POLYVINYLBUTYRAL (PVB): A BOOST IN THE RECYCLING

An innovative approach of the Sunrise project

Manual of good management practice

Baudouin Ska FERVER

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Speaker presentation

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How to move from present practices focused on glass, to future practices preserving the unique properties of PVB?

- **Tod**

- **Ensure an efficient, cheap and easy separation of laminated glass in:**
  - **Glass fraction for further processing and recycling**
  - **PVB-fraction with limited glass content for disposal or recovery**

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How to move from present practices focused on glass, to future practices preserving the unique properties of PVB?

- **Tomorrow**
  - **Preserve the PVB from degradation as from the collection through the entire processing :**
    - **Keep dry**
    - **Avoid direct exposure to UV-light**
    - **Preserve from external contamination (dust, other stored materials / waste)**
  - **Depending on the final recycling destination and process:**
    - **Further glass extraction (dry process) or not (intermediate solution phase)**
    - **Avoid addition of chemicals**
    - **Pre-processing of flakes in pellets**

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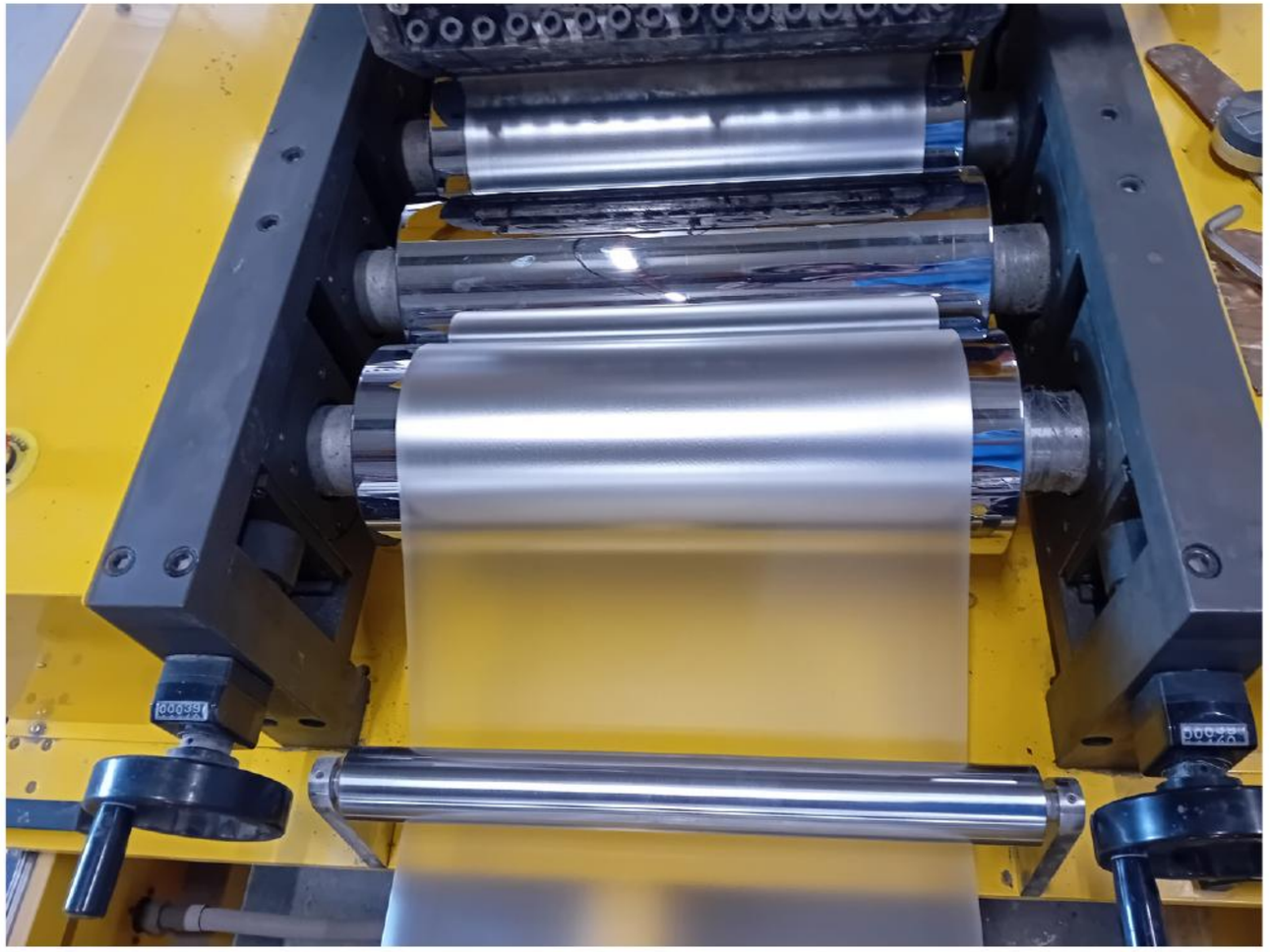
Requirements for an optimal use of Recycled PVB in closed-loop applications

- Traceability
- Origin of the laminated glass
  - Construction (renovation / Demolition), age
  - Automotive : Brand, age, acoustic, non-acoustic
- Storage conditions
  - Packed (i.e. big bags)
  - Storage time
  - Moisture
  - Light protection
  - Clean environment

- Properties
  - Colour: transparent
  - Light transmittance > 87%
  - Moisture: < 0,8%
  - Ash: < 1%



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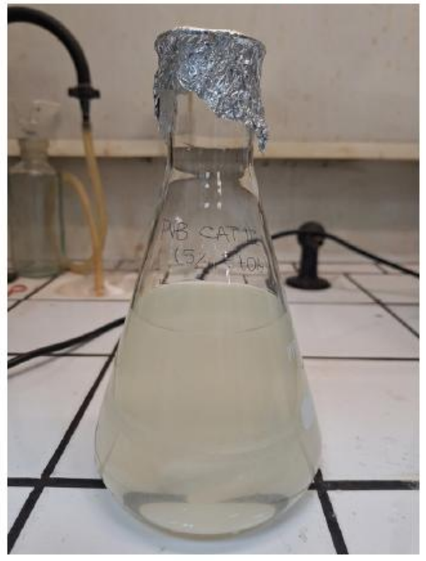
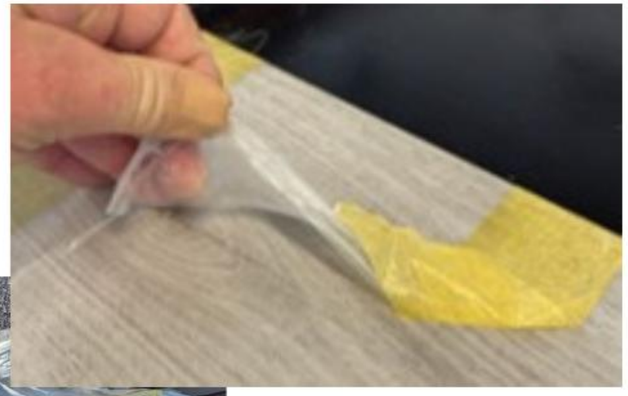
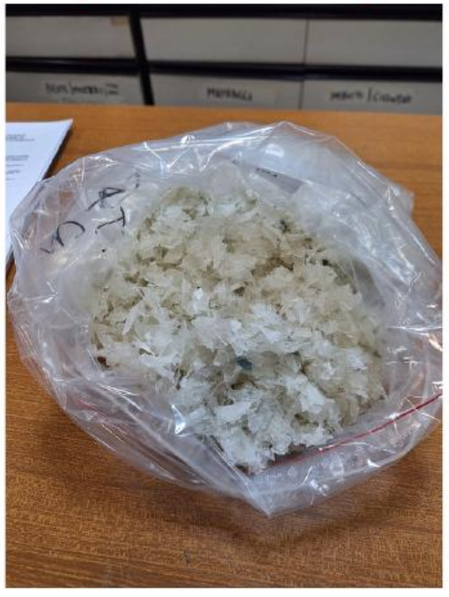
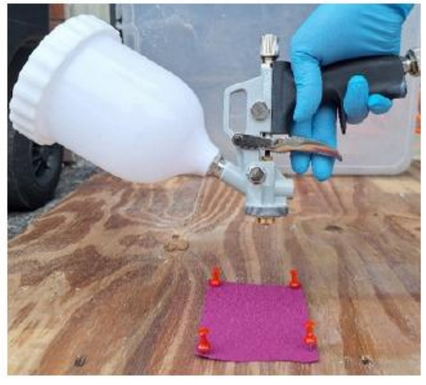
Requirements for Recycled PVB in open loop / lower quality applications









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Requirements for Recycled PVB in open loop / “lower“ quality applications

- **Solution / dispersion**
- **Residual glass content is manageable**
- **Need to stabilize the dispersion (min dry content)**

- **Flakes**
- **Storage conditions ensuring separability of the flakes**
- **Avoid addition of anti-cohesion agents (i.e. Ca CO3)**

- **Pellets**
- **Control of production temperature**
- **Avoid addition of additives**
- **Reduce the colour changes**

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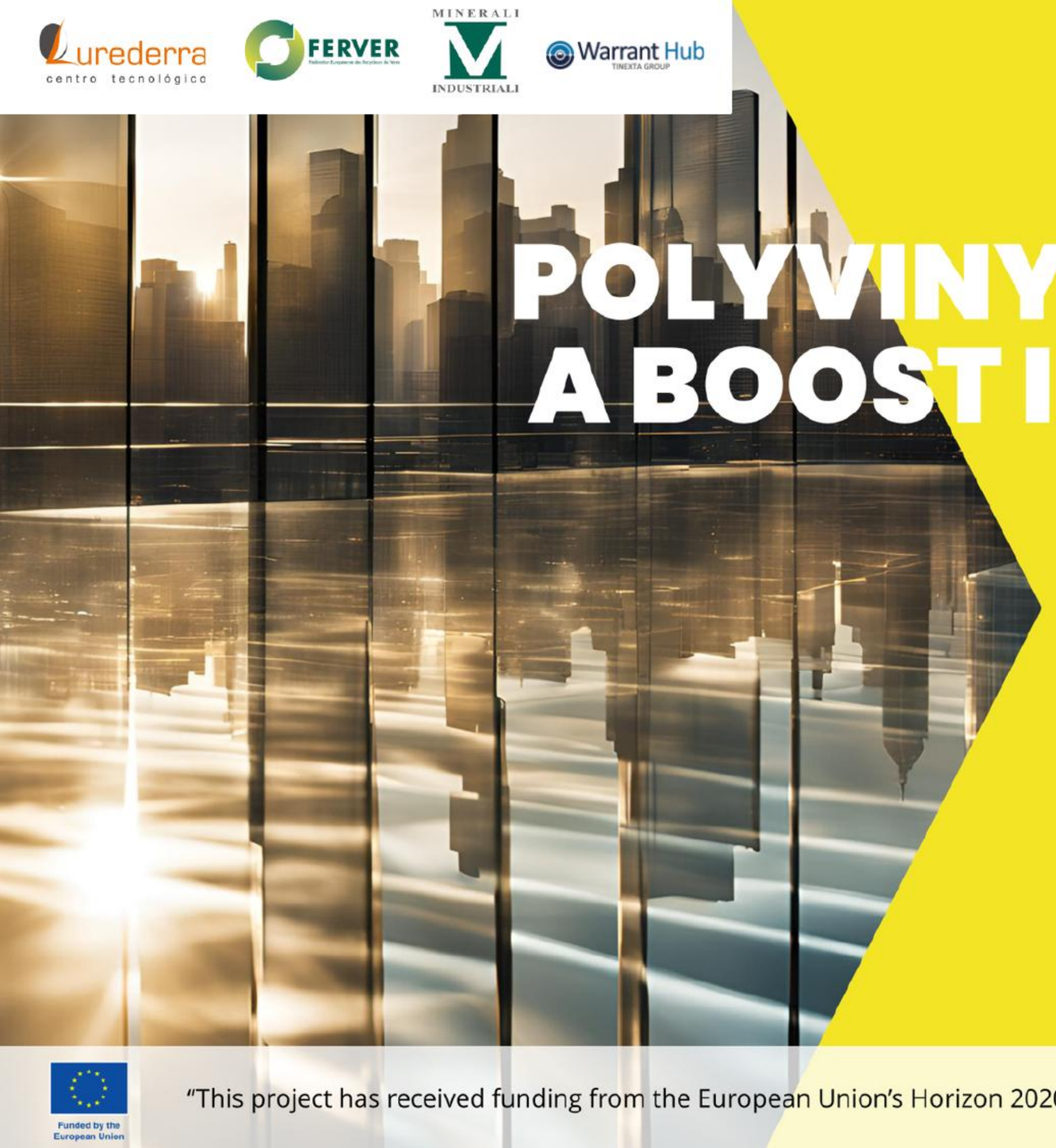

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Thanks for your attention!

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