9 GOLDEN DESIGN RULES

GUIDELINES FOR CLOSING THE LOOP OF PLASTIC PACKAGING

ver. 1.0
Warsaw, October 2023

POLSKI PAKT PLASTIKOWY

PLASTICS PACT

KAMPANIA 17. CELÓW

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INTRODUCTION

The overuse of plastic packaging and inefficient management of packaging waste is a huge environmental challenge today. At the same time, many advantages can be pointed out in favor of plastic packaging, such as low weight, very good barrier properties - important in the food industry and prevention of food waste, sterility (important for medical devices) or relatively low manufacturing costs.

Sustainable use of plastic packaging is at the heart of the Polish Plastics Pact's efforts - Pact members aim to close the loop of plastic packaging in Poland by 2025. To achieve the target, one of the most important tasks is to harmonize the packaging placed on the market in the country.

A key step, determining the environmental impact of packaging, is design. It is design that determines the amount and type of material used, the reusability of the packaging or its recycling.

To ensure the highest standards of packaging design, The Consumer Goods Forum (CGF) has developed Golden Design Rules (GDR) covering all plastic packaging placed on the market worldwide. GDR aim to change the way packaging is designed so that it can remain in circulation for as long as possible. The implementation of the GDR allows harmonization of packaging design requirements on a global level, which significantly affects the ability to close the packaging cycle - eliminating excess packaging, increasing the recyclability of packaging and, consequently, increasing recycling rates. GDR set out a clear framework to develop innovation and implement ambitious measures to ensure that by the end of 2025, the weight of plastic used in packaging will decrease and recycling rates will increase.

This publication is a Polish adaptation of the 9 Golden Design Rules. It was created in a broad partnership of members of the Polish Plastics Pact, supporting members and the Pact's Council of Experts. The publication, implementation and promotion of the 9 GDRs will allow the implementation of tasks 7.3, 7.4 and 7.5 of the Pact Road Map, resulting in the achievement of Effect No. 7: *Pact members are guided by key rules on best practices for selecting and designing plastic packaging for recyclability*.

We believe that the implementation of the Golden Design Rules in the Polish market will allow a significant reduction in the use of plastics and improve the functioning of the packaging management system, in full synergy with the actions taken globally.

We invite you to join the initiative and implement the 9 Golden Design Rules together!

HOW TO READ THE DOCUMENT

PURPOSE OF THE DOCUMENT

The main goal of the guidelines is to harmonize packaging design guidelines for the local and global market, based on the 9 Golden Design Rules created by The Consumer Goods Forum. The publication supports the implementation of all of the Pact's strategic targets, with particular emphasis on Target 3, according to which 100% of plastic packaging on the Polish market must be reusable or recyclable by the end of 2025.

WHAT DOES THE DOCUMENT CONTAIN?

The document consists of the following parts:

- preliminary information,
- genesis,
- 9 Golden Design Rules,
- other key publications of the Polish Plastics Pact,
- conclusion,
- additional information and contact,
- glossary of abbreviations.

The most important chapter is a detailed description of the Golden Design Rules with examples. The file uses hyperlinks so that you can quickly move between different parts of the publication.

WHAT IS THE ROLE OF THE 9 GOLDEN DESIGN RULES IN POLISH PLASTICS PACT?

The 9 Golden Design Rules are a guidepost to achieve Target 3 of the initiative. Members of the Polish Plastics Pact implement GDR in plastic packaging placed on the market and promote a sustainable approach among their business partners. Publication, implementation and promotion of the document will allow the implementation of tasks 7.3, 7.4 and 7.5 of the Pact Road Map. Progress in implementing the 9 GDRs among members will be monitored through the annual reporting process.

WHO IS THE DOCUMENT FOR?

The publication was created to provide direction and best practices in plastic packaging design to members of the Polish Plastics Pact, their business partners, and all those who want to contribute to closing the plastic packaging loop in Poland (locally) and on a global level.

ADDITIONAL NOTES

• The document provides recommendations for the design of plastic packaging in line with a circular economy principles. When the use of packaging other than recommended is required due to product safety or product-specific regulatory requirements, the priority is always to use packaging that adequately protects the product, allows the product to meet specific requirements and, in the case of food products, contributes to reducing food waste.

• The guidelines were developed by the Polish Plastics Pact based on the 9 GDRs created by The Consumer Goods Forum. The author of this document is not The Consumer Goods Forum.

• Polish Plastics Pact and all entities involved in the development of the document are not responsible for decisions made on the basis of the information contained therein. The information provided in the document is a recommendation, and its application should be considered on a case-by-case basis. The authors of the publication recommend that changes in packaging design should not be based solely on the guidelines contained in this document.

• The contents of the document are the property of Polish Plastics Pact, and reprinting, quoting or citing the information contained therein requires citation of the source. When citing the content of a study, use the following citation method:

Polish Plastics Pact, *9 GOLDEN DESIGN RULES, Guidelines For Closing The Loop Of Plastic Packaging*, Version 1.0, 2022, accessed: **https://paktplastikowy.pl/rezultaty/**

PRELIMINARY INFORMATION

POLISH PLASTICS PACT

The Polish Plastics Pact is a platform that unites companies and organizations for the realization of an ambitious vision - a multidimensional change in the model of plastic use in packaging in Poland towards a circular economy. This is the first initiative of its kind in Central and Eastern Europe. Currently, there are 10 national pacts and 2 regional pacts in the world coordinated by the Ellen MacArthur Foundation (Fig. 1.).

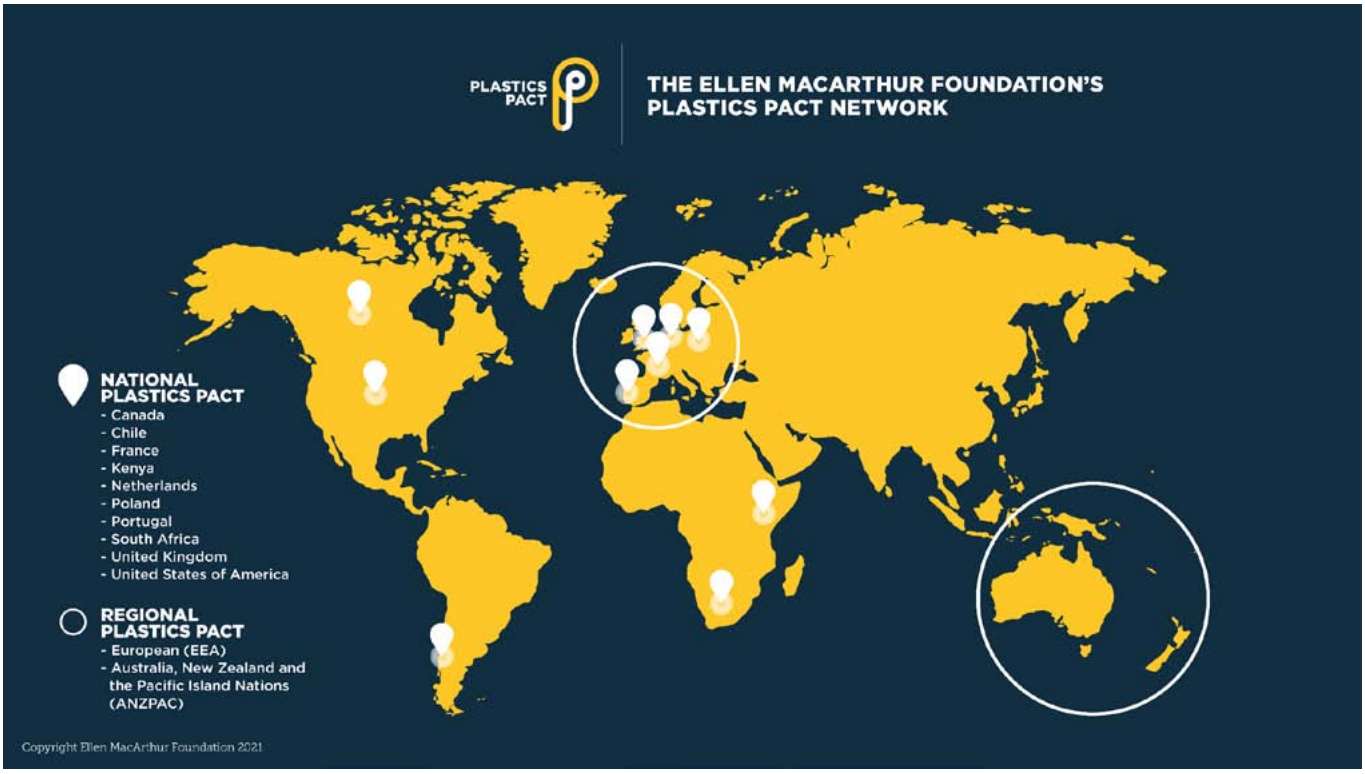

Fig. 1 A map of the Plastic Pacts network around the world.

THE POLISH PLASTICS PACT TARGETS

In order to close the plastic packaging loop in the Polish market, Pact has set six strategic targets for its members to achieve by the end of 2025:

1. Identification and elimination of unnecessary and problematic plastic packaging through redesign, innovation and alternative delivery models.

2. Striving to reduce the use of virgin plastic packaging by 30% across all plastic packaging put on the market.

3. 100% of plastic packaging on the Polish market to be reusable or recyclable.

4. Striving to increase the amount of the recycled content across all plastic packaging up to 25%.

5. Effective support of the packaging collection and recycling system to achieve a recycling rate of at least 55% on the Polish market.

6. Increasing the quality and effectiveness of consumer education in the field of segregation, recycling, reuse and reduction of packaging consumption.

In order to achieve targets, the members of the Pact are working intensively within the framework of the Working Groups on common tools that will reduce the consumption of plastics, improve the recyclability of packaging placed on the market, and contribute to improving the system for collecting, sorting and recycling of plastic packaging in Poland. The Working Groups consist of representatives of member companies, supporting members and members of the Pact's Council of Experts. During the work of the groups, specific actions to be taken to achieve the ambitious targets set by the Pact by 2025 are discussed and planned, as envisioned in the Pact's Road Map (see **page 51** for more on the Road Map).

ELLEN MACARTHUR FOUNDATION

The Ellen MacArthur Foundation was established in 2009. Its goal is to promote and implement a circular economy by publishing world-class reports, analysis and expertise, popularizing best practices, lobbying for circular economy, and conducting outreach and education among representatives of business, NGOs and the higher education sector. The Foundation is also the initiator and coordinator of the Plastics Pact Network.

MORE INFORMATION

THE CONSUMER GOODS FORUM

A global organization of more than 400 consumer goods companies, founded in 2009 and headquartered in Paris. CGF members are responsible for global sales of 4.6 trillion Euro and employ some 10 million workers. With a global reach, committed executives, and strong cooperation between retailers and manufacturers, CGF aims to implement positive change and solve key challenges in the industry in the areas of environment, social aspects, health or food safety, among others. To make the change possible, CGF has formed 8 coalitions, including the Plastic Waste Coalition of Action, which seeks to close the plastic packaging loop, in line with the Ellen MacArthur Foundation's vision.

MORE INFORMATION

ABOUT 9 GOLDEN DESIGN RULES

As part of the Plastic Waste Coalition of Action, CGF members, together with experts from around the world, have developed packaging design guidelines - called the 9 Golden Design Rules - that cover all plastic packaging placed on the market. The guidelines that have been developed are intended to make it possible to close the plastic packaging loop, in line with the Ellen MacArthur Foundation's vision. The 9 Golden Design Rules revolve around the elimination of problematic packaging (e.g., PVC, EPS, or containing carbon black) and excessive packaging (e.g., by reducing excess headspace in packaging, removing excessive overwraps, optimizing packaging in B2B). The rules also address increasing the recycling value of selected groups of packaging - bottles and thermoformed packaging made of PET, flexible consumer packaging, rigid HDPE and PP packaging - and indicate the need to include instructions for correct sorting of packaging waste aimed at consumers.

The rules are described in detail on pages **15** - **49**.

GENESIS

HARMONIZATION OF THE APPROACH TO PACKAGING DESIGN ON A GLOBAL AND LOCAL LEVEL

Collaboration and common targets of The Consumer Goods Forum, Ellen Macarthur Foundation and Plastics Pacts.

The 9 Golden Design Rules support the Ellen MacArthur Foundation's vision of plastic packaging in circular economy. CGF member companies have voluntarily supported the rules (all or a selected) at the global level, pledging to implement them in their plastic packaging portfolio.

In order to harmonize global requirements for packaging design with local conditions, the Polish Plastics Pact has adapted 9 GDRs, taking into account the specifics and technologies operating in the Polish market.

The implementation of GDR in Poland, will support the realization of all the strategic targets of the Pact - to eliminate problematic packaging, reduce the use of plastics, improve the recyclability of packaging, facilitate correct sorting of waste and (as a result) increase packaging recycling levels. Figure 2 shows the relationship between the GDR and targets of the Polish Plastics Pact.

> *We are delighted that the Polish Plastics Pact has adopted all nine Golden Design Rules developed by The Consumer Goods Forum. This announcement marks an important milestone in our goal to „mainstream" the rules globally. The rules themselves represent a clear framework that aims to drive innovation and scalable actions in Poland. We are sure it will result in less plastic overall and easier to recycle plastic packaging. Companies in Poland who choose to commit to the rules will help to catalyse this system-wide change needed for improved recyclability.*
>
> **Ignacio Gavilan**
> Sustainability Director
> The Consumer Goods Forum

<table>
<tr><th>Overarching objectives defined by the CGf, guiding creation of the Golden Design Rules</th><th>9 Golden Design Rules</th><th colspan="3">Targets of the Polish Plastics Pact</th></tr>
<tr><td rowspan="3">A. Elimination of problematic or excessive packaging</td><td>RULE 2: Remove Problematic Elements from Packaging</td><td rowspan="3">TARGET 1: Identification and elimination of unnecessary and problematic plastic packaging through redesign, innovation and alternative delivery models</td><td rowspan="3">TARGET 2: Striving to reduce the use of virgin plastic packaging by 30% across all plastic packaging put on the market</td><td rowspan="3"></td></tr>
<tr><td>RULE 3: Eliminate Excess Headspace</td></tr>
<tr><td>RULE 4: Reduce Plastic Overwraps</td></tr>
<tr><td>B. Improving the environmental footprint of B2B packaging</td><td>RULE 8: Reduce Virgin Plastic Use in Business-to-Business Plastic Packaging</td><td rowspan="3">TARGET 3: 100% of plastic packaging on the Polish market to be reusable or recyclable</td><td rowspan="4">TARGET 5: Effective support the packaging collection and recycling system to achieve a recycling rate of at least 55% on the Polish market</td><td rowspan="4">TARGET 4: Striving to increase the amount of the recycled content across all plastic packaging up to 25%</td></tr>
<tr><td>C. Increasing the recyclability of packaging categories that are recycled on a large scale in today's in waste management system</td><td>RULE 1: Increase Value in PET Recycling</td></tr>
<tr><td>RULE 7: Increase Recycling Value in Rigid HDPE and PP</td></tr>
<tr><td rowspan="2">D. Increasing the recyclability of the category of packaging that is not recycled on a large scale today, with a view to developing a waste management system in the future</td><td>RULE 6: Increase Recycling Value in Flexible Consumer Packaging</td></tr>
<tr><td>RULE 5: Increase Recycling Value for PET Thermoformed Trays and Other PET Thermoformed Packaging thermoformed trays and other PET thermoformed packaging</td><td>TARGET 6: Increasing the quality and effectiveness of consumer education in the field of segregation, recycling, reuse and reduction of packaging consumption</td></tr>
<tr><td>E. Improving consumer communication</td><td>RULE 9: Use On-Pack Recycling Instructions</td><td colspan="3"></td></tr>
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Fig. 2 The relationship between the targets of the Plastic Waste Coalition of Action of the Consumer Goods Forum, the Golden Design Rules and the Targets of the Polish Plastics Pact.

INTERNATIONAL EXPERT PANEL – VERIFICATION OF 9 GOLDEN DESIGN RULES

The Golden Design Rules have been adapted to the current technical capabilities of recycling systems on a global level. The guidelines were prepared, reviewed and accepted by key stakeholders in the packaging recycling and eco-design industry.

• The author of the original Golden Design Rules document is The Consumer Goods Forum.

• **The rules were developed with input from experts** from APR (The Association of Plastic Recyclers), WRAP (The Waste & Resources Action Program), CEFLEX (The Circular Economy for Flexible Packaging), and specialists from across the value chain and CGF member partner companies.

• **The rules are aligned with existing key technical guidelines** set by APR, WRAP, CEFLEX, Petcore Europe and the European PET Bottle Platform.

• **The rules were consulted with members of an international panel of experts**, including representatives:

- Australian Packaging Covenant - Australia,
- Association of Plastics Recyclers - USA,
- China Plastics Reuse and Recycling Association - China,
- Crow's Nest Environmental - Canada,
- Ellen MacArthur Foundation - UK,
- TriCiclos - Latin America,
- WRAP - UK.

During the preparation of the document by the Polish Plastics Pact, the study was reviewed for Polish conditions by:

- member companies of the Polish Plastics Pact, united in the Recyclable Packaging Working Group,
- representatives of the Expert Council of the Polish Plastics Pact,
- Łukasiewicz Research Network - Łódź Institute of Technology,
- Rekopol Packaging Recovery Organization.

9 GOLDEN DESIGN RULES

1. Increase Value in PET Recycling.

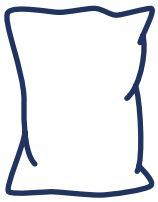
2. Remove Problematic Elements from Packaging.

3. Eliminate Excess Headspace.

4. Reduce Plastic Overwraps.

5. Increase Recycling Value for PET Thermoformed Trays and Other PET Thermoformed Packaging.

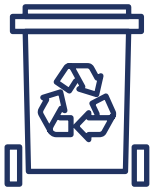
6. Increase Recycling Value in Flexible Consumer Packaging.



7. Increase Recycling Value in Rigid HDPE and PP.

8. Reduce Virgin Plastic Use in Business-to-Business Plastic Packaging.

9. Use On-Pack Recycling Instructions.



RULE 1

INCREASE VALUE IN PET RECYCLING

THE RULE APPLIES TO **37% OF PACKAGING** PLACED ON THE MARKET BY MEMBERS OF THE POLISH PLASTICS PACT

INCREASE VALUE IN PET RECYCLING

It is recommended to use transparent, uncoloured PET material or transparent green or blue in all PET bottles[1].

When using labels for PET bottles, make sure that the chosen material, adhesive and label size are not problematic for recycling[2,3,4].

PET is one of the most widely used polymers in the packaging industry.

Replacing coloured PET bottles with transparent ones will have a positive impact on the supply of high-quality PET recyclate and ensure the marketing of materials for which an efficient waste management pathway is available.

EXAMPLE APPLICATION

- Beverage bottles.
- Sauce bottles.
- Cleaning product bottles.
- Hygiene product bottles.
- Cosmetic bottles.

REFERENCES

[1]In exceptional situations, it is permissible to use coloured PET packaging to ensure adequate barrier to CO_2 or O_2 gases and UV gases and UV protection, when this is necessary to ensure the shelf life and useful life of the product and other solutions are not feasible (e.g., the use of a shrink sleeve label for UV protection). **It is recommended to identify plastics according to the APR comparison test**.

[2]It is recommended to withdraw shrink sleeve labels, especially those made of PVC material, PETG and PLA, water-insoluble adhesives, wherever possible. According to the *Report: Excessive and problematic packaging*, in the Polish Plastics Pact all shrink labels are considered problematic and their use is not recommended. In justified cases (e.g., see item 2), it is permissible to use heat-shrinkable labels with perforations to enable separation of the label from the bottle.

[3]In the Polish Plastics Pact, according to the **RecyClass guidelines**, labels made of PE, PP, OPP or foamed PET are recommended for PET bottles. The density of the label material must be less than 1 g/cm3. The surface area of the label for bottles with a volume greater than 500 ml should occupy less than 70% of the surface area of the bottle, and for bottles with a volume less than or equal to 500 ml, the label should occupy less than 50% of the surface area of the bottle. The only acceptable barrier substance that does not impede recycling is the SiOx layer.

[4]The exception to the rule is small bottles (smaller than 80 mm), which are not sent for recycling due to their small size.

RATIONALE FOR THE RULES AND BENEFITS OF THE SYSTEM

1. PET bottles are a high-quality raw material that is recycled in practice and at scale. According to estimates by Rekopol Packaging Recovery Organization, PET packaging accounts for about 30% of the weight of primary plastic packaging entering the market, with a recycling rate of about 50%.
2. Due to the wide variety of PET colours, it is estimated that in Europe today more than 30% of PET bottles are not likely to be mechanically recycled, and only 9% of bottles are recycled back to the same use.
3. By 2030, all PET bottles in the European Union must contain 30% rPET recycled material; current supply may not meet demand.
4. Harmonizing the colours of PET bottles on the market (clear and transparent with a slight blue or green tint) will help increase the availability of high-quality raw material for the mechanical recycling process and make it easier for manufacturing companies to use recycled raw materials.
5. By using the right types of labels that do not hinder the recycling process, it is possible to obtain higher quality raw material.

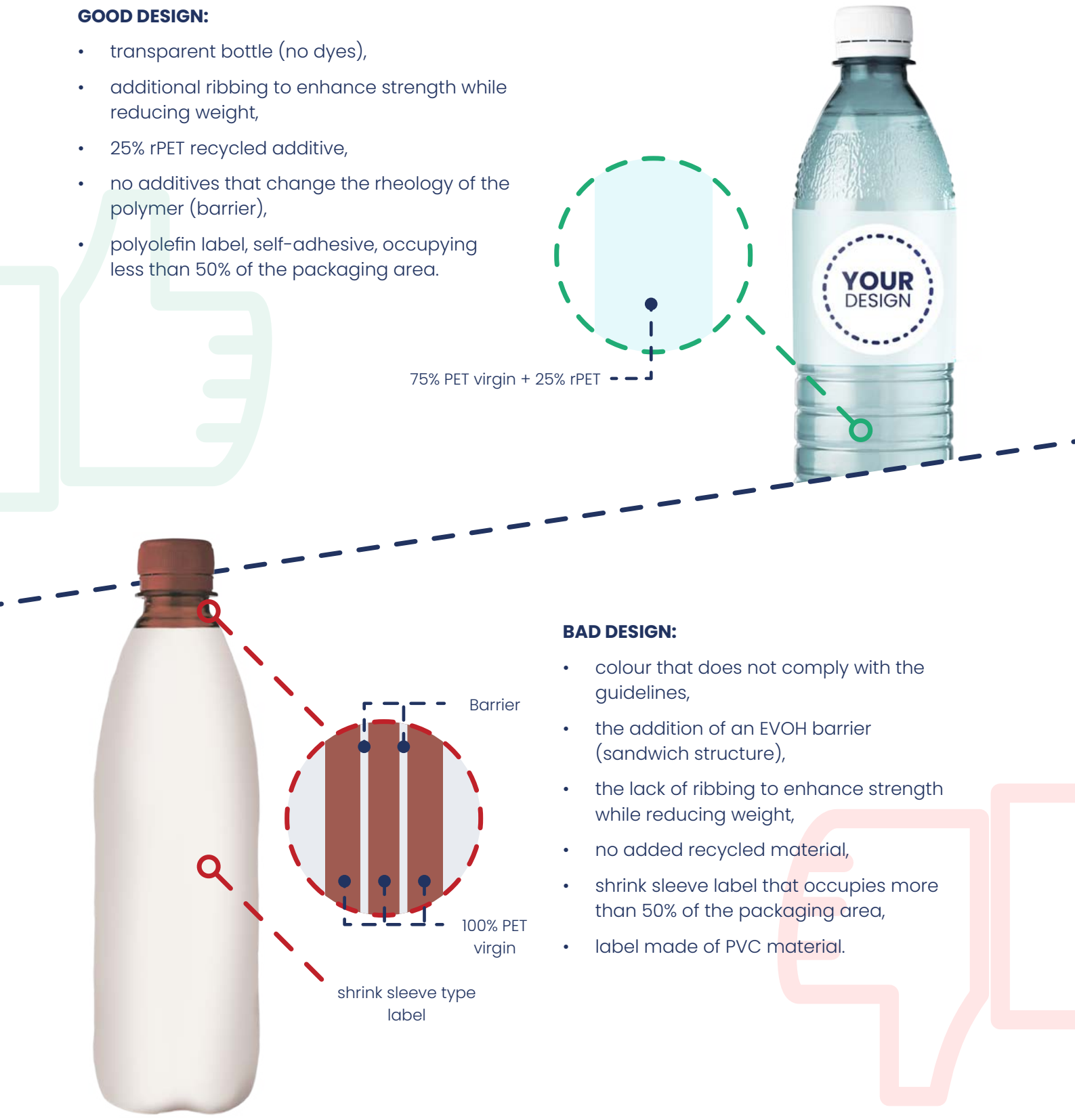
DIRECTIONS OF ACTION FOR MEMBERS SUPPORTING THE IMPLEMENTATION OF THE RULE

1. Public declaration of target achievement by **2025**.
2. Implementation and application of the rule in designing new and changing current packaging.
3. Transparent reporting of progress toward the target (in the Polish Plastics Pact's annual reporting and, if the company is a member, through the CGF).

EXAMPLE OF DESIGNING THE PET BOTTLES

GOOD DESIGN:

- transparent bottle (no dyes),
- additional ribbing to enhance strength while reducing weight,
- 25% rPET recycled additive,
- no additives that change the rheology of the polymer (barrier),
- polyolefin label, self-adhesive, occupying less than 50% of the packaging area.



BAD DESIGN:

- colour that does not comply with the guidelines,
- the addition of an EVOH barrier (sandwich structure),
- the lack of ribbing to enhance strength while reducing weight,
- no added recycled material,
- shrink sleeve label that occupies more than 50% of the packaging area,
- label made of PVC material.

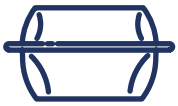
RULE 2

REMOVE PROBLEMATIC ELEMENTS FROM PACKAGING

Remove problematic elements from packaging

A. Elimination of packaging containing undetectable[1] carbon black dye[2] (page 22).

B. Elimination of PVC and PVDC[3] (page 23).



C. Elimination of EPS and XPS[2] (pages 24-25).

D. Elimination of PETG in rigid packaging[2, 3] (page 26).

E. Elimination of oxo-degradable substances (page 27).

REFERENCES

[1]Not detectable by NIR optical sorting, making separation from the waste stream impossible.

[2]An exception to the rule is small packages (smaller than 80 mm), which, due to their small size, are not sent for recycling, as long as they do not hinder the recycling of other packages.

[3]The exception is packaging for medical use, if there are no alternatives.

A. ELIMINATION OF PACKAGING CONTAINING UNDETECTABLE CARBON BLACK DYE

Packaging containing carbon black dyes is undetectable by optical sorting using the NIR technique, which is widely used in plastic sorting systems. As a result, dark-coloured packaging is often not recycled - it is incinerated or landfilled. Carbon black dye is commonly used in meat trays, vegetable trays, bottles and cup lids. In addition to minimizing environmental impact, removing the carbon black dye would help increase the stream of plastics recycled.

EXAMPLE APPLICATION

- Meat and fish trays.
- Bottles.
- Trays for vegetables and fruits.
- Caps and lids.

RATIONALE FOR THE RULES AND BENEFITS OF THE SYSTEM

1. Elimination of problems associated with sorting black and dark packaging with carbon black.
2. Closing the loop of materials currently coloured with carbon black dyes, the possibility of diverting packaging for recycling.
3. The removal of carbon black dyes is a simple design change that will not affect product quality and protection, while enabling improved recyclability of packaging.
4. The rule is in line with the general eco-design rules operating in the international market.

DIRECTIONS OF ACTION FOR MEMBERS SUPPORTING THE IMPLEMENTATION OF THE RULE

1. Public declaration of the target achievement **by the end of 2023**.
2. Implementation and application of the rule in the design of new and changes to current packaging so that no packaging contains carbon black dyes.
3. Transparent reporting of progress toward the target (in the Polish Plastics Pact's annual reporting and, if the company is a member, through the CGF).

B. ELIMINATION OF PVC AND PVDC

PVC and PVDC - the presence of these materials in packaging interferes with the recycling of other plastics, negatively affecting the quality of the recyclate. PVC is most commonly found in trays, films, shrink labels and blister packaging, while PVDC is used as a barrier layer in multi-material packaging.

EXAMPLE APPLICATION

- Meat and fish trays.
- Shrink films for fruits and vegetables.
- Blisters.
- Shrink labels.

RATIONALE FOR THE RULES AND BENEFITS OF THE SYSTEM

1. PVC interferes with PET recycling and reduces the quality of the recyclate. The presence of even very small amounts of PVC (50-200 ppm) in the PET stream can cause significant deterioration in the mechanical and chemical properties of PET recyclate[4].
2. The elimination of PVC and PVDC will result in a reduction of contaminants in processing and contribute to the quality of recyclates and the level of recycling.
3. PVC/PVDC waste is a relatively small stream in packaging waste and has a low potential for developing processing capacity in Poland.
4. The presence of PVC and PVDC also hinders other waste management processes (thermal conversion and pyrolysis).
5. The rule is in line with the general eco-design rules operating in the international market.

DIRECTIONS OF ACTION FOR MEMBERS SUPPORTING THE IMPLEMENTATION OF THE RULE

1. Public declaration of the target achievement **by the end of 2023**.
2. Implementation and application of the rule in the design of new and modification of current packaging, so that no packaging contains PVC or PVDC; search for alternatives to achieve the same properties without adversely affecting mechanical recycling processes.
3. Transparent reporting of progress toward the target (in the Polish Plastics Pact's annual reporting and, if the company is a member, through the CGF).

REFERENCES

[4] The European PET Bottle Platform, Design Guidelines, **https://www.epbp.org/design-guidelines/products** [accessed: 23.09.2022].

C. ELIMINATION OF EPS AND XPS

Small-format food packaging EPS and XPS do not occur frequently enough in the packaging waste stream to make their material recycling economically viable on a global scale. As a result, they are rarely sorted from municipal waste and recycled into materials. Most often, EPS and XPS primary packaging is diverted to thermal recovery processes or disposed of in landfills. It should be noted that at the global level, PS packaging has also been identified as problematic. The issue of PS packaging in Poland is described more broadly in the Local Context section.

EXAMPLE APPLICATION

Primary, small-format food packaging such as:

- take-out food containers,
- trays, e.g. for vegetables, fruits, delicatessen products, meat.

LOCAL CONTEXT

Polish Plastics Pact in the making of *Report*: *Excessive and problematic packaging* identified EPS and XPS as problematic materials in pre-packaging, due to the lack of data showing that these packages are recycled on a large scale in Poland. In addition, EPS, due to its low weight and distinctive foam structure, has a high probability of small elements getting into the environment.

PS packaging is not currently on the Polish Plastics Pact's list of problematic packaging, but it has been classified as potentially problematic, a group that requires an in-depth analysis of the market and available technologies. This means that PS may be added to the list of problematic packages in the future. The existence of waste sorting plants that separate PS packaging from the municipal waste stream has been confirmed, as well as the existence of facilities that mechanically recycle PS packaging. However, it is necessary to further analyze the scale of operations of the mentioned plants in the context of the entire stream of PS packaging placed on the market and to assess the possibility of closing the loop for this group of packaging. Given that more and more companies are abandoning use of PS, classifying it in internal policies as banned or un-recommended packaging, a gradual decline in the share of such packaging in the waste stream can be forecast. Currently, PS packaging accounts for less than 3% of the packaging placed on the market by members of the Polish Plastics Pact.

RATIONALE FOR THE RULES AND BENEFITS OF THE SYSTEM

1. Elimination of waste for which there is no effective mechanical recycling system operating in practice and at scale today.
2. EPS has been identified as a contaminant in polyolefin recycling due to the difficulty of separation by flotation.
3. EPS, due to its low weight and poor mechanical properties that cause easy crumbling, has a high probability of entering the natural environment.
4. The change is in line with the general rules of eco-design operating in the international market.
5. According to Directive (EU) 2019/904 of the European Parliament and the Council on reducing the environmental impact of certain plastic products (the so-called Single Use Plastics Directive), there is a ban on the marketing of food containers, beverage containers (including caps and lids) and beverage cups (including caps and lids) made of EPS on the Community market. The directive does not cover packaging made of XPS, but because of the aspects cited above, the Polish Plastics Pact classifies this primary packaging material as problematic.

DIRECTIONS OF ACTION FOR MEMBERS SUPPORTING THE IMPLEMENTATION OF THE RULE

1. Public declaration of target achievement **by the end of 2023 for EPS and XPS**.
2. Until a decision is made on the classification of PS as a problematic material in the Polish Plastics Pact - the declaration of PS elimination is voluntary.
3. Implementation and application of the rule in designing new and making changes to current packaging so as to eliminate the use of XPS and EPS (optional - PS).
4. Transparent reporting of progress toward the target (in the Polish Plastics Pact's annual reporting and, if the company is a member, through the CGF).

D. ELIMINATION OF PETG IN RIGID PACKAGING

PETG is a contaminant in the recycling of PET material, thus reducing the quality of the recycled rPET plastic. The material is used, for example, in beverage bottles and packaging for edible oil. The rule applies to all rigid disposable packaging materials in the FMCG market.

EXAMPLE APPLICATION

- Beverage bottles.
- Cosmetic bottles.
- Bottles and containers for oils and fats.

Exceptions: medical applications if there are no alternatives, and packaging smaller than 80 mm that is not diverted for recycling due to its small size.

RATIONALE FOR THE RULES AND BENEFITS OF THE SYSTEM

1. PETG contaminates the PET packaging stream going to recycling because of the difference between temperatures of their processing. The presence of PETG contributes to the formation of lumps, which negatively affect the recycling process and the equipment used, and reduce the value of PET flakes.
2. PETG has a higher density than water and cannot be separated from PET flakes during the flotation process, thus contaminating the feedstock stream and degrading the quality of rPET.
3. The rare occurrence of PETG in the packaging waste stream and the limited market for PETG make it uneconomical to sort and recycle.
4. The elimination of PETG will result in a reduction of contaminants in processing and contribute to an increase in recyclate quality and recycling rates, especially for the PET packaging stream.
5. Due to its high similarity to glass in Poland PETG is also a contaminant of the glass packaging fraction.

DIRECTIONS OF ACTION FOR MEMBERS SUPPORTING THE IMPLEMENTATION OF THE RULE

1. Public declaration of the target achievement **by the end of 2025**.
2. Implementation and application of the rule in the design of new and changes to current packaging to eliminate packaging and packaging components made of PETG.
3. Transparent reporting of progress toward the target (in the Polish Plastics Pact's annual reporting and, if the company is a member, through the CGF).

E. ELIMINATION OF OXO-DEGRADABLE SUBSTANCES

Oxo-degradable plastics contribute to microplastic contamination and - in the long run - are not suitable for reuse, large-scale material recycling or composting. Oxo-degradable packaging includes shrink and stretch film, shopping bags, blister packaging, bottles, labels and caps. This rule applies to all oxo-degradable plastics, as defined by the European Committee for Standardization (CEN).

EXAMPLE APPLICATION

- Shrink and stretch films.
- T-shirt bags for shopping.
- Blisters.
- Bottles.
- Labels and bottles.

RATIONALE FOR THE RULES AND BENEFITS OF THE SYSTEM

1. In accordance with Directive 2019/904 of the European Parliament and of the Council (EU) on the reduction of the environmental impact of certain plastic products (the so-called SUP Directive, the Plastics Directive), a ban on the marketing of products made of oxo-degradable plastics has been established on the Community market.
2. According to the aforementioned Directive, oxo-degradable plastics contribute to microplastic contamination, are not compostable, have a negative impact on the recycling of commonly used plastics, and have no proven environmental benefits.

DIRECTIONS OF ACTION FOR MEMBERS SUPPORTING THE IMPLEMENTATION OF THE RULES

1. Elimination of oxo-degradable packaging within the time horizon specified in the laws of the European Union member states (see section Justification for the existence of the rule and system benefits).

RULE 3

ELIMINATE EXCESS HEADSPACE

FLEXIBLE CONSUMER PACKAGING ACCOUNTS FOR **29.5% OF THE PACKAGING** PLACED ON THE MARKET BY MEMBERS OF THE PLASTICS PACT

ELIMINATE EXCESS HEADSPACE

Elimination of excessive empty space in all types of flexible packaging, so that the filling is a minimum of 70% in all product categories listed in this rule.

By eliminating excess void volume in flexible packaging, companies reduce the need for virgin plastics and reduce the amount of plastic entering the market.

EXAMPLE APPLICATION

Food products:

- sweets,
- dry foodstuffs,
- frozen products and ice cream,
- water and beverages,
- shelf-stable food,
- other food products and fresh food.

Non-food products:

- personal care products and baby cosmetics,
- animal food,
- cleaning products.

RATIONALE FOR THE RULES AND BENEFITS OF THE SYSTEM

1. By eliminating excess headspace in flexible packaging, the need for virgin raw materials and the absolute amount of plastic placed on the market is reduced.
2. Since flexible consumer packaging is not currently recycled on a large scale in Poland (i.e. the current recycling rate is less than 30%), reducing its weight is beneficial in terms of reducing the amount of waste sent to heat recovery and disposal processes.
3. The rule is in line with the current Law on Packaging and Packaging Waste Management of June 13, 2013, according to which the *Packaging introducer is also obliged to reduce the quantity and negative environmental impact of substances used to produce packaging and packaging waste produced in such a way that the volume and mass of packaging are limited to the necessary minimum required to fulfill the functions of packaging referred to in Article 3, paragraph 1, and to ensure the level of safety of the product, taking into account the expectations of the user* (Article 11, paragraph 2 of the Law)[1].
4. The rule is in line with the general eco-design rules operating in the international market, and consistent with the Pact's member companies' commitments to reduce plastic consumption.

DIRECTIONS OF ACTION FOR MEMBERS SUPPORTING THE IMPLEMENTATION OF THE RULE

1. Public declaration of the target achievement **by the end of 2025**.
2. When designing new and changes to current packaging, implement the rule so that the filling level of packaging is always min. 70%.
3. It is necessary to measure the current level of product fulfillment and check compliance with the rule.
4. Transparent reporting of progress toward the target (in the Polish Plastics Pact's annual reporting and, if the company is a member, through the CGF).

REFERENCES

[1] Act of June 13, 2013 on packaging and packaging waste management, Dz.U. [Journal of Laws] of 2013 item 888, as amended.

RULE

4

REDUCE PLASTIC OVERWRAPS

REDUCE PLASTIC OVERWRAPS

Using additional packaging (overwraps) only if necessary. The rule relates to the reduction of excessive[1] overwraps, i.e., packaging that does not perform a barrier function, used as packaging for multipacks (multi-packs).

EXAMPLE APPLICATION

Food products:

- sweets,
- potato chips and snacks,
- tinned foods,
- beverages.

Non-food products:

- household chemicals,
- personal hygiene products,
- baby care products.

RATIONALE FOR THE RULES AND BENEFITS OF THE SYSTEM

1. By eliminating excessive packaging, the need for virgin raw materials is reduced and the absolute amount of plastic entering the market.
2. The change is in line with the general eco-design rules operating in the international market, and consistent with the Pact's member companies' commitments to reduce plastic consumption.

DIRECTIONS OF ACTION FOR MEMBERS SUPPORTING THE IMPLEMENTATION OF THE RULE

1. Public declaration of the target achievement **by the end of 2025**.
2. When designing new and changes to current packaging, implement and apply the rule.
3. Transparent reporting of progress toward the target (in the Polish Plastics Pact's annual reporting and, if the company is a member, through the CGF).

REFERENCES

[1] Excessive packaging is packaging whose elimination will not reduce all essential packaging functions; it can be avoided or replaced (e.g., using reusable models) while maintaining usability.

RULE 5

INCREASE RECYCLING VALUE FOR PET THERMOFORMED TRAYS AND OTHER PET THERMOFORMED PACKAGING

THE RULE APPLIES TO **1% OF PACKAGING** PLACED ON THE MARKET BY MEMBERS OF THE PLASTICS PACT

INCREASE RECYCLING VALUE FOR PET THERMOFORMED TRAYS AND OTHER PET THERMOFORMED PACKAGING

For trays and other thermoformed packaging made of PET material:

1. Regional packaging design guidelines should be aligned with existing waste management and recycling systems whenever possible[1];

2. The following requirements apply to packaging that is not accepted by existing recyclers, and for which there is a clear opportunity to develop a management and recycling system by 2025[2]:

a. Using PET material that is transparent and uncoloured (preferred) or transparent blue or green[3];

b. It is important to make sure that the chosen material, adhesive and label size will not be problematic in the recycling process[4];

c. Only PET5 mono-material packaging is recommended;

d. It is recommended to use direct printing on packaging in minimal to moderate amounts[6];

e. It is important to make sure that the selected adhesives and top film materials, absorbers, inserts and other components and packaging components will not be problematic to recycle[7].

PET trays are not currently recycled on a large scale, but more solutions are being developed in Europe and North America that could change this. The rule to increase the recyclability of PET thermoformed packaging would provide a boost to the emerging recycling infrastructure and increase the quantity and availability of rPET regranulate, which is necessary to meet the targets for the share of recyclables in packaging.

The rule is in line with published guidelines for retailers and those developed by others, such as APR, RecyClass, Petcore Europe and WRAP.

REFERENCES

[1] Since no national design guidelines for recycling have been established in Poland, the Polish Plastics Pact recommends using **the European RecyClass guidelines**. Dyes may be used only if necessary to increase the proportion of recyclable materials in the packaging.

[2] According to the practical and large-scale recyclability criterion used by Plastic Pacts and the assumptions made by industry associations and multilateral value chain initiatives such as RecyClass and Petcore Europe, the target for mechanical recycling is at least 30%.

[3] The use of fillers that affect transparency should be avoided; any additional coatings should not lead to misidentification of the package and diversion to the wrong waste stream. **It is recommended to identify plastics according to the APR comparison test**.

[4] Phasing out paper labels and PETG, PVC and PLA labels (including heat shrinkable), as well as water-insoluble adhesives. Labels should not lead to misidentification of packaging and diversion to the wrong waste stream.

[5] It is recommended to use packs of min. 95% from PET with similar processing parameters (characterized, among other things, by the MFI index, according to ISO 1133) to other packaging in the waste stream of this category.

[6] If additional printing is required (e.g. production date or expiration date), labels are preferred. If this is not possible, use only inks that will not migrate deep into the packaging and will not contaminate the plastic in recycling processes.

[7] Top films, absorbers, inserts and other components should not lead to misidentification of the main package, and if polymers other than PET are used, their density should be < 1 g/cm^3.

EXAMPLE APPLICATION

- Meat and fish trays.
- Prepared food trays.
- Fruit and vegetable trays.
- Thermoformed blister packs.

Exceptions: where the barrier properties of the packaging (against UV, CO_2 or O_2) are required and the use of alternatives is not possible.

RATIONALE FOR THE RULES AND BENEFITS OF THE SYSTEM

1. PET thermoformed packaging is currently not recycled on a large scale, but solutions are being developed in Europe to increase its recycling rate.
2. Material changes in current PET thermoformed packaging are needed to support the recycling technologies being developed.
3. By standardizing the materials and colours of PET thermoformed packaging, eliminating elements and components that make it difficult to recycle, it is possible to obtain a raw material of higher quality, which will help increase the supply of recyclable materials.
4. Achievement of the target will increase the recycling rate of plastic packaging - an additional 3% of plastic packaging (which today goes to energy recovery or disposal) will be managed in accordance with the rules of a circular economy.
5. The rule is in line with published eco-design guidelines and third-party guidelines such as APR, RecyClass, Petcore Europe and WRAP.

DIRECTIONS OF ACTION FOR MEMBERS SUPPORTING THE IMPLEMENTATION OF THE RULE

1. Public declaration of the target achievement **by the end of 2025**.
2. When designing new and changes to current packaging, the rule should be implemented and applied.
3. Transparent reporting of progress toward the target (in the Polish Plastics Pact's annual reporting and, if the company is a member, through the CGF).

EXAMPLE OF TRAY DESIGN

GOOD DESIGN:

- PET mono-material packaging (tray and closing film made of PET),
- transparent tray and sealing film,
- PE label,
- The label takes up less than 30% of the packaging area.

BAD DESIGN:

- PET/PE laminate,
- EVOH barrier substance addition,
- tray coloured in the mass with pigment based on technical carbon black,
- paper or plastic label with density > 1g/cm3,
- The label takes up more than 30% of the packaging area.

RULE 6

INCREASE RECYCLING VALUE IN FLEXIBLE CONSUMER PACKAGING

29.5% OF THE PACKAGING PLACED ON THE MARKET BY MEMBERS OF THE PLASTIC PACT IS PLASTIC-CONTAINING FLEXIBLE PRIMARY PACKAGING

INCREASE RECYCLING VALUE IN FLEXIBLE CONSUMER PACKAGING

For flexible consumer packaging made predominantly of plastics[1]:

1. Regional packaging design guidelines[2] should be aligned with existing waste management and recycling systems whenever possible;

2. The following requirements apply to packaging that is not accepted by existing waste management systems, but there is a guided path for a future recycling system by 2025:

a. Maximum polyolefin content:

- **Preferred use of packaging with a min. 90% share of PE material or min. 90% PP material;**
- **If content at min. 90% is not possible, it is acceptable to use min. 80% PE material, min. 80% PP material or min. 80% mixed polyolefins;**

b. The density of the material should not exceed 1 g/cm^3;

c. The barrier layer used should not exceed 5% of the total weight of the packaging[4];

d. The following materials are prohibited: PVC, PVDC, aluminum foil, PET.

Demand for flexible packaging is estimated to increase with the growing demand for prepared meals, processed foods and online retailing. Primary plastic flexible packaging is not currently recycled in practice and on a large scale, but many efforts are being made to improve the operation of the management system so that flexible packaging recycling is possible.

The rule applies to all flexible consumer packaging with a predominance of plastics, recognizing that:

- primary packaging is, according to the Packaging and Packaging Waste Management Act of June 13, 2013, a packaging used to transfer a product to the user at the point of purchase. In view of the 6th Golden Rule, these are packaging that are likely to end up in the household waste circulation or be discarded by consumers after consumption outside the home;

- flexible packaging is packaging whose shape can be easily changed and which does not retain its shape during handling or after emptying.

REFERENCES

[1] „Predominantly plastic" packaging is defined as packaging whose min. 50% by weight is plastic (i.e. plastic is the predominant material). The rule does not cover compostable plastic packaging that meets accepted certification standards for compostability.

[2] Since no national design guidelines for recycling have been established in Poland, the Polish Plastics Pact recommends using **the European RecyClass guidelines**.

[3] According to the practical and large-scale recyclability criterion used in all Plastic Pacts, and the assumptions made by industry associations and multilateral value chain initiatives, the target recycling rate is a minimum of 30%.

[4] Only barrier layers and coatings that have been proven not to reduce the recyclability of the packaging should be used up to a maximum of 5% by weight. Depending on product requirements, AlOx, SiOx, EVOH and PVOH are acceptable. The impact of each of the listed barriers on the quality of recycled raw materials varies, so it is advisable to verify the compatibility of the barrier with the packaging recycling process each time when making design decisions, using RecyClass guidelines. Excessive exterior metallization (as a barrier or for decoration) can lead to misidentification of packaging and diversion into the wrong waste stream.

EXAMPLE APPLICATION

- Sweets.
- Dry foodstuffs.
- Frozen products and ice cream.
- Food products and fresh food.
- Shelf-stable food.
- Personal care products and baby cosmetics.
- Animal food.
- Cleaning products.

RATIONALE FOR THE RULES AND BENEFITS OF THE SYSTEM

1. Flexible plastic packaging accounts for an estimated 51% of the total plastic packaging market worldwide (68 million tons). In the Polish Plastics Pact, flexible consumer packaging containing plastics accounts for nearly one-third of all packaging placed on the market by members (29.5%). Demand for this type of packaging is projected to grow in tandem with increasing demand for food and online retailing.
2. Flexible plastic packaging is not currently recycled on a large scale in Poland (e.g. the current recycling rate is less than 30%), but efforts are being made to improve the collection, sorting and recycling system (in Poland, such an initiative is **the ReFlex project**, for example).
3. The design changes proposed in this GDR will increase the suitability of packaging for both mechanical and chemical recycling.

DIRECTIONS OF ACTION FOR MEMBERS SUPPORTING THE IMPLEMENTATION OF THE RULE

1. Public declaration of the target achievement **by the end of 2025**.
2. When designing new and changes to current packaging, implement the rule, trying to design flexible packaging with maximum polyolefin content.
3. Transparent reporting of progress toward the target (in the Polish Plastics Pact's annual reporting and, if the company is a member, through the CGF).

EXAMPLE OF FLEXIBLE PACKAGING DESIGN

GOOD DESIGN:

- PP packaging (proportion of PP >95% by weight of packaging),
- content of SiOx barrier substance in a polymer matrix accounting for <5% of the packaging weight,
- transparent packaging,
- PP label.

BAD DESIGN:

- Multi-polymer packaging with a density > 1 g/cm3 (e.g., PP/PET laminate),
- packaging that is substantially printed in dark colours,
- addition of EVOH barrier substance constituting >5% of the weight of the packaging,
- placement of a string or valve if the product does not require it.

RULE 7

INCREASE RECYCLING VALUE IN RIGID HDPE AND PP

THE RULE APPLIES TO **23.4% OF PACKAGING** PLACED ON THE MARKET BY MEMBERS OF THE PLASTICS PACT

INCREASE RECYCLING VALUE IN RIGID HDPE AND PP

For all HDPE and PP rigid packaging:

a. It is important to make sure that the choice of material, glue, dyes, varnish and packaging size will not be problematic in the recycling process[1];

b. It is necessary to use direct printing minimally or moderately[2];

c. For closures, it is important to make sure that the choice of material, absorber and top film will not be problematic in the recycling process;

d. No fillers that increase the density of packaging materials above 1 g/cm should be used[3].

The rule applies to all HDPE and PP rigid packaging, including bottles and tubes.

HDPE and PP rigid packaging is recycled in practice and on a large scale in many markets. In Poland, there is a lack of data confirming that these packaging have reached the 30% recycling threshold, but waste sorting plants have been identified that separate HDPE and PP packaging from the municipal waste stream, as well as facilities that recycle them mechanically. The use of this GDR offers the opportunity to significantly improve the recyclability of HDPE and PP rigid packaging and increase the availability of recyclate of these raw materials.

EXAMPLE APPLICATION

- Meat and fish trays.
- Bottles and containers for cleaning products and cosmetics.
- Dairy bottles.
- Containers for processed and prepared foods.
- Animal food.

REFERENCES

[1] Phasing out paper labels, PET, PETG, PLA and PVC shrink labels and water-insoluble adhesives. Labels (including shrink-wrap) should not lead to packaging being misidentified and diverted to the wrong waste stream. Use polyolefins for labels, such as polypropylene, used with IML (in-mould labeling) technology to produce mono-material packaging with increased recyclability.

[2] If additional printing is required (e.g., production date or expiration date), labels are preferred. If this is not possible use only inks that will not migrate deep into the packaging and will not contaminate the plastic in recycling processes.

[3] Gradual phasing out of silicone, PVC and PS gaskets and steel and aluminum caps. Closures should not lead to packaging being misidentified and diverted to the wrong waste stream.

RATIONALE FOR THE RULES AND BENEFITS OF THE SYSTEM

1. Adoption of this industry-wide rule would affect 20% of the global plastic packaging market and increase recycling rates and availability of recyclates. Adoption of the rule by members of the Polish Plastics Pact affects 23.4% of packaging placed on the market by companies.
2. HDPE and PP rigid packaging is recycled in practice and on a large scale in many markets (e.g., in the EU, HDPE and PP post-consumer recycling levels are 64% and 42%, respectively), but in Poland there is no data to support a recycling threshold of 30% for this packaging. Adapting the rule in Poland would allow for an increase in the amount of packaging designed with recycling in mind, resulting in higher recycling rates for this group of packaging and a greater supply of recyclable materials.

DIRECTIONS OF ACTION FOR MEMBERS SUPPORTING THE IMPLEMENTATION OF THE RULE

1. Public declaration of the target achievement **by the end of 2025**.
2. When designing new and changes to current packaging, the rule should be implemented, designing HDPE and PP packaging according to the guidelines, so that it is recyclable as a result.
3. Transparent reporting of progress toward the target (in the Polish Plastics Pact's annual reporting and, if the company is a member, through the CGF).

EXAMPLE OF PP BOTTLES DESIGN

GOOD DESIGN:

- PP transparent bottle,
- rPP recycled additive,
- PP label,
- label with water-soluble adhesive,
- monomaterial dispenser design.

BAD DESIGN:

- PP coloured bottle,
- no added recycled material,
- PETG label,
- label with water insoluble adhesive.

RULE 8

REDUCE VIRGIN PLASTIC USE IN B2B PLASTIC PACKAGING

REDUCE VIRGIN PLASTIC USE IN BUSINESS-TO-BUSINESS PLASTIC PACKAGING

Reducing virgin plastic use in B2B packaging in ways that benefit the environment by:

a. Elimination of excessive[1] plastics;

b. Use of secondary raw materials (PCR) where plastics are essential;

c. Switch to reusable models or convert to alternative raw materials.

This segment of the packaging market most often does not require food grade plastics or barrier properties, providing ample opportunity to use recycled plastics or alternative materials with a lower environmental footprint.

There are alternatives to single-use packaging on the market, i.e. using B2B reusable packaging.

Reducing the use of virgin plastics through elimination, the use of recycled materials and reuse models can lead to a reduction in environmental impact - both in terms of waste generation and greenhouse gas emissions (if the changes are implemented with all environmental aspects in mind).

The scope of the rule includes all plastic packaging that does not reach the consumer (as opposed to 4th Rule it includes all packaging that does not enter the household waste stream or is not used by consumers when consuming the product outside the home.

The group includes (but is not limited to):

- secondary packaging or other methods of combining individual packages into bundles, multipacks and kits to protect products, facilitate transportation, distribution and shelf display,

- transport packaging, including pallets, anti-slip dividers and stretch films used to secure goods during storage, shipping and distribution.

EXAMPLE APPLICATION

- Stretch films for pallets.
- Stretch hoods.
- Shrink films.

REFERENCES

[1] Excessive packaging is packaging whose elimination will not reduce all essential packaging functions; it can be avoided or replaced (e.g. using reusable models) while maintaining usability.

RATIONALE FOR THE RULES AND BENEFITS OF THE SYSTEM

1. Reduction in the use of primary raw materials placed on the market.
2. Increase in the percentage of recycled materials in transport packaging in the B2B area.
3. Reduction of environmental impact, both from the perspective of the amount of waste generated and greenhouse gas emissions.

DIRECTIONS OF ACTION FOR MEMBERS SUPPORTING THE IMPLEMENTATION OF THE RULE

1. Public commitment to meet the target **by the end of 2025**.
2. Consideration of the rule in the design and selection of stretch and shrink films in B2B packaging.
3. Transparent reporting of progress toward the target (in the Polish Plastics Pact's annual reporting and, if the company is a member, through the CGF).

RULE 9

USE ON-PACK RECYCLING INSTRUCTIONS

USE ON-PACK RECYCLING INSTRUCTIONS

It is recommended that instructions be placed on plastic primary packaging stating the proper sorting of waste or reuse[1, 2].

Consumers play a key role in the separate waste collection system, which influences the further effective management of packaging waste. Clear and accurate instructions on packaging about sorting can increase the chances of putting waste in the right container.

In addition to the development and introduction of labeling on packaging by individual manufacturers, there has been an increase in the number of initiatives that develop guidelines for creating sorting instructions on packaging (in Poland, such an initiative is, for example, the **5 Fractions Coalition**). Their goal is to create an accurate and understandable way for consumers to deal with packaging waste and make it easier to choose the right waste fraction for all elements of packaging.

EXAMPLE APPLICATION

- Plastic primary packaging of products of all categories.

RATIONALE FOR THE RULES AND BENEFITS OF THE SYSTEM

1. Improvement in the quality of the packaging waste stream, which will translate into the quality of waste sorted for recycling and increase the supply of recyclable materials in the market.
2. Education of the public on waste sorting.

DIRECTIONS OF ACTION FOR MEMBERS SUPPORTING THE IMPLEMENTATION OF THE RULE

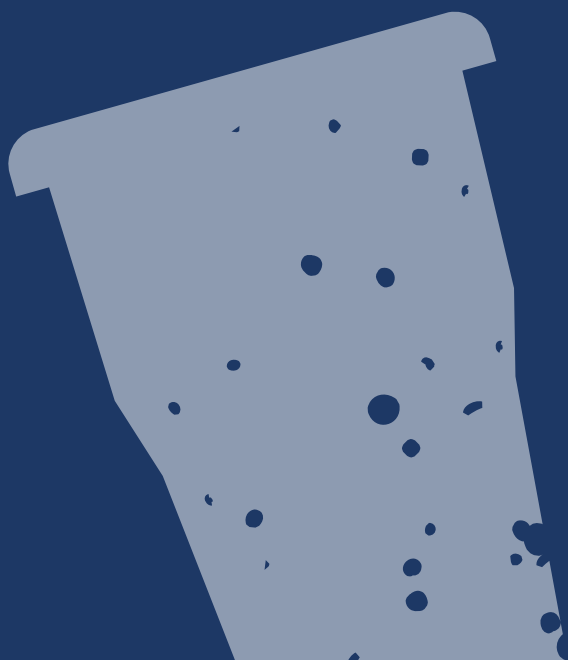
1. Public commitment to meet the target **by the end of 2025**.
2. Instructions for proper waste sorting should be placed in a conspicuous place on each primary packaging.
3. Transparent reporting of progress toward the target (in the Polish Plastics Pact's annual reporting and, if the company is a member, through the CGF).

REFERENCES

[1] Instructions should reflect local (national) conditions and rules for selective waste collection.

[2] The instructions should be clear, visible and legible to the consumer.

OTHER KEY DOCUMENTS OF THE POLISH PLASTICS PACT



ROAD MAP

The Road Map is a key document for the Polish Plastics Pact, detailing the outcomes and tasks that need to be achieved to enable the closure of the plastic packaging cycle, along with a time horizon for their implementation. The document version 2.0 was published in March 2022, after numerous consultations with Pact members, the Steering Committee, the Consultative Council, the Expert Council and independent experts in an open consultation.

The publication, implementation and promotion of the 9 GOLDEN DESIGN RULES allow tasks 7.3, 7.4 and 7.5 of the Pact Road Map to be accomplished to achieve outcome no. 7: Pact members are guided by key rules on best practices for selecting and designing plastic packaging for recyclability.

The Road Map is aimed not only at members of the Pact - all market stakeholders are invited to read and join in the tasks. The document has been made available for download below.

CLICK TO DOWNLOAD! (POLISH VERSION ONLY)

ASSESSING THE RECYCLABILITY OF PLASTIC PACKAGING

To improve the circularity of plastic packaging and increase its recyclability, it is necessary to understand which packaging materials are currently being mechanically recycled in practice and on a large scale, and for which such a system is not in place or the scale of its operation is not yet sufficient. This distinction forms the basis of the Ellen MacArthur Foundation's methodology for assessing the recyclability of packaging and Plastic Pacts around the world.

In the second quarter of 2022, the Polish Plastics Pact developed a document that explains in detail the methodology for evaluating plastic packaging suitability for mechanical recycling in practice and on a large scale.

The document also shows for which packaging categories effective recycling systems are already in place, both globally and locally - in Poland. As a result, the publication helps you make an informed choice of packaging materials so that they meet the criteria for assessing recyclability. It should be noted that the implementation of the 9 Golden Design Rules directly contributes to increasing the share of recyclable packaging in practice and on a large scale.

The study consists of two parts:

- Part 1: practical and large-scale recyclable packaging - definition and interpretation of terms,

- Part 2: instructions for conducting practical and large-scale recycling assessments.

The report Criteria for classifying mechanically recyclable packaging in practice and on a large scale (downloadable version) is below:

CLICK TO DOWNLOAD!
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EXCESSIVE AND PROBLEMATIC PACKAGING

The waste hierarchy introduced into the legal order through Directive 2008/98/EC of the European Parliament and of the Council on waste indicates clearly - the overriding way of dealing with waste is prevention. To close the circulation of plastic packaging, it is necessary to reduce the amount of plastic entering the market and eliminate excessive and problematic packaging.

Report Excessive and problematic packaging was created in 2021, as part of Target 1 of the initiative *Identification and elimination of unnecessary and problematic plastic packaging through redesign, innovation and alternative delivery models*. The report presents a list of excessive and problematic packaging identified by the Polish Plastics Pact, along with a time horizon for their elimination, outlines the factors affecting problematic packaging, and includes a dose of inspiration in the form of a model for implementing innovation at the source in packaging.

The list of packaging identified in the report is largely consistent with the packaging identified in the 1st Golden Design Rule, although not all packaging identified by the CGF was included in the Plastic Pact report. Polish Plastics Pact in the coming months will update the Report: Excessive and problematic packaging to harmonize and update the packaging list.

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CONCLUSION

Harmonizing local guidelines with global requirements for packaging is a huge step toward closing the plastic packaging loop. 9 Golden Design Rules is a document aimed at all those involved in the value chain of plastic packaging in the Polish market. Members of the Polish Plastics Pact, by implementing its rules, contribute to all of the initiative's strategic targets - with the greatest impact on Target 3[1], leading to the achievement of key outcomes identified in the Road Map.

All recipients of the document are invited to take action as soon as possible - analyze the packaging portfolio and make changes, in accordance with the recommendations of the 9th GDR. To facilitate design decisions, Pact plans to update the study (version 2.0) in 2023, which will be enriched with practical tips for implementing packaging changes.

ADDITIONAL INFORMATION AND CONTACT

More information on GDRs developed globally by CGF can be found **HERE**.

The full version of the GDRs developed at the global level by the CGF can be found **HERE**.

If you have any questions about the publication, Polish Plastics Pact activities or membership, please feel free to contact us at **sekretariat@paktplastikowy.pl**.

REFERENCES

[1] Target 3: 100% of plastic packaging on the Polish market to be reusable or recyclable.

GLOSSARY OF ABBREVIATIONS

ABS	acrylonitrile-butadiene-styrene copolymer
APR	The Association of Plastics Recyclers
B2B	business-to-business, a relationship occurring between two (or more) companies
B2C	business-to-client, a relationship that occurs between businesses and individual customers
CEFLEX	The Circular Economy for Flexible Packaging
CGF	The Consumers Goods Forum
EMF	The Ellen MacArthur Foundation
EPBP	The European PET Bottle Platform
EPS	Expanded polystyrene, or foamed polystyrene
EVOH	copolymer of ethylene and vinyl alcohol
FMCG	fast-moving consumer goods, e.g. foodstuffs, cosmetics, household chemicals
HDPE	high density polyethylene
NIR	near-infrared spectroscopy
PE	polyethylene
PET	poly(ethylene terephthalate)
PETG or PET-G	PET with 1,4-cyclohexanedimethanol mers, a.k.a. glycol-modified poly(ethylene terephthalate)
PLA	polylactide
PP	polypropylene
PRE	Plastics Recyclers Europe
PS	polystyrene
PVC	poly(vinyl chloride)
PVDC	poly(vinylidene chloride)
rPET	recycled poly(ethylene terephthalate)
SAN	poly(styrene-co-acrylonitrile), a copolymer of styrene and acrylonitrile
SUP	Single Use Plastic
WRAP	The Waste & Resources Action Programme
XPS	extruded polystyrene, or foamed polystyrene, obtained by extrusion

POLSKI PAKT PLASTIKOWY

PLASTICS PACT

KAMPANIA 17. CELÓW