



# RecyClass FOR BEGINNERS

## RecyClass Online Tool: How to evaluate your plastic packaging?

21 September 2022

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# WHAT IS THE RECYCLASS ONLINE TOOL?

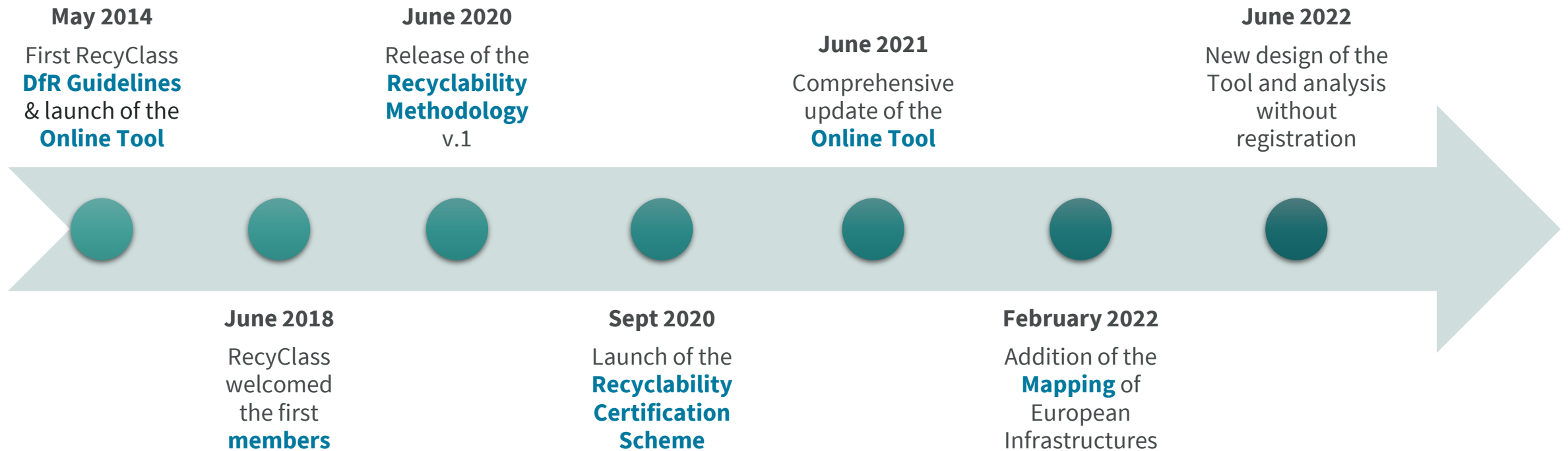
**Free-of-charge tool for self-assessment of plastic packaging recyclability.**

- Ranks the recyclability of plastic packaging in an easily understandable manner, based on RecyClass Methodology
- Evaluates packaging recyclability given the existing recycling streams
- Gives precise indications on critical points to be improved
- Provides mapping of European waste management infrastructure



*Users intending to use RecyClass logos and recyclability claims must complete RecyClass Certification. The results from the Online Tool alone are not sufficient.*

# RecyClass | A BIT OF HISTORY



Currently more than 8000 users on the Tool

# 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.



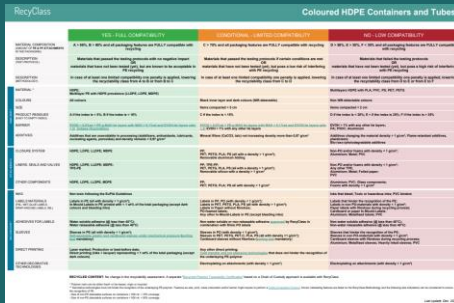
The product **can be processed & reclaimed/recycled** with commercial recycling processes.



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

# RecyClass | HOW TO CLAIM RECYCLABILITY?

## DESIGN FOR RECYCLING GUIDELINES



Criteria	Recommendations
Material selection	Use mono-materials or easily separable materials. Avoid complex multi-layer structures.
Design for disassembly	Design components to be easily separated. Avoid glue, welding, or other permanent joining methods.
Labeling	Use standard, easily removable labels. Avoid permanent or difficult-to-remove labels.
Color	Use standard colors. Avoid bright, fluorescent, or metallic colors.
Shape and structure	Design simple, standard shapes. Avoid complex, irregular shapes.
Recycling symbols	Use standard recycling symbols. Avoid custom or non-standard symbols.

- 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



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 1.0 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.

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  
Signature of auditor  
CERTIFICATION NAME  
Certification address

RecyClass is a RecyClass Group company. RecyClass Group is a 100% owned subsidiary of RecyClass Group Ltd. RecyClass Group is a public limited company registered in England and Wales, number 11012040. RecyClass Group Ltd is a company registered in England and Wales, number 11012040. RecyClass Group Ltd is a company registered in England and Wales, number 11012040. RecyClass Group Ltd is a company registered in England and Wales, number 11012040.

- Recyclability **Assessment** by recognized Certification Bodies

# 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

## 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 | STEP BY STEP ANALYSIS

## SUITABILITY

Verifying that the packaging can be analysed by the Tool, based on its composition

## TYPE OF PACKAGING & SORTING

Stream attribution & identification of features with possible impact on the sorting behavior of packaging

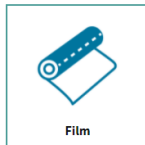
## RECYCLABLE PLASTIC CONTENT

Determination of the amount of recoverable and valuable materials

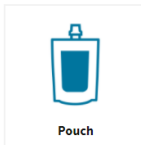
## DfR INCOMPATIBILITIES

Check of the DfR incompatibilities (guidelines)

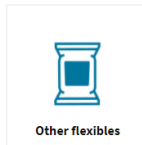
What type of package do you have?



Film



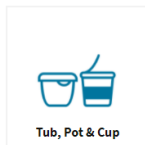
Pouch



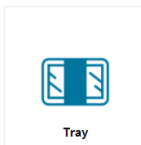
Other flexibles



Bottle



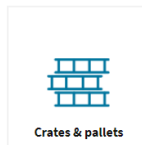
Tub, Pot & Cup



Tray



Other rigid



Crates & pallets

What is the net weight of your packaging? ⓘ

40 grams

What is the net weight of **PET** in your packaging? ⓘ

30 grams

Are other polymers (PE, PP, PS, EPS, PVC, Others) present in and/or welded to the bottle's structure? ⓘ

☐ Yes ☒ No

Does your bottle contain any polyolefins (PE and/or PP) components (e.g., closure, label, sleeve)? ⓘ

☒ Yes ☐ No

In which quantity?

8 grams

### INTERIM RESULT:



### INTERIM RECYCLABILITY RATE:

**95.0%**

This class represents the maximal and theoretical recyclability class that your packaging can obtain. This result is obtained by mass balance calculation regarding the amount of plastic and non-plastic incorporated in the packaging design. Indeed, the larger the content of one polymer in the packaging, the higher its recyclability rate will be (i.e., the amount of recoverable and valuable plastic recycled).

What colour is the package body?

Transparent clear; transparent light blue (0)

What is the barrier of the package body made of?

× SiOx plasma-coating (0)

What additives does the package body contain?

× No additives (0)

What material are the closures made of?

PE; PP (all with density less than 1 g/cm<sup>3</sup>) (0)



# RecyClass | STEP BY STEP ANALYSIS

## EASY-TO-EMPTY INDEX

Evaluation of the contamination caused by the residual content

## REACH COMPLIANCE

Compliance with the European legislation on chemicals

## RECYCLED CONTENT

Bonus grading for the integration of recycled content (does **not** impact the recyclability class)

## FINAL RESULTS

Summary of your analysis, EU mapping & details on the features which lead to class downgrading

What is the net weight of your package without content (W)?

grams

What is the net weight of the content (Pf)?

grams

Please fill

What is the weight of the emptied packaging (Pe; 10 test values)?

Test #1	<input type="text" value="Ex: 253"/>
Test #2	<input type="text" value="Ex: 253"/>
Test #3	<input type="text" value="Ex: 253"/>
Test #4	<input type="text" value="Ex: 253"/>

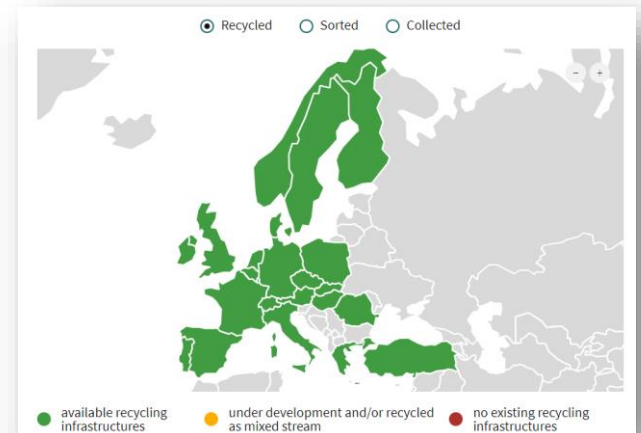
grams

$$Ete_i = \left( \frac{Pe - W}{Pf} \right) \times 100$$

*Pe* = Net weight of brand new package;

*W* = Weight of emptied package;

*Pf* = Net Weight of content





RecyClass  
FOR BEGINNERS

# Demo: Online Tool in practice

GET IN TOUCH WITH US!

[info@recyclclass.eu](mailto:info@recyclclass.eu)

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



# RecyClass | FIRST PAGE: LOGIN

RecyClass Online Tool

New analysis

LOGIN

## FREE ONLINE TOOL

RecyClass Online Tool assesses the recyclability of plastic packaging and shows to what extent it is suitable for recycling, rating it with a class system from A to F.

## TEST YOUR PACKAGING NOW

Is your packaging designed to be recycled?  
Test its recyclability now & register later.

START

Start a quick analysis  
without registering.

## CREATE AN ACCOUNT

With an account, you can easily access your  
testing history and download analysis  
reports.

CREATE AN ACCOUNT

OR LOG IN >

Create an account, with the access to  
the reports, the testing history, the  
Roadmap and the Mapping.

# RecyClass | ONLINE TOOL: DASHBOARD

RecyClass Online Tool

Dashboard

Guidelines

FAQ

Mapping

Roadmap

NEW ANALYSIS

WELCOME MARTINA

START NEW ANALYSIS

READ THE MANUAL >

Discover where you can claim the recyclability of your packaging.

MAPPING



## Your analysis history

Below you will see a listing of your previous analyses. All corresponding analysis results can be downloaded as a PDF.

Date of the analysis	Name of the analysis	Result	Actions
2022-07-07 09:20:56	PE film		
2022-07-01 14:13:03	Bottle		
2022-07-01 14:09:39	Pouch		
2022-06-28 09:34:46	PET tray		
2022-06-28 09:30:20	Trial		

1 2 3 >

Analyses 1-5 of 15

## Design for recycling guidelines

### History

April 2022

PP Natural and Coloured containers

December 2021

HDPE natural and coloured containers, PS coloured containers

September 2021

Tool Methodology revision

June 2021

PP containers (natural and coloured), PE films (coloured and transparent)

SEE ALL GUIDELINES >

Learn more about the packaging features that are currently under investigation by the RecyClass Technical Committees.

ROADMAP

## FAQ

> Could other types of packaging materials (e.g., aluminium, paper) be evaluated with the RecyClass Online Tool?

> What is the recognition of the RecyClass Online-Tool across Europe and where does the harmonisation stand?

> Can single packaging components – as a cap – be assessed?

> How to use the RecyClass Online-Tool for semi-finished packaging (e.g., for converters or raw material producers)?

READ THE FULL FAQ >

OR CONTACT US >

Thank you for using the RecyClass Online Tool! Help us further improve it by sharing your experience.

LEAVE US A FEEDBACK

# RecyClass | ONLINE TOOL: MANUAL

The Manual summarizes all the steps of the assessment, including a detailed description of the Design for Recycling section.

The final result of the Assessment is a class (A-F), which are explained in detail in the Manual.

[START NEW ANALYSIS](#)

[READ THE MANUAL >](#)

## Assessment steps

The analysis is divided into **5 steps**

- **Step 1: Description**  
The first step aims to name and describe the packaging to be analysed.
- **Step 2: Suitability**  
This step ensures that the packaging falls under the scope of the RecyClass Methodology dedicated to plastic packaging.
- **Step 3: Type of packaging**  
This step defines which is the type of packaging under analysis to attribute the corresponding Design for Recycling questions & answers.
- **Step 4: Design for Recycling**  
This step evaluates the compatibility of the packaging design with its recycling stream and is split into 5 sections explained below.
- **Step 5: Final results**  
The last step gathers all results of the analysis, highlighting the areas of improvement, and provides as well a mapping of the current waste management systems in Europe.

## Design for Recycling (step 4)




















The step is divided into **5 sets** of questions

- **Part 1: Recyclable plastic content**  
This set is a mass balance calculation to determine the amount of recoverable and valuable plastic in your packaging.
- **Part 2: Design for Recycling Incompatibilities**  
In this set, the incompatibilities of your product that affect recycling efficiency and quality of the recycle are verified.
- **Part 3: 'Easy to Empty' / 'Easy Access' Index**  
These indications evaluate the proportion of product that remains in the packaging after it has been emptied.
- **Part 4: REACH compliance results**  
This set ensures that no intentionally added substances of very high concern are present in your packaging.
- **Part 5: Recycled Content**  
In this set, you are asked how much recycled material your product contains (if any).

# RecyClass | ONLINE TOOL: DASHBOARD

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2022-09-08 09:55:50	Example	-	  
2022-09-06 11:23:05	PE film		  
2022-07-01 14:13:03	Bottle		  
2022-07-01 14:09:39	Pouch		  
2022-06-28 09:34:46	PET tray		  

## Analysis history

This feature enables users to access all the previously conducted analyses & their respective reports. Analyses can be edited, duplicated, downloaded or deleted.

The report summarizes the result of the analysis & highlights the critical points of the assessment.

Access to the **DfR Guidelines**, with all the recent updates.

## Design for recycling guidelines

### History

#### September 2022

PP and HDPE Natural and Coloured Guidelines.

#### April 2022

PP Natural and Coloured containers

#### December 2021

HDPE natural and coloured containers, PS coloured containers

#### September 2021

Tool Methodology revision

[SEE ALL GUIDELINES >](#)

## Frequently Asked Questions

### FAQ

- > Could other types of packaging materials (e.g., aluminium, paper) be evaluated with the RecyClass Online Tool?
- > What is the recognition of the RecyClass Online-Tool across Europe and where does the harmonisation stand?
- > Can single packaging components – as a cap – be assessed?
- > How to use the RecyClass Online-Tool for semi-finished packaging (e.g., for converters or raw material producers)?

[READ THE FULL FAQ >](#)

[OR CONTACT US >](#)

# RecyClass | ONLINE TOOL: DASHBOARD

RecyClass Online Tool

Dashboard

Guidelines

FAQ

Mapping

Roadmap

NEW ANALYSIS

WELCOME MARTINA

START NEW ANALYSIS

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1 2 3 >

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LEAVE US A FEEDBACK



# RecyClass | ONLINE TOOL: ROADMAP

Overview of the currently running test campaigns which help generate robust & reliable data to update the Guidelines.

Packaging features under investigation	Guideline(s) concerned	Under testing	Foreseen updates	Timeline	Status
<div>Please make a ▼</div>	<div>Please make a ▼</div>				
Printing inks	PE & PP films	Various inks binders (PU, NC) and amount of inks (wt%)	Possible limitations for some binders & move from surface coverage to printing amount for flexibles	October 2022	Ongoing
Metallisation	PE & PP films	Vacuum-deposited metallisation of co-extruded and laminated structures	Classification of metallisation in the flexible guidelines	November 2022	Ongoing
Labels & adhesives	HDPE & PP containers	Various non-washable labels and adhesives applied on HDPE containers	New recommendations on the use of non-washable adhesives for the coloured HDPE and PP guidelines	September 2022	Finished
PA	PE films	Film structures containing various PA types and contents with and without compatibilizers	New recommendation on PA for the PE flexible guideline	Mid-2022	Finished
Laminating adhesives	PE & PP films	Various chemistries and amount of laminating adhesives	New category on the flexible guidelines and new question on the tool	October 2022	Ongoing



# RecyClass | NEW ANALYSIS



## DESCRIPTION/COMMENTS

In case you do several analyses, clear descriptions and comments will later help you to distinguish between the different analysis results.

## DISCLAIMER

### Design optimisation for its recyclability

RecyClass Tool has been developed and maintained on the basis of laboratory testing and the expertise of European plastics recyclers. Sometimes it is not possible to provide accurate figures and data with scientific background, therefore we choose to include figures based on our experience.

This tool evaluates the technical recyclability of the packaging given the current best available technology, but does not take into account the efficiency of different collection schemes across Member States.

The RecyClass team has signed a non-disclosure agreement to ensure your product design confidentiality. Any kind of individual communication of the report is strictly prohibited without your previous consent. The anonymised global result of your analysis might be used for statistics purposes.

## Description

Disclaimer on the use of the Online Tool & the option to assign a name and description to the current analysis.

Name of package to be analysed

HDPE bottle

Your comments

# RecyClass | NEW ANALYSIS



## Suitability

### IS YOUR PACKAGE GENERALLY SUITABLE FOR THIS ANALYSIS?

The RecyClass tool is only suitable for packaging which:

- is made of **plastic**
- is free from **hazardous** substances
- does not consist of **bio- or oxo-degradable** plastics

Plastic packaging must be detectable using state-of-the-art sorting technology.

The RecyClass Tool defines packaging as made of plastic when:

- it consists **predominantly** of plastics, by weight
- **more than 50% of the surface is plastic**
- and if present, an existing aluminium layer is **not thicker than 5 µm** (in case of a multilayer film).

Does your package consist predominantly of plastic by weight? [?](#)

☒ Yes ☐ No

Does the surface of your package consist of at least 50% of plastic? [?](#)

☒ Yes ☐ No

Is there an aluminium layer e.g. in a multilayer film thicker than 5 µm, or an aluminium label/sleeve which the user can't remove when opening the package? [?](#)

☐ Yes ☒ No

Does your package have a surface with a colour containing non detectable carbon black? [?](#)

☐ Yes ☒ No

Will or is your packed good considered as a Plant Protection Product or Biocidal Product as defined in the [Plant Protection Products Directive \(No 1107/2009\)](#) and [Biocidal Product Regulation \(No 528/2012\)](#)? [?](#)

☐ Yes ☒ No

Is your packaging containing bio- or oxo-degradable plastics? [?](#)

☐ Yes ☒ No

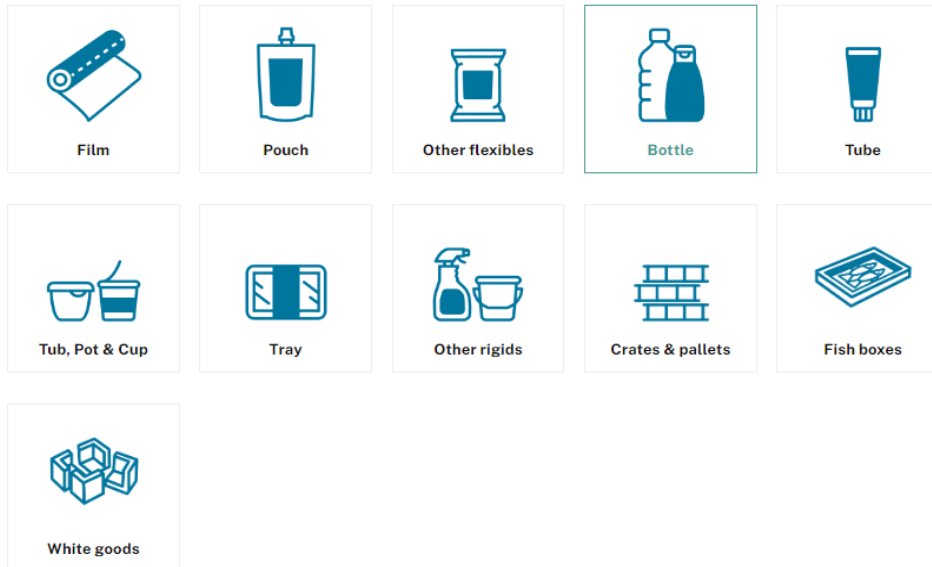
Your package is suitable for this analysis.

Please continue.

# RecyClass | NEW ANALYSIS



What type of package do you have?



What is the main polymer that constitutes the packaging?

- ☒ PE
- ☐ PP
- ☐ PET
- ☐ PS (except EPS and XPS)
- ☐ Other

How does your packaging look like?

- ☒ Transparent
- ☐ Coloured

Sorting is a key step in evaluating recyclability. Following is a list of items making the sortability of your packaging complicated. Please, select one or more items from the list in case the features represent your packaging.

- ☐ Size: < 5 cm (compacted)
- ☐ Large labels (>50% covering for <500 ml and >70% covering for >500 ml)
- ☐ Full body sleeves
- ☐ Perforated full body sleeves
- ☐ Multi-layer structures (excluding PE or PP with EVOH)
- ☐ Metallisation (excluding on the inside/in the middle layer)
- ☐ Non NIR detectable colours (also when dark colours used for internal layers)
- ☐ Printing covering larger than 50% of the surface and/or use of dark colours
- ☐ Different types of plastic used on front and back sides
- ☐ Different types of plastic (rigids and flexibles) used in the package
- ☐ Round shape, very rigid and hard to compact

## Type of packaging

Selection of the packaging stream & check of features that can impact the sorting behaviour.

# RecyClass | NEW ANALYSIS



## PART 1: RECYCLABLE PLASTIC CONTENT

In this area your packaging is checked for its composition. More information can be found in the RecyClass [Recyclability Methodology](#).

The design compatibility process is carried out to establish the amount of recyclable plastics in the packaging and its ability to replace virgin plastics in new products. Any non-recoverable (non-plastic) materials must be considered and removed from the proportion of recyclable plastics (e.g., inks, EVOH, barriers, adhesives for laminates, fillers, etc.). The class ranking to consider is the following:



**Class A**  
>95%



**Class B**  
90-95%



**Class C**  
90-70%



**Class D**  
50-70%



**Class E**  
<50%

## PART 2: DESIGN FOR RECYCLING INCOMPATIBILITIES

In this area your package is checked for incompatibilities, which influence the efficiency of recycling. Please analyse the [recycling guidelines for your product](#).

Possible changes in interim result from Question area 1:

- at least 1 x area answered LIMITED COMPATIBILITY (-) = **downgraded by 1 class**
- at least 1 x area answered NEGATIVE (--) = **downgraded by 2 classes**
- at least 1 x area answered VERY NEGATIVE (---) = **downgraded by 3 classes**
- at least 1 x area answered DISQUALIFYING (!) = **downgraded by 5 classes**

Size recommendations for the sorting of a HDPE packaging:

- Item compacted > 5cm. The size of the packaging should not prevent the sortability of the packaging.
- Item compacted < 5cm. A sorting test is recommended. Please refer to the RecyClass Sorting Protocol.
- Item compacted < 2cm. Based on the European state of art technologies the packaging will get lost during the sorting steps.

## Design for Recycling (step 4)

The step is divided into **5 sets** of questions

### • Part 1: Recyclable plastic content

This set is a mass balance calculation to determine the amount of recoverable and valuable plastic in your packaging.

### • Part 2: Design for Recycling Incompatibilities

In this set, the incompatibilities of your product that affect recycling efficiency and quality of the recycle are verified.

### • Part 3: 'Easy to Empty' / 'Easy Access' Index

These indications evaluate the proportion of product that remains in the packaging after it has been emptied.

### • Part 4: REACH compliance results

This set ensures that no intentionally added substances of very high concern are present in your packaging.

### • Part 5: Recycled Content

In this set, you are asked how much recycled material your product contains (if any).

# RecyClass | FINAL RESULT



## Final result

Summary of the assessment, with the possibility to download the report & the direct link to the Recyclability Certification Scheme

YOU HAVE  
SUCCESSFULLY  
COMPLETED YOUR  
ANALYSIS!

Thank you for using the RecyClass analysis tool.

[↓ DOWNLOAD YOUR ANALYSIS](#)

[📄 SAVE THE ANALYSIS AND DUPLICATE](#)

[+ START NEW ANALYSIS](#)

Need more information regarding your result?

[Contact our expert](#) to obtain a RecyClass report expert-checked.



Satisfied with your self-assessment?

Get certified by our recognized Certification Bodies and claim the recyclability of your packaging.

[GET CERTIFIED](#)

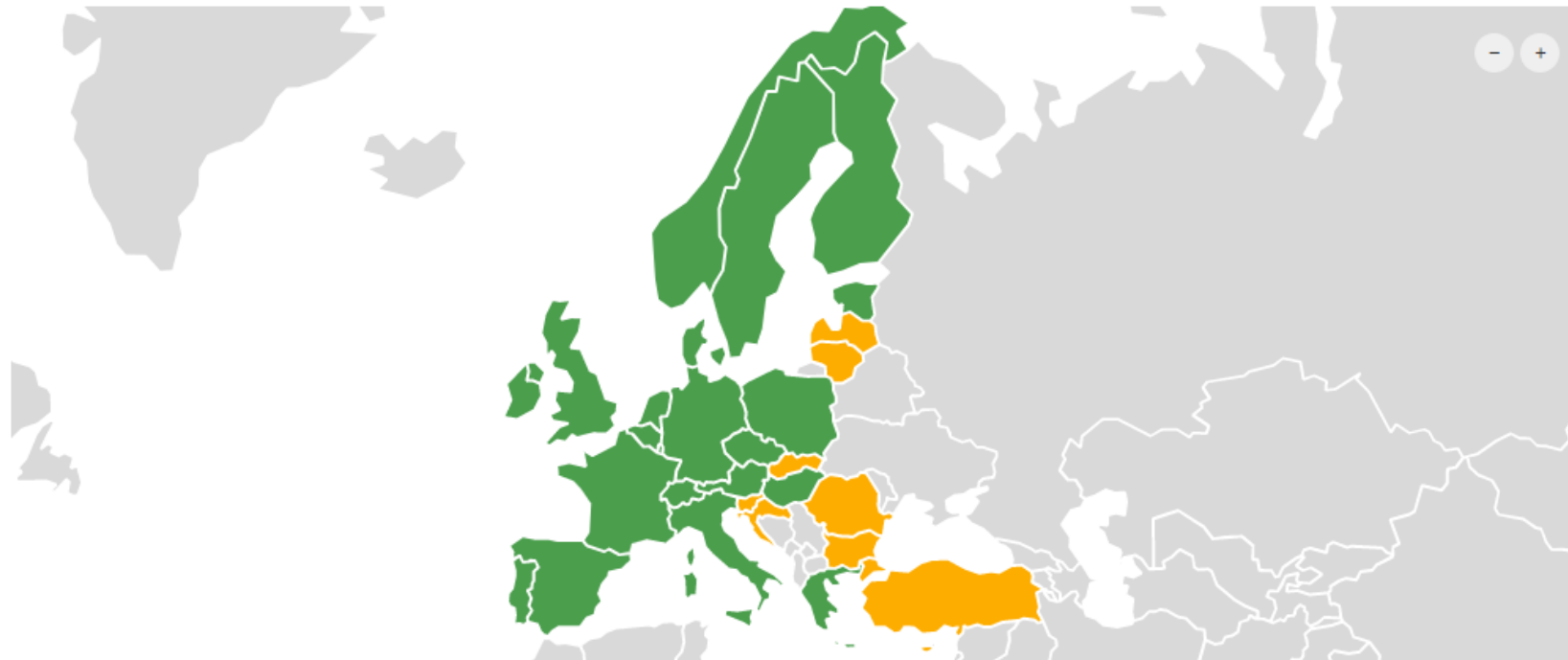
# RecyClass | MAPPING

## MAPPING OF RECYCLING INFRASTRUCTURES IN EUROPE

### Guideline

PET transparent clear & light blue bottle

☒ Recycled ☐ Sorted ☐ Collected



● available recycling infrastructures ● under development and/or recycled as mixed stream ● no existing recycling infrastructures

### Guideline

PET transparent clear & light blue bottle

**PET transparent clear & light blue bottle**

PET transparent coloured bottles

PET clear transparent trays

HDPE containers (excluding tubes)

HDPE tubes

PP containers (excluding tubes)

PP tubes

PS coloured containers

PE films

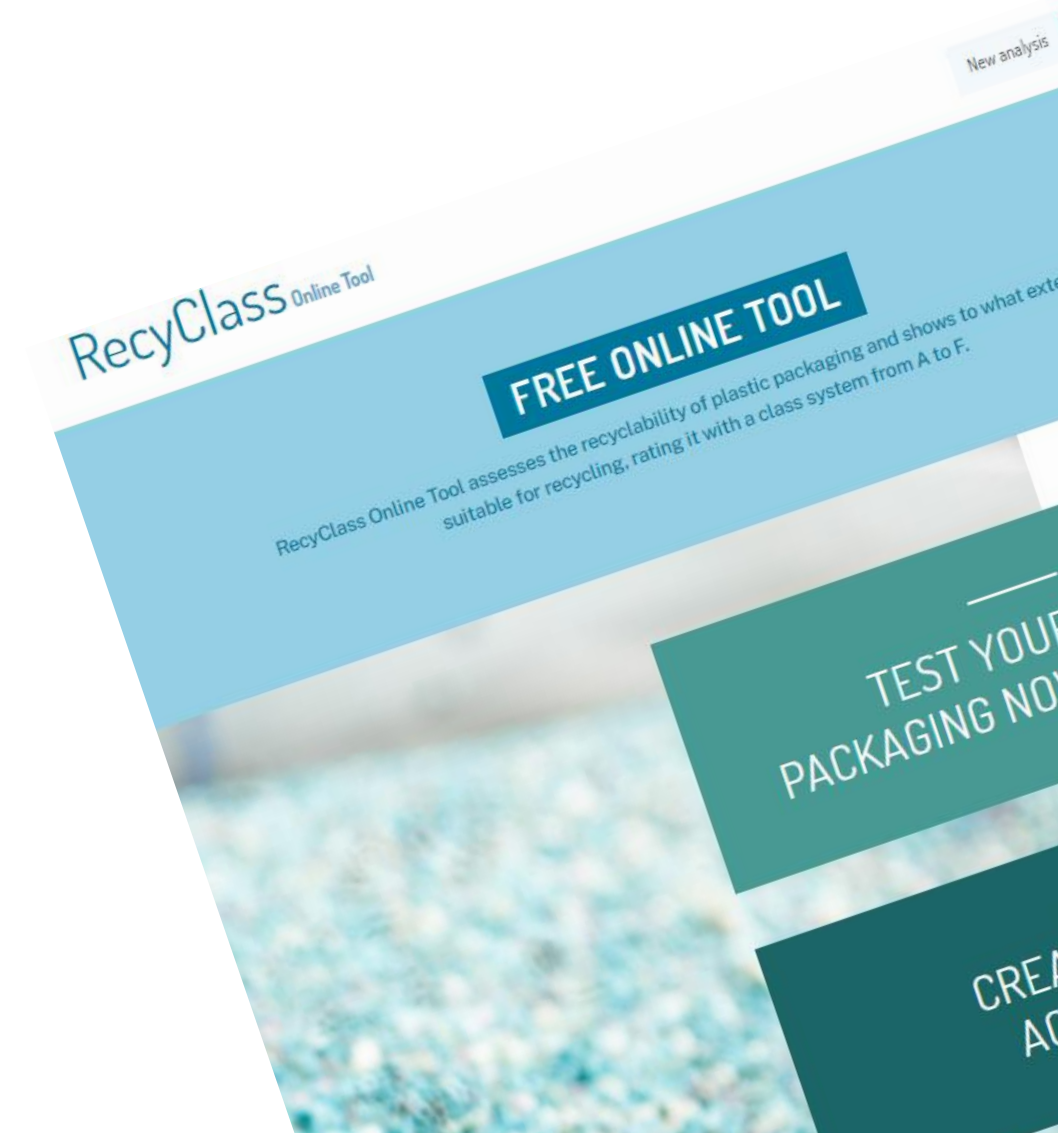
PP films

The map gives an overview of the collection, sorting & recycling infrastructures available in Europe, for each packaging stream.

# RecyClass | KEY TAKEAWAYS

## Start your circular plastic journey today!

- Free-of-charge with unlimited analyses
- Based on a scientific and transparent methodology
- Provides clear recommendations & indications for improvements in recyclability
- Considers the market state-of-play & the latest developing technologies





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:**

5 October

14 December

**GET IN TOUCH WITH US!**

*info@recyclclass.eu*

*www.recyclclass.eu*



