

RecyClass

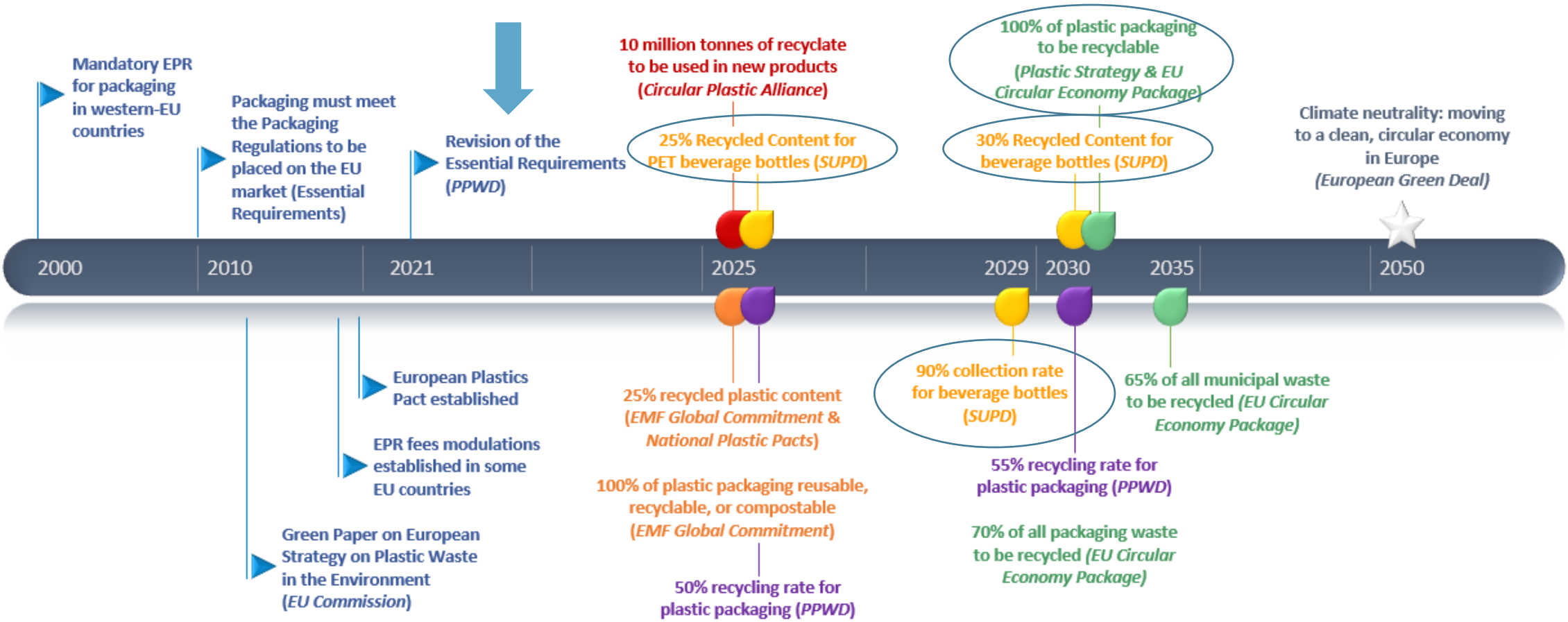


Recyclability and recycled content with RecyClass

Petcore Annual Meeting – June 15, 2022

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Plastics Recyclers Europe and Head of RecyClass
fabrizio.digregorio@plasticsrecyclers.eu

RecyClass | THE CIRCULARITY JOURNEY

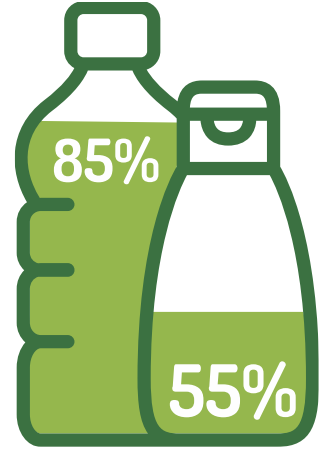


Multiple commitments and legislative targets to achieve

RecyClass



RECYCLABILITY



RECYCLED
CONTENT

RecyClass | MEMBERS & SUPPORTERS

BRANDS & RETAILERS



CONVERTERS



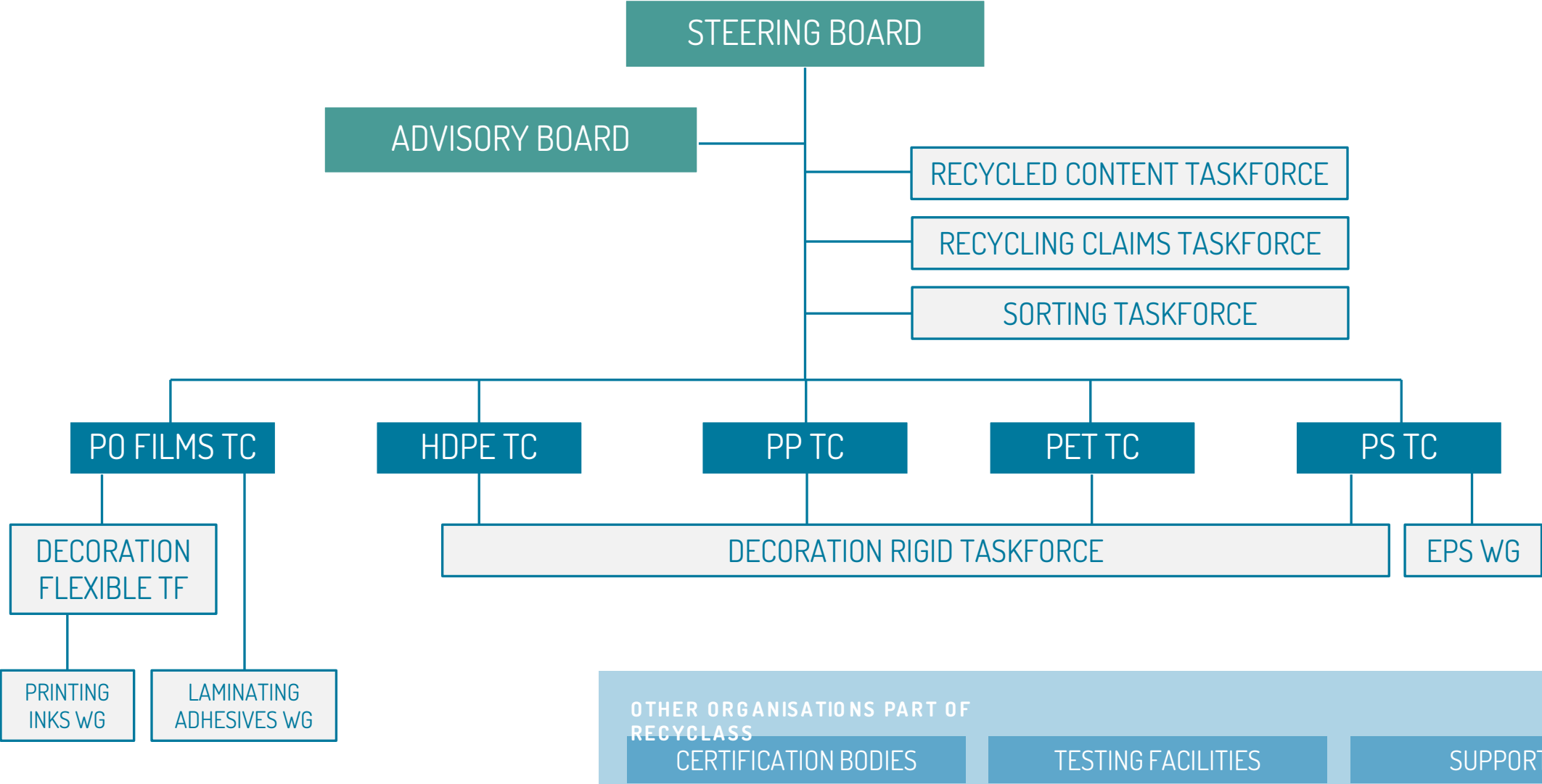
RAW MATERIAL PRODUCERS



SUPPORTERS



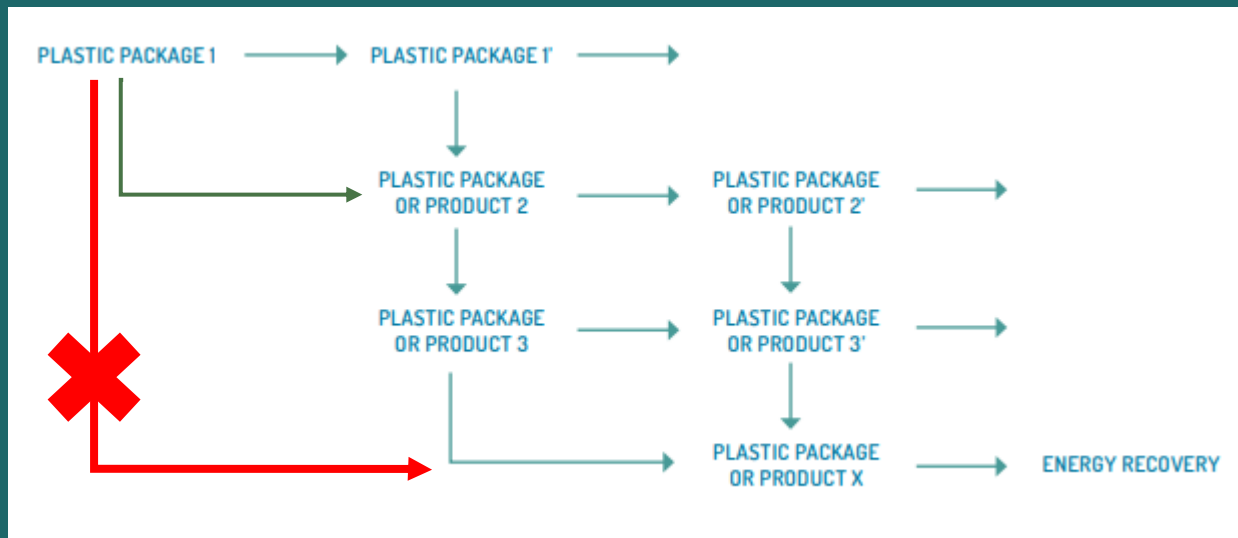
RecyClass | RECYCLASS STRUCTURE



RecyClass

WHAT DOES CIRCULARITY MEANS

‘A circular economy is one that is restorative and regenerative by design and **aims to keep products, components and materials at their highest utility and value at all times**’ (MacArthur, 2015)

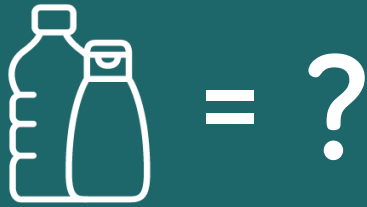


In some cases, functionality requirements make it difficult to design packaging for closed-loop recycling systems.

Designs enabling **expanded multi-step cascaded recycling** remain favourable, for such situations;

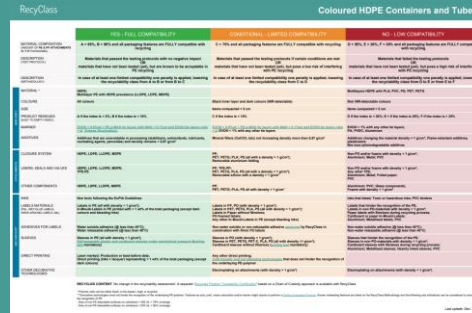
RecyClass | HOW DOES RECYCLASS WORK ?

TESTING PROTOCOLS



- **Lab testing** of innovative plastic packaging vs control material
- Comparison of properties
- **Technology/Product Approval**

DESIGN FOR RECYCLING GUIDELINES



The screenshot shows a table with three columns: 'THE RECYCLABILITY OF...', 'DESIGN FOR RECYCLING GUIDELINES', and 'THE RECYCLABILITY OF...'. The table contains detailed technical specifications and design recommendations for various plastic packaging materials.

- Design guide & recommendations for plastic packaging
- Design for Recycling (DfR) Guidelines transposed in the tool
- Assessing **overall recyclability** of a finished package

RECYCLABILITY ASSESSMENTS



- Recyclability Self-Assessment with the RecyClass **Online Tool**
- RecyClass Team support
- **Recyclability Certification**

RecyClass

DESIGN FOR RECYCLING GUIDELINES

FULL COMPATIBILITY

Green column gathers the preferred design features, that guarantee the best recyclability and quality of the recycle.

LIMITED COMPATIBILITY

Yellow column lists the second choices for each packaging features, that have been tested, known, or supposed to slightly impact the recycling and/or the quality of the recycle.

LOW COMPATIBILITY

Red column classifies the detrimental and disqualifying features that should be avoided when designing a packaging, as strongly impacting the recycling and/or the quality of the recycle.



PET bottles (clear/light blue and colored)



Clear PET trays



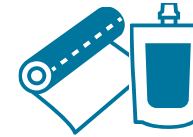
HDPE containers & tubes (colored and transparent)



PP containers & tubes (colored and transparent)



EPS fish boxes



PE films (colored and natural)



PP films (colored and natural)



PS colored containers



Crates and Pallets



EPS white goods



Full Alignment with EPBP and Petcore on PET bottles and trays

RecyClass | HOW TO CLAIM RECYCLABILITY ?

DESIGN FOR RECYCLING GUIDELINES

The image shows a table titled 'RecyClass Coloured HDPE Containers and Tubes'. The table is divided into three columns: 'Highly Recyclable', 'Recyclable', and 'Not Recyclable'. Each column contains detailed technical specifications and requirements for different types of containers and tubes, including material grades, wall thicknesses, and design considerations. The table is color-coded: green for highly recyclable, yellow for recyclable, and red for not recyclable.

- Design guide & recommendations for plastic packaging
- Design for Recycling (DfR) Guidelines transposed in the tool
- Assessing **overall recyclability** of a finished package

RECYCLASS TOOL



- Recyclability Self-Assessment
- RecyClass Team support

RECYCLABILITY CERTIFICATION



- Recyclability **Assessment** by recognized Certification Bodies

DESIGN FOR RECYCLING ASSESSMENT



- Qualitative Assessment: **ranking from A to F**
- Valid for the **EU market**
- Based on the **European plastic waste streams**
- Packaging design, sorting behaviour, end-markets included

RECYCLABILITY RATE ASSESSMENT



- Quantitative Assessment: **% of recyclable content, in addition to class ranking**
- **Country-specific**
- Based on the **local collection and availability of infrastructures**
- Packaging design, sorting behaviour, end-markets included



RecyClass | RECOGNIZED CERTIFICATION BODIES

- HARMONIZED DESIGN FOR RECYCLING GUIDELINES
- HARMONIZED RECYCLABILITY METHODOLOGY



BRAZIL



SPAIN



EU 27+3



AUSTRIA



GREECE, SERBIA



FRANCE



ITALY, SPAIN, PORTUGAL



NORWAY



UK, IRELAND



PLASTSHIP
Your plastic recycling network

GERMANY



SWITZERLAND

RecyClass

RECYCLABILITY RATE CERTIFICATE

THIS CERTIFIES THAT

PRODUCT NAME

BRAND NAME

LEGAL COMPANY NAME AND ADDRESS

The product and equivalent products listed in Annex I were assessed and certified according to RecyClass Recyclability Methodology (version 1.1) and Design for Recycling Guidelines (Feb. 2021), hereby obtaining the following recyclability rate and class:

90%

RECYCLABILITY

The value represents the proportion of material in the packaging that is recoverable and valuable for the recycling stream.

ABCDEF

The certificate and its result are valid for: France, Germany, Spain and Italy

Audit Report and Certificate Registration Code: _____

Date of issue of Certificate: _____

Date of expiration of Certificate: _____

CERTIFIED BY:

NAME OF AUDITOR
Title of auditor

CERTIFICATION NAME
Certification address

*Validity conditions and terms of use may be found in the Audit Scheme documents.

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[Detailed list and contacts of certification online](#)



Public interest in recycled content - **Reassure consumers, provide trust to end-users offering certified claims.**



Support corporate sustainability claims about recycled content targets.



Circular Plastics Alliance – record and certify your use of recycled plastics towards the **10 M t target.**



Show transparency - information about the waste origin and source.



Demonstrate compliance with legislation (B2B)– increasing regulation; address use of claims by a third-party verification.

- National Implementation of the **Plastic tax** (EN 15343:2007)
- **Single Use Plastics Directive** - target of 25% recycled plastics in bottles by 2025 (PET) and 2030 (beverage bottles).
- **Eco-modulation** of the EPRs fees based on criteria such as presence of recycled plastics.

RecyClass | CHALLENGES & RISKS



FREE ALLOCATION OF RECYCLED CONTENT

Recycled content calculation must refer to real percentages, not credit systems between products, production lines, plants, etc.



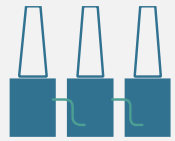
SELF-DECLARATION OF ORIGIN OF WASTE

Downstream users declaring origin of material must not be permitted. Origin of the waste must be verified in case of Certification.

RecyClass | FOCUS & SCOPE

→ Certification **recognises the use of recycled plastics in products** via an independent third-party audit. Certification is granted to a process linked to a product or group of products.

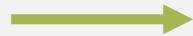
→ Audit Scheme verifies the traceability of recycled material in different process steps throughout **the whole chain of custody of the recycled material**.



RECYCLER



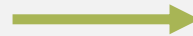
Traceability
Certification
EN 15343



COMPOUNDER



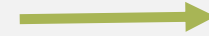
Recycled Content
Traceability
Certification



CONVERTER



Recycled Content
Traceability
Certification



PRODUCER

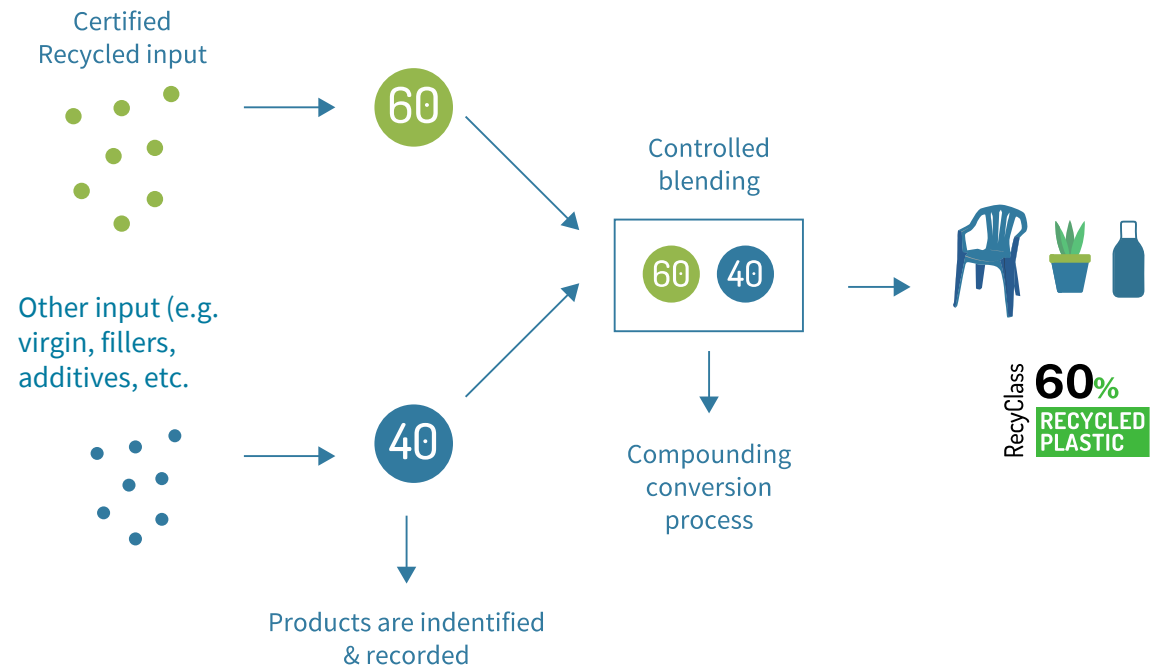


Recycled Content
Traceability
Certification

RecyClass

CONTROLLED BLENDING CHAIN OF CUSTODY

- Certification follows a **controlled blending approach** as a chain of custody model as described in ISO/IEC 22095:2020.
- The certification relates to recycled plastics when mixed with other materials or substances resulting in a **known proportion of recycled content of plastics** in output products.
- Focus on the **physical presence** of recycled plastics in the output.



Documentation available online

RecyClass | 2022 DEVELOPMENTS

CONFORMITY ASSESSMENT SCHEME APPROVED BY THE EUROPEAN CO-OPERATION FOR ACCREDITATION

- RecyClass CAS **positively evaluated by EA according to ISO 17065.**
- Recognised certification bodies to operate under accreditation within transition period of 2 years.

ALIGNMENT WITH CPA AUDIT FRAMEWORK*

- Version 2.1 of the Audit Scheme has been adapted to be compliant with the CPA Audit Framework requirements.
- Addition of an Annex to report the data for each data point.
- To be used as a verification of use of recycled plastics in a site/process.
- **Official approval by the CPA Monitoring WG**

RecyClass Recycled Plastics Traceability Certification ready for accreditation



RecyClass Conformity Assessment Scheme positively evaluated by the European co-operation for Accreditation

With the positive evaluation by the European co-operation for Accreditation, Recycled Plastics Traceability Certification becomes the go-to standard for companies that want to comply with the standard EN 15343:2007 and to stay in line with the market. The scheme verifies and certifies the origin, as well as the traceability of the material beyond packaging, virtually any plastic products in line with the current market developments.

“It is a clear signal to all the actors of the value chain who are looking for a credible scheme to certify the circularity of their plastic products. This positive evaluation will bring confidence to both downstream and end-users. We will continue to work on our tool which will constitute major support for the companies willing to increase their use of recycled plastics” he added.

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8: ANNEX I: CIRCULAR PLASTICS ALLIANCE

The following Annex verifies the tonnages to be reported to a CPA compliant Data Collector to count towards the monitoring of recycling and uptake of recyclates in the EU.

This Annex applies only to converters following the CPA definition.

The following data points were evaluated and verified for the period XXX.
The following data is compliant with Traceability **Level 1**.

8.1 CONVERTER'S TOTAL INPUT

Specify the Converter's Total Input value and the period assessed below to be declared.

Assessed period	Polymer type	Country of origin (EU+UK (specify country) or non-EU)*	Type of material (Pre-consumer/ Post-consumer)**	Source of material (sector)**	Tonnage (t)
TOTAL					

*Reporting optional for Traceability 2

**Report only for Traceability Level 1

Detail how the calculation was done to obtain the value and verify it is plausible.

Check if any Converter's Input was supplied by a trader. If this is the case, keep in mind that traders and compounders are subject to the same information obligation as recyclers (according to either Traceability level 1 or 2).

If the plant has received any material which has been refused that is recorded. That material cannot be included in the reported tonnages.

8.2 CONVERTER'S OUTPUT

Specify the Converter's Total Output value and the period assessed below to be declared.

RecyClass | RECOGNIZED CERTIFICATION BODIES

Certificates are issued by recognised Certification Bodies only



B-Pack BVPA

Sachverständigenbüro M.
Ahaus



Detailed list and contacts of certification [online](#)

RecyClass | USE OF CLAIMS

Guidance detailing when and how to use RecyClass **claims and logos** by certified companies and products for both **B2B and B2C communications**.

RECYCLABILITY:

- Technology/Product Approval for final packaging
- Letter of Compatibility for semi-finished packaging
- Design-for-Recycling Certification for plastic packaging
- Recyclability Rate Certification for plastic packaging

RECYCLED CONTENT:

- Recycled Plastics Traceability Certification for plastic products



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PET: A SYNERGIC VALUE CHAIN APPROACH



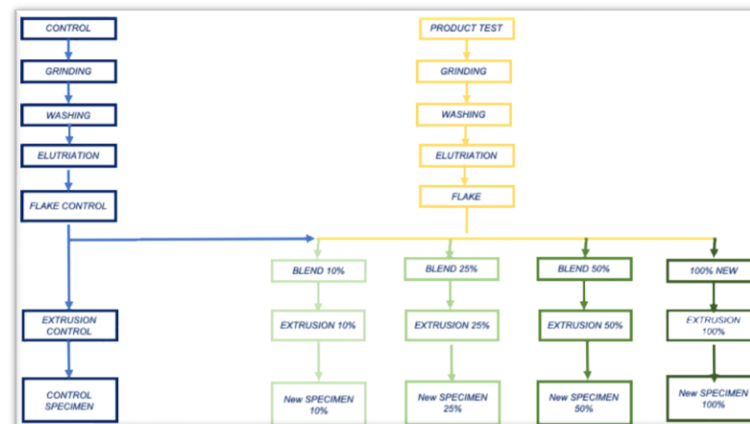
RecyClass

Develops and maintains testing protocols and manage applications to assess PET bottles recyclability

Develops and maintains testing protocols and manage applications to assess PET trays recyclability

Recyclability Methodology (based on EPBP & Petcore guidelines) and certification for recyclability and recycled content

Process steps		
Pellets		
Bottles		
Grinding		
Washing		
Air elutriation		
Flakes		
Flake mixing (2, 5, 10, 25 and 50% test)		
Extrusion to pellets		
Route 1	Route 2	Route 3
Solid stating for Colour	Solid stating for 0.80 IV	Crystallization pellets
Pellet blending (50/50)	Pellet blending (50/50)	Fibre spinning
Injection Molding plaques	Injection Molding Preforms	Film extrusion (gels/specks)
Testing Plaques on colour	Blow molding bottles	
	Testing bottles	



A graphic consisting of four thick, light blue curved arrows arranged in a circle, pointing clockwise. The arrows are positioned around the central text, creating a circular flow effect.

RecyClass

PLASTICS FUTURE IS CIRCULAR