



# RecyClass FOR BEGINNERS

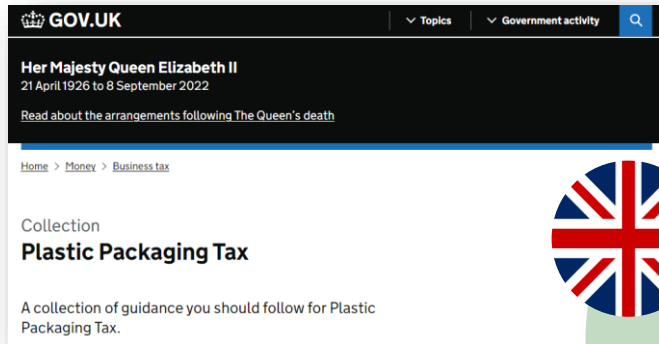
How to calculate & verify  
recycled content in plastics?

5 October 2022

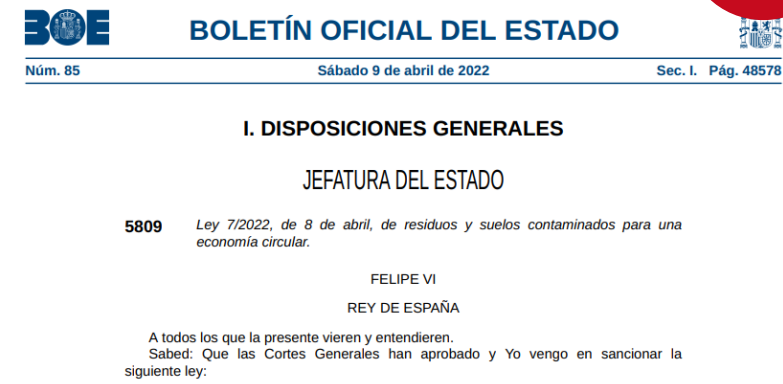
Mireia Boada, Project Manager, Plastics Recyclers Europe  
Davide Ricci, Recycling Analyst, Plastics Recyclers Europe



# RecyClass | STATE OF PLAY



National  
implementation  
of the **plastic  
tax**

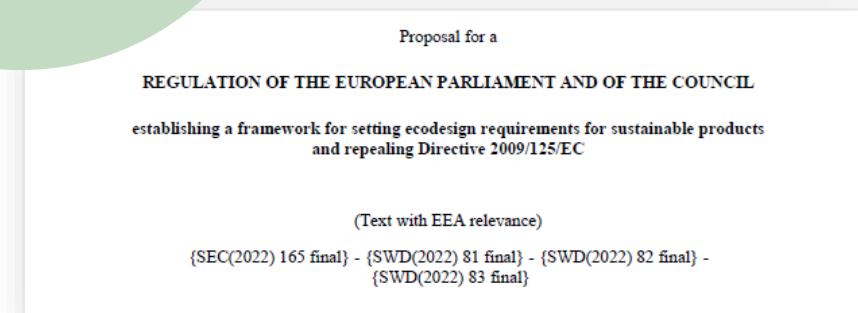


**Legislative  
developments**  
Demonstrate  
compliance with  
legislation (B2B)

**Eco-  
modulation  
of the EPRs  
fees**

The  
**2021\***  
rate for recycling  
household  
packaging

**Single Use  
Plastics Directive**  
25% rPET in  
beverage bottles  
by 2025 and 30%  
by 2030



# RecyClass | STATE OF PLAY



# WHY CERTIFICATION?

**Traceability.**



**Transparency.**



**Trust.**



# RecyClass | CERTIFICATION



**Demonstrate transparent use of recycled plastics** in products within every step of the value chain.



**Trace recycled** plastics within a process and **verify** the declaration of a certain **percentage of recycled content** in products.



Third-party certification



# RecyClass | MEMBERS & SUPPORTERS

## BRANDS & RETAILERS



## CONVERTERS



## RAW MATERIAL PRODUCERS



## SUPPORTERS



# RecyClass | OUR KEY DRIVERS



## RecyClass Vision

- Making **plastic circular** by ensuring all products are recyclable and by **promoting transparent uptake of recycled content** in new products **in line with the circular economy**.



## RecyClass Commitments

- **Reliable & transparent:** based on traceability standard EN 15343 referenced in legislation.
- **Reflecting reality:** based on robust calculation and chain of custody models (ISO 22095) along the entire plastics value chain.



**Circularity:** endorsement of the EMF definition & listed as mandatory requirement of the recyclability definition (jointly developed with APR – USA)

Source: <https://recyclass.eu/recyclability/definition/>



# RecyClass | RECYCLASS CERTIFICATIONS

- **Recognition of use of recycled plastics** via third party audits (post and pre consumer).
- **Traceability of recycled plastics** through the value chain & calculation recycled plastic percentage.

EN 15343:2006  
Plastics – Recycled  
Plastics – Plastics  
recycling  
traceability and  
assessment of  
conformity and  
recycled content

ISO 22095:2020  
Chain of Custody  
General  
terminology and  
models  
**Controlled  
blending model**

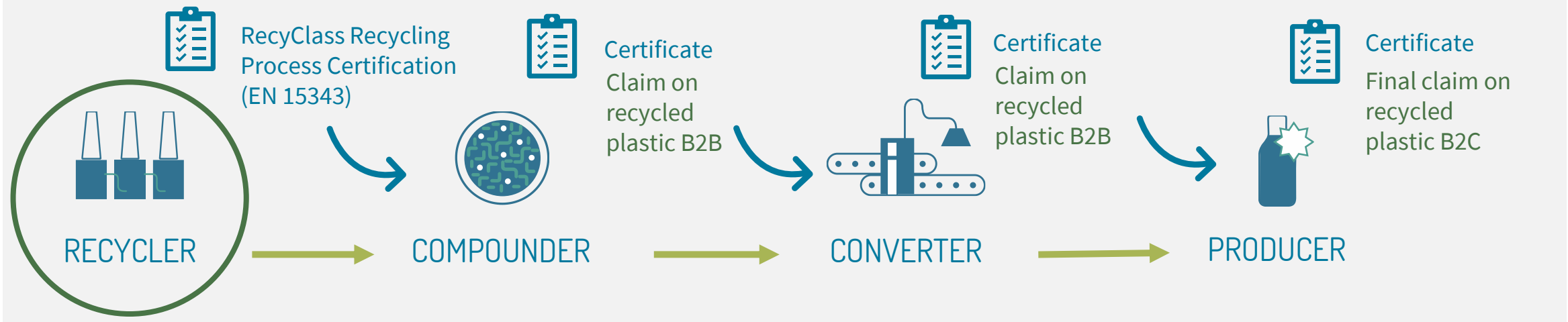
## Certification avoids:



Free allocation of recycled content




Self-declaration of origin of waste



RecyClass | CERTIFICATION FOR RECYCLING PROCESS

# CERTIFICATION FOR RECYCLING PROCESS

<h1 style="text-align: center;">RecyClass</h1> <h2 style="text-align: center;">RECYCLING PROCESS CERTIFICATE</h2>	
<b>Name of the recycler: Name of the recycler</b>	
<b>Address:</b> Address Country: Country Registration office address: Address Country: Country	
<p>The audited recycling process and associated management systems have met the requirements of Recycling Process Audit scheme Version 1.0, in line with EN 15343:2007 and has the required procedures in place in order to ensure the traceability of recycled plastics produced listed in the annex of this certificate.</p> <p><b>Certification compliant with EN 15343:2007.</b></p> <p><b>Certification Module:</b> e.g. general, food contact, cosmetics  <b>Type of audit:</b> e.g. monitoring  <b>Chain of custody model:</b> e.g. controlled blending  <b>Traceability level:</b> 1, 2 or 3  <b>Process overview:</b> e.g., sorting, washing, extrusion  <b>Input Plastic waste:</b> e.g., PET bottles  <b>Type and source of waste:</b> e.g., post-consumer, household - bottles  <b>Recycled Output:</b> e.g., PET flakes  Pre-processed waste outputs: No </p>	
<b>Audit Report and Certificate Code:</b> R008-67-23-AIM  <b>Date of the audit:</b> XX/XX/2022  <b>Period of validity:</b> XX/XX/2022 - XX/XX/2023  <small>*Validity conditions and scope of use may be found in the Audit Scheme documents</small>	<b>CERTIFIED BY:</b>  <b>Name of the auditor</b> Lead auditor  <b>Certification Body name</b> Address  <div style="text-align: right;">   Click on icon to add Certification Logo   Certification Body is accredited by  Name of AB under the certificate no. XX </div>

[illegible]

## RECYCLING PROCESS CERTIFICATION

- Eligibility: Waste management of plastics
- Process certification → Covers groups of products under 1 certificate
- Reliability of traceability and origin of recycled plastics endorsed by RecyClass



# RcyClass

# RECYCLED PLASTICS CERTIFICATION

# RecyClass

## RECYCLED CONTENT TRACEABILITY CERTIFICATE

### ENTER COMPANY

COMPANY ADDRESS

Has been assessed in accordance with the Audit Scheme 1.0 in line with EN 15343:2007 and has the required procedures in place in order to ensure the traceability of recycled plastics incorporated in products listed in the attached Annex.

Type of products:

Type of process or operation:

Audit Report and Certificate Registration Code:

XXX-XXX-XX

Date of issue of certificate:

05/2012

Date of validity:

05/2012

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

Click on icon to add  
Certification Logo

CERTIFIED BY:

NAME OF THE AUDITOR

Title of auditor

CERTIFICATION NAME

Certification address

RecyClass - Avenue de Broezeplein 11, 1190 Woluwe-Saint-Pierre - Belgium - Phone: +32 2 512 24 80 - info@recyclass.eu - www.recyclass.eu

PAGE 1/X

\*\*\*\*\*

Name of product/family

Reference

%

%

Name of product/family

Reference

%

%

Name of product/family

Reference

%

%

Audit Report and Certificate Registration Code N°:

XXX-XXX-XX

Date of issue of certificate:

05/2012

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## RECYCLED PLASTICS TRACEABILITY CERTIFICATION

- Process certification → Covers groups of products under 1 certificate;
- Reliability of traceability and origin of recycled plastics endorsed by RecyClass;
- Claims of % of recycled plastics in products;
- Exposure on the RecyClass website as a certified company.



# RecyClass | AUDIT SCHEME DEVELOPMENT

## RecyClass Recycled Plastics Traceability Certification ready for accreditation



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

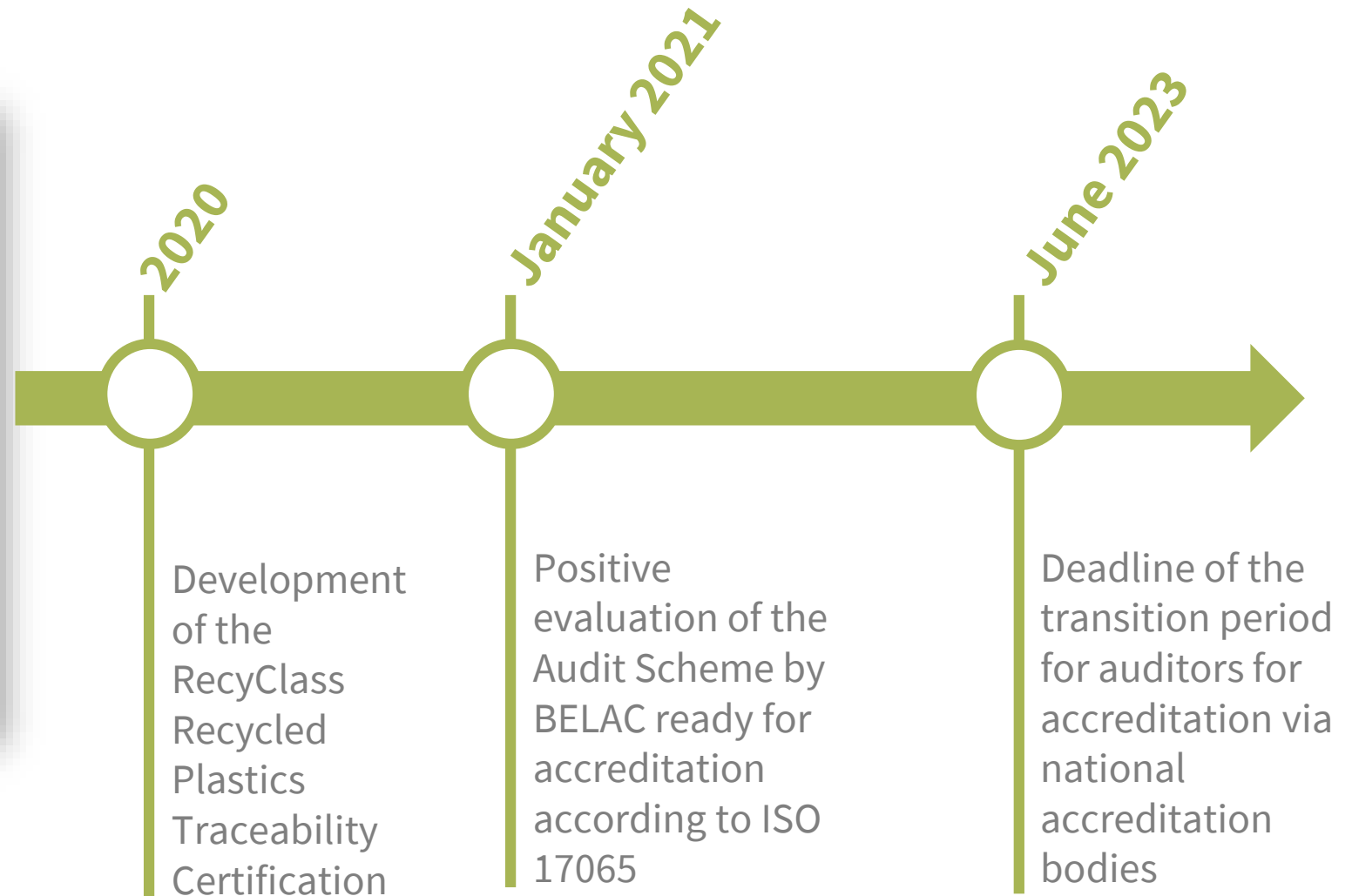
With the positive evaluation by the European co-operation for Accreditation (EA)'s, RecyClass Recycled Plastics Traceability Certification becomes the go-to scheme for companies that want to comply with the standard EN 15343:2007 and to stay ahead in the circular transition. The scheme verifies and certifies the origin, as well as the percentage of recycled content in, beyond packaging, virtually any plastic products in line with the latest market and regulatory developments.

"It is a clear signal to all the actors of the value chain who are searching for a reliable and credible scheme to certify the circularity of their plastic products", said Paolo Gleran, Chairman of RecyClass. "This positive evaluation will bring more transparency on the market and give confidence to both downstream and end-users. We are convinced that such a robust tool will constitute major support for the companies willing to substantiate their commitment on the use of recycled plastics" he added.

The positive evaluation by the European co-operation for Accreditation (EA) comes as an important milestone for RecyClass whose overarching objective is to drive harmonisation for advancing plastics circularity in Europe and beyond. The approval for RecyClass Recycled Plastics Traceability Certification<sup>[1]</sup> officially attests to the highest standards, operational procedures, and its impartiality.

The scheme was positively evaluated as a scheme based on product certification (ISO/IEC 17065) following the requirements of the European co-operation for Accreditation (EA) for the Evaluation of Conformity Assessment Schemes.

Furthermore, the positive evaluation will support the verification and finally the uptake of recycled content in the market while raising awareness about the importance of verification.



# RecyClass

1. What counts as recycled plastics?
2. How to trace the use of recycled plastics?
3. How to calculate the share of recycled plastics?



# RecyClass | RECYCLED PLASTICS DEFINITIONS

## Pre-consumer plastic

[ISO 14021:2016, 7.8.1.1]

**Material diverted from the waste stream during a manufacturing process.** Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

e.g. PET preforms

**(By-products have no waste status)** Re-work, regrind or scraps that can be reclaimed in the same process that generated it are excluded

## Post-consumer Plastic

[ISO 14021:2016, 7.8.1.1]

**Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product which can no longer be used for its intended purpose.** This includes returns of material from the distribution chain.

e.g. Household waste, commercial waste such as supermarkets

More information in the [CPA Guidance on Waste](#).

# RecyClass | RECYCLED PLASTICS DEFINITIONS

## Pre-consumer plastic

[ISO 14021:2016, 7.8.1.1]



(By-products have no waste status) Re-work, regrind or scraps that can be reclaimed in the same process that generated it are excluded

## Post-consumer Plastic

[ISO 14021:2016, 7.8.1.1]



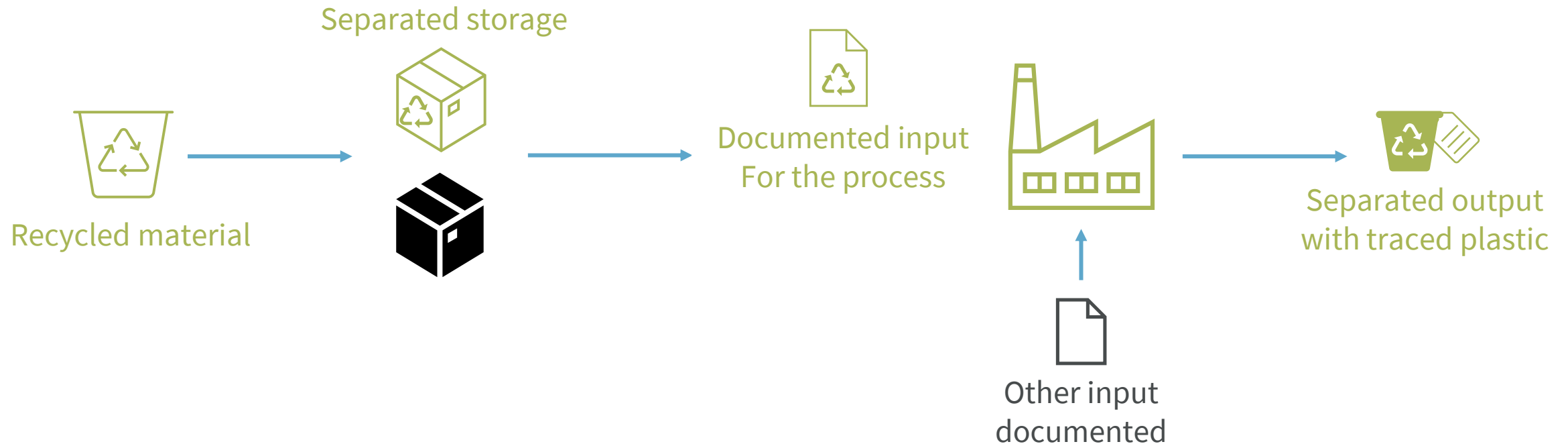
More information in the [CPA Guidance on Waste](#).

# RecyClass | TRACEABILITY WITHIN THE PROCESS

## Traceability

[ISO 22095, 3.6.1]

the ability to trace the history, application, location or source(s) of a material or product throughout the supply chain





	IDENTITY PRESERVED	SEGREGATION	CONTROLLED BLENDING	MASS BALANCE	BOOK & CLAIM
Physical traceability	✓	✓	✓	≈	✗
Physical presence of specified characteristics	✓	✓	✓	?	?
Mixing of specified characteristics with other inputs	✗	✗	✓	✓	✓
Possible claims	Contains 100% recycled plastics		Contains X% recycled plastics	<p>Contributes to the replacement of virgin plastics</p> <p>Company X used X amount of recycled plastics for X products.</p>	Generally, not used for recycled plastics.

# RecyClass | TRACEABILITY ALONG THE VALUE CHAIN: CHAIN OF CUSTODY MODELS

	CONTROLLED BLENDING	MASS BALANCE	BOOK & CLAIM
Physical traceability	✓	<pre> graph LR     A[Certified Recycled input] --&gt; B((60))     C[non-certified Recycled input (e.g. virgin)] --&gt; D((40))     B --&gt; E[Controlled blending]     D --&gt; E     E --&gt; F[Compounding conversion process]     F --&gt; G[Products]     D --&gt; H[Products are identified &amp; recorded]     G --- I[RecyClass 60% RECYCLED PLASTIC]           </pre>	
Physical presence of specified characteristics	✓		
Mixing of specified characteristics with other inputs	✓		
Possible claims	Contains <b>X%</b> recycled plastics		

# RecyClass | RECYCLED PLASTICS CALCULATION

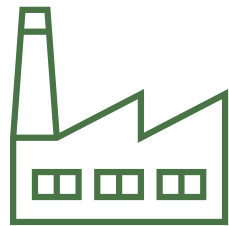
## Recycled content calculation

[EN 15343:2008]

share of Recycled Content for pre-consumer and post-consumer of a Product will be calculated as:

$$\text{Recycled content (\%)} = \frac{\text{Mass of Recycled input}}{\text{Mass of Products or Components}} \times 100$$

Throughout the process, the ratio between inputs and outputs is always known for a determined volume



Process records  
(Input/Output/Scraps)



Bills of Materials / Recipes  
of Materials

# RecyClass | HOW TO GET RECYCLASS CERTIFICATION

Contact a recognised Certification Body

 Application form



  
Documentation  
exchange and  
onsite audit

  
Audit Report  
draft preparation  
(Quality Control)



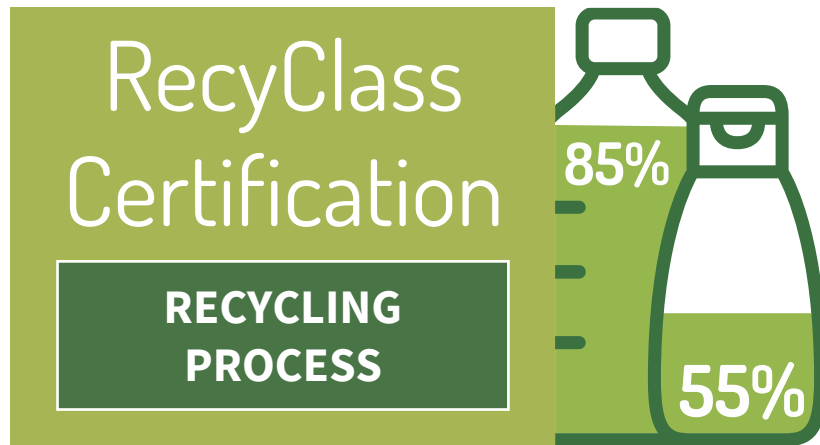
Certificate  
(Company listed on  
RecyClass Website)



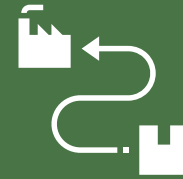
Detailed list and contacts of certification [online](#)

# RecyClass

## TO CONCLUDE



Controlled blending approach  
for Recycled Plastics



Physical traceability of the  
recycled plastic in the value chain



Compliance with EN 15343:2008,  
cited in national legislation,  
upcoming legal requirements



Clear statement of the actual  
content of recycled plastics in  
products



RecyClass  
FOR BEGINNERS

# Questions & Answers

Use the Q&A box in the top-right corner of your screen

*GET IN TOUCH WITH US!*

*info@recyclclass.eu*

*www.recyclclass.eu*





RecyClass  
FOR BEGINNERS

**Thank you for participating!**

**Save the date for the next webinars:**

14 December 2022

**GET IN TOUCH WITH US!**

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[www.recyclclass.eu](http://www.recyclclass.eu)

