Mono-material Film Selection Checklist

RecyClass v3.1 Aug 2025, CEFLEX D4ACE Sept 2025, PPWR (EU) 2025/40 · Edition I — April 2026

5 steps before ordering · Follow the steps in order — each step conditions the next.

1 Product category

- Food: compliance with Reg. (EU) 1935/2004 + 10/2011 + 2025/351 + supplier DoC
- Medical: ISO 11607 + MDR (EU) 2017/745 + sterilisation testing
- Cosmetic: chemical compatibility with the product formulation

2 Barrier requirements

- Define the required OTR ($cm^3/m^2/day$) based on shelf-life and sensitivity
- Define the required WVTR ($g/m^2/day$)
- Check whether the mono-material structure meets the requirement
- OTR under 0.01 $cm^3/m^2/day$: recyclable mono-material does not yet cover this

3 Production-line compatibility

- Seal temperature: PE 110-140°C · PP 130-160°C · MDO slightly higher
- Check whether the equipment has PID temperature control on the jaws
- Plan 1-3 days of trial runs and parameter setting before production

4 Regulatory compliance

- Assess the structure on the RecyClass Online Tool (free) → Class A/B/C
- Check that the score obtained is A or B → PPWR 2030 compliance
- Request a DoC from the film manufacturer (Reg. (EU) 10/2011, post 2025/351)
- Check the absence of carbon black, PVDC and PET in the PE or PP structure

5 Final validation

- Accelerated shelf-life testing (minimum 4 weeks under simulated conditions)
- Mechanical resistance testing: drop test, puncture test, seal strength
- Written confirmation of RecyClass compliance from the supplier
- Formal certification: Centexbel / GAIKER / Proplast · 6-12 weeks · EUR 3,000-8,000

PPWR deadlines: DoC mandatory from 12 August 2026 · Grades D-E banned from 1 January 2030 · Class C banned from 1 January 2038

Sources: *RecyClass v3.1 Aug 2025 · CEFLEX D4ACE Phase 2 Sept 2025 · PPWR (EU) 2025/40 · Reg. (EU) 10/2011 + 2025/351*

v1 · vlmpoliplast.ro/en/resources/ — Always check the latest version online.