circularity.