RecyClass

PLASTIC FUTURE IS CIRCULAR

PETinar Conference – May 6, 2022
RecyClass for PET packaging

RecyClass

MISSION & VISION

Plastic Future is Circular

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

RECYCLABILITY

RECYCLED CONTENT

RecyClass | MEMBERS & SUPPORTERS

BRANDS & RETAILERS

P&G
DANONE ONE PLANET. ONE HEALTH
Unilever
ALDI
gsk
LAVAZZA
L'ORÉAL
Mondelēz International
AVON
essity
PEPSICO
COLGATE-PALMOLIVE
kao
Henkel
FERRERO
Orkla
SCHWARZ
Edgewell PERSONAL CARE
reckitt
ISDIN

CONVERTERS

Constantia Flexibles
Berry
amcor
Sealed Air
greiner packaging
NEOPAC THE TUBE
Milliken
Taghleef Industries
saes coated films Advanced coatings for sustainable solutions
LUMSON Cosmetic Packaging Industries
ALBÉA packaging and more
Huhtamaki
SILGAN DISPENSING
epl LEADING THE PACK
IPV PACK
DI MAURO flexible packaging
深圳市通产丽星科技集团有限公司 SHENZHEN BEAUTY STAR CO., LTD
Gualapack
Fuji Seal
IMPERIAL Polythene
Trioworld
Bisio progetti a Guala Group company
Guala dispensing a Guala Group company
BEWI for a better everyday
SACMI ENDLESS INNOVATION SINCE 1919
ATE ПЛАСТ

RAW MATERIAL PRODUCERS

Bostik smart adhesives
UPMRAFLATAC
coim
AVERY DENNISON
KURZ
SunChemical a member of the DIC group
BOREALIS Keep Discovering
SIEGWERK
ExxonMobil
kuraray
All4Labels GLOBAL PACKAGING GROUP
MCC PREMIUM LABEL SOLUTIONS
UBE
DOW
CCL
FEDRIGONI SELF-ADHESIVES
MITSUBISHI CHEMICAL
CLARIANT
Aptargroup
KRATON
BASF We create chemistry
YUPO®

SUPPORTERS

epro European Association Of Plastics Recycling & Recovery Organisations
Styrenics Circular Solutions
petcore EUROPE Pioneering PET circularity since 1993
Grønt Punkt Norge
FEICA
EuPIA
FINAT Linking the Label Community
EUMEPS
AGMPM
natureef
NTCP national test centre circular plastics
Searious BUSINESS
HPRC Healthcare Plastics Recycling Council

RecyClass

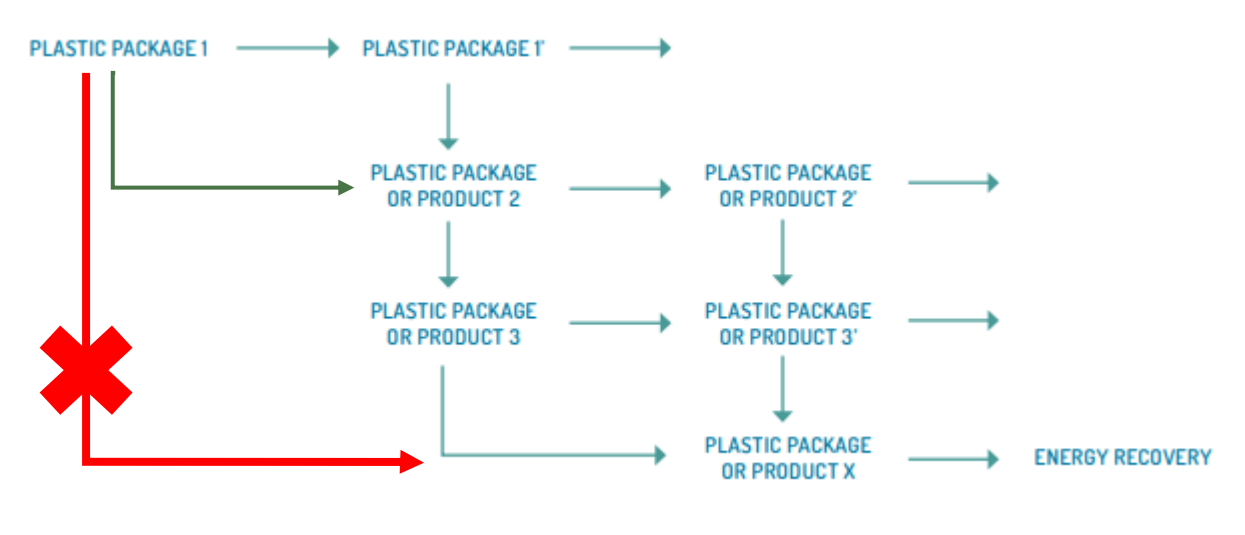
DESIGN FOR RECYCLING WITH RECYCLASS

DESIGN MATTERS!

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

WHAT MAKES A PRODUCT **RECYCLABLE** ?

The product must be **made with plastic that is collected** for recycling, has market value and/or is supported by a legislatively mandated program.

The product must be **sorted & aggregated into defined streams** for recycling processes.

The product **can be processed & reclaimed/recycled** with commercial recycling processes.

The recycled plastic becomes a raw material that **is used in the production of new products.**

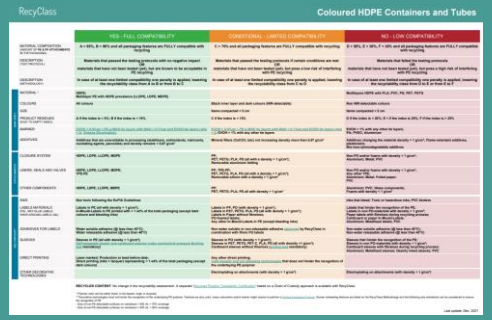
RecyClass | HOW DOES RECYCLASS WORK ?

TESTING PROTOCOLS

= ?

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

DESIGN FOR RECYCLING GUIDELINES



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

RECYCLABILITY ASSESSMENTS

RecyClass A ABCDEF RECYCLABILITY

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

RECYCLABILITY CLASSES

CLASS A
The packaging does not pose any recyclability issues and the recycled plastics can potentially feed a closed-loop scheme to be used in the same quality application.

CLASS B
The packaging has some minor recyclability issues that slightly affect the quality of the recycled plastic generated. However, majority of recycled plastics from this packaging can still potentially feed a closed loop.

CLASS C
The packaging presents some recyclability issues that affect the quality of the recycled plastics or lead to material losses during recycling. In the first case the recycled plastic could be used in a cascade open-loop scheme, whereas in the latter case the plastic could potentially feed a closed loop scheme.

CLASS D
The packaging has significant design issues that highly affect its recyclability or imply large material losses. In both cases the recycled plastic can only be fed into low-value applications (i.e. the packaging will be downcycled).

CLASS E
The packaging has major design issues that jeopardize its recyclability or imply severe material losses. The packaging is not considered recyclable and can only be used in incineration with energy recovery.

CLASS F
The package is not recyclable at all, either because of fundamental design issues or a lack of specific infrastructure for collection, sorting and recycling in EU28+2.

RECYCLASS METHODOLOGY

1 EXISTING RECYCLING STREAMS & SORTABILITY

2 RECYCLABLE PLASTIC CONTENT

3 DESIGN INCOMPATIBILITIES (DfR guidelines)

4 EASY-TO-EMPTY / EASY-TO-ACCESS INDEX

5 REACH COMPLIANCE

RecyClass | RECYCLABILITY CERTIFICATION : FOR **FINAL PACKAGE**

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

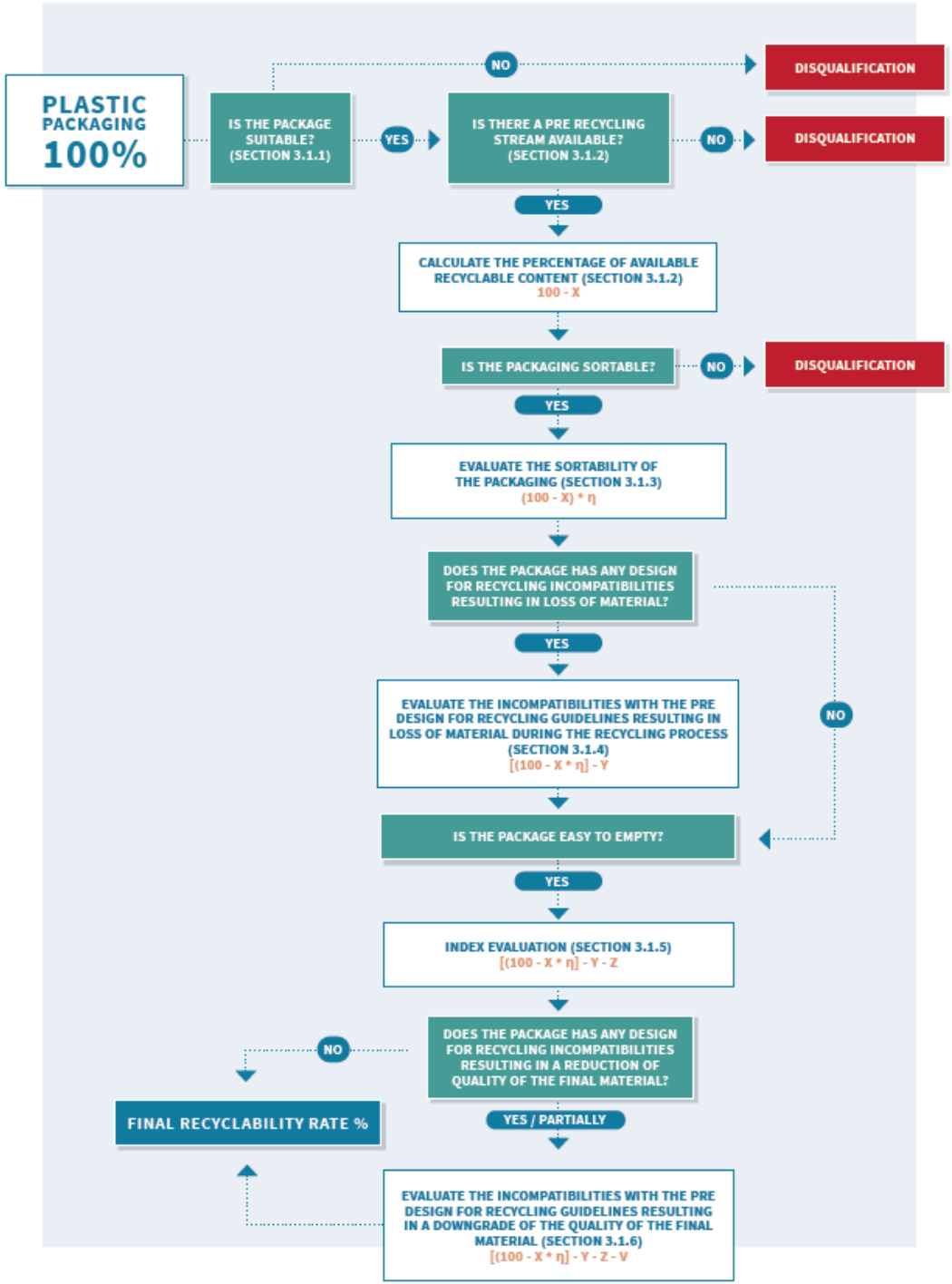
RECYCLABILITY RATE ASSESSMENT

\+ 90%

- 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

Detailed information online

RecyClass



COLLECTION AND LOCAL INFRASTRUCTURE

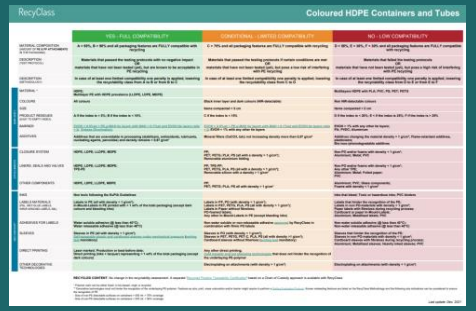
SORTABILITY

RECYCLABILITY (DfR)

END MARKET: ABILITY IN REPLACING VIRGIN PLASTIC

RecyClass | HOW TO CLAIM RECYCLABILITY ?

DESIGN FOR RECYCLING GUIDELINES



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

RECYCLASS TOOL

RecyClass A ABCDEF RECYCLABILITY

- Recyclability Self-Assessment
- RecyClass Team support

RECYCLABILITY CERTIFICATION


RecyClass
RECYCLABILITY RATE CERTIFICATE
THIS CERTIFIES THAT
PRODUCT NAME
BRAND NAME
LEGAL COMPANY NAME AND ADRESS
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 adress
PAGE N°X

- Recyclability **Assessment** by recognized Certification Bodies

RecyClass | RECOGNIZED CERTIFICATION BODIES

- HARMONIZED DESIGN FOR RECYCLING GUIDELINES
- HARMONIZED RECYCLABILITY METHODOLOGY

AcePlas
BRAZIL

AIMPLAS PLASTICS TECHNOLOGY CENTRE
SPAIN

CIRCPACK by VEOLIA
EU 27+3

CIRCULAR ANALYTICS
AUSTRIA

HELLAS
GREECE, SERBIA

IPC
FRANCE

LOGOPLASTE INNOVATIONLAB
ITALY, SPAIN, PORTUGAL

norner The Polymer Explorers
NORWAY

RECOUP
UK, IRELAND

PLASTSHIP Your plastic recycling network
GERMANY

REDILO
SWITZERLAND


RecyClass

RECYCLABILITY RATE CERTIFICATE

THIS CERTIFIES THAT

PRODUCT NAME
BRAND NAME

LEGAL COMPANY NAME AND ADRESS

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:

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

CERTIFIED BY:

NAME OF AUDITOR
Title of auditor

CERTIFICATION NAME
Certification adress

RecyClass - Avenue de Broqueville 12, 1150 Woluwe-Saint-Pierre – Belgium - Phone : +32 2 315 24 60 - info@recyclass.eu - www.recyclass.eu

PAGE 1/X

Detailed list and contacts of certification online

RecyClass | DESIGN FOR RECYCLING GUIDELINES

FULL COMPATIBILITY

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

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 recyclate.

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 recyclate.

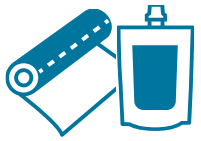
PET bottles (clear/light blue and colored)

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

RecyClass

CERTIFYING RECYCLED CONTENT: TRACEABILITY OF RECYCLED PLASTICS FOR RELIABLE CLAIMS

TRACEABILITY. TRANSPARENCY. TRUST.

INTRODUCTION

- **ROBUST AND TRANSPARENT CLAIMS** OF RECYCLED CONTENT ARE ESSENTIAL TO **ENSURE CREDIBILITY.**
- **TRACEABILITY IS KEY** TO FACILITATE VERIFIED AND TRANSPARENT CLAIMS.
- **CERTIFICATION IS THE RIGHT TOOL** TO RECOGNISE USE OF RECYCLED PLASTICS.

- **Reassure consumers, provide trust to end-users (B2C)**– increasing public interest in recycled content.

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

- **Underpin quality** – ensure certain Standard Operating Procedures are implemented. Problem solving and correction.

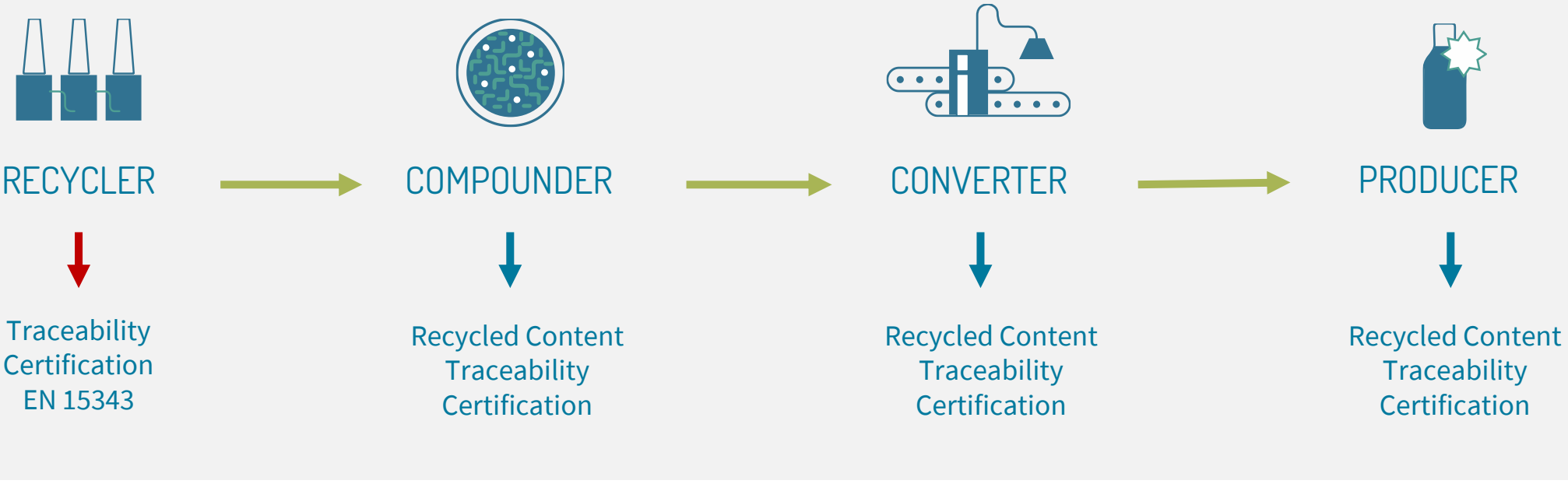
- **Show transparency** - information about the waste origin and source.

- **Support corporate sustainability claims** about recycled content.

RecyClass | FOCUS & SCOPE

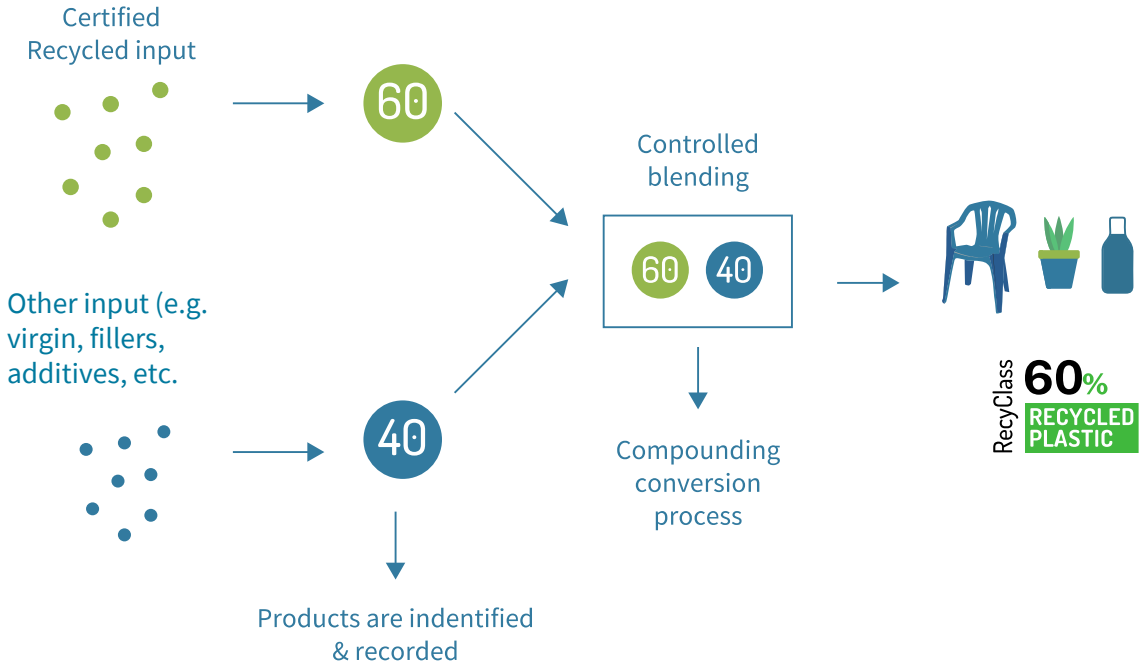
- Certification **recognises the use of recycled plastics in products** via an independent third-party audit. Certification is granted to a process linked to a product or group of products.

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



RecyClass | CONTROLLED BLENDING CHAIN OF CUSTODY

- Certification follows a **controlled blending approch** 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 | 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.

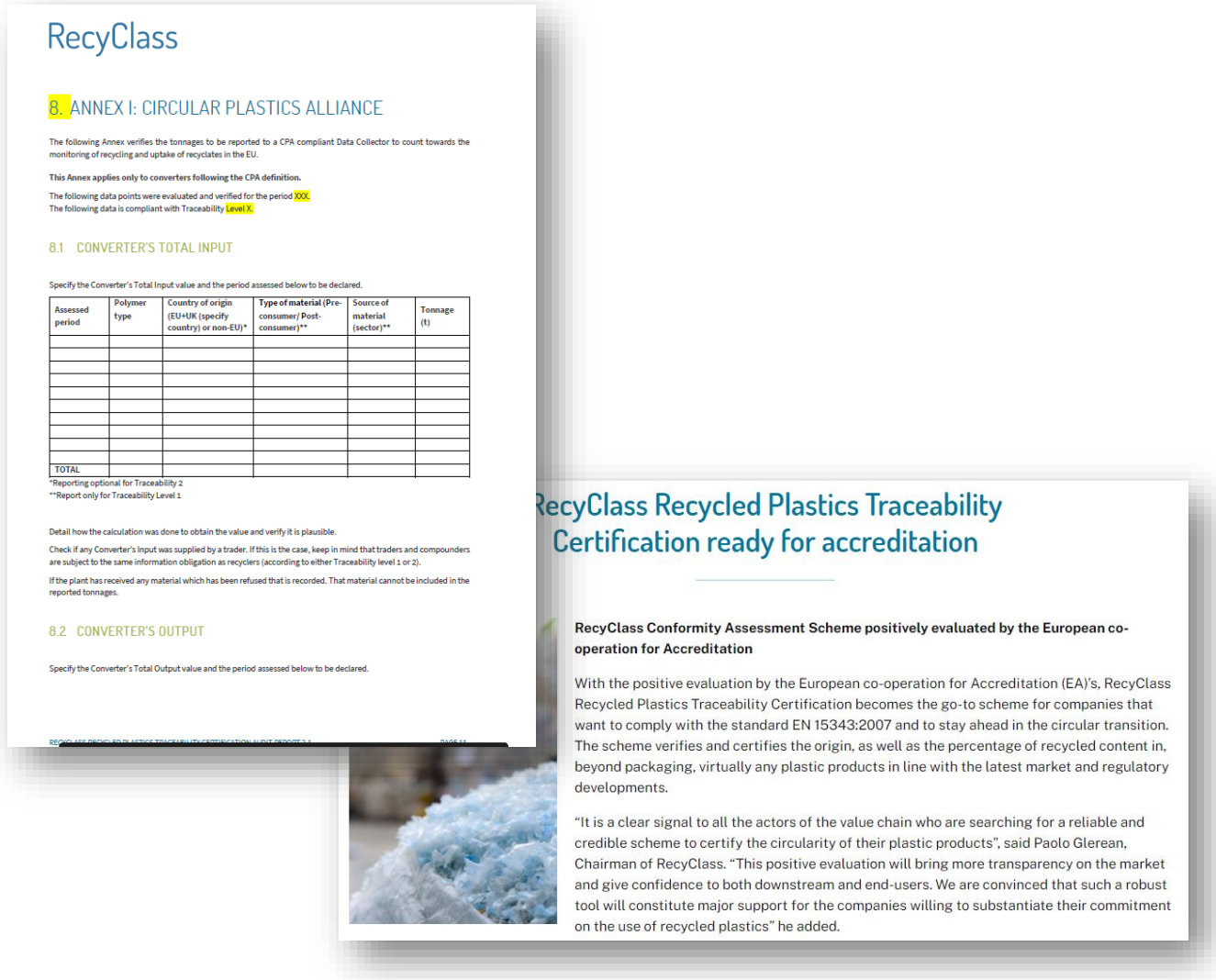
RecyClass | RECENT DEVELOPMENTS

CERTIFICATION READY 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** REQUIREMENTS*

- Addition of an Annex to be compliant with the CPA Audit Framework requirements.
- To be used as a verification of use of recycled plastics in a site/process.
- *Pending official approval by the CPA Monitoring WG



RecyClass

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 X.

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 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 Glerean, 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.

RecyClass | RECOGNIZED CERTIFCATION BODIES

Certificates are issued by recognised Certification Bodies only

AIMPLAS PLASTICS TECHNOLOGY CENTRE

KPMG

ecocycle

kiwa

EcoSustentável

DQS HELLAS

SGS

CIRRUS

cyclos

aiju Instituto Tecnológico de producto infantil y ocio

HTP

almaland

PLASTSHIP Your plastic recycling network

ECOGRANT

MarTec

OHSEcert

Zertifizierungs Netzwerk

Terra

ms.consulting Compliance of recycled plastics.

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
- Letter of Compatibility
- Design-for-Recycling Certification
- Recyclability Rate Certification

RECYCLED CONTENT:

- Recycled Plastics Traceability Certification

RecyClass | PET: A SYNERGIC VALUE CHAIN APPROACH

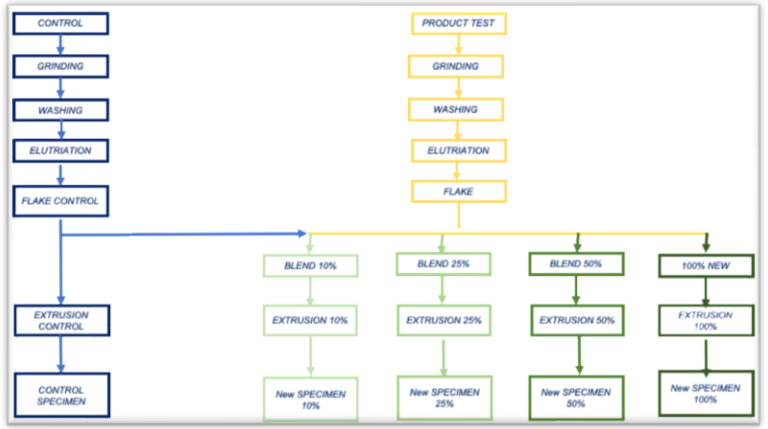
EPBP

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

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	

Pioneering PET circularity since 1993 — petcore EUROPE

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



RecyClass

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

RecyClass

PLASTICS FUTURE IS CIRCULAR

www.recyclass.eu