EUROPEAN COMMISSION
JOINT RESEARCH CENTRE
Directorate B – Fair and Sustainable Economy
**Circular Economy and Sustainable Industry**

# *Revision of the EU Ecolabel criteria for detergent and cleaning products*

*Background paper displaying discussions and feedback received during the working sub-group (sub-AHWG) on*

## *Packaging (PACK)*

*This background document aims to provide the context and the content on the discussion points addressed during the PACK working sub-group lifetime (1st and 2nd meeting)*

# 1 General introduction

The Joint Research Centre (JRC) can organise Ad Hoc working sub-groups (sub-AHWG) as part of the revision of EU Ecolabel criteria, aimed at feeding, cross-checking and improving draft criteria proposals made on specific aspects.

The scope could be as wide as a criterion *and*/or a number of product groups but also really specific, as examining a particular material/ingredient type within a product sub-group. Whatever the case, it requires the involvement of experts on the chosen topic due to the highly technical nature and/or specificity of the exchanges expected during the sub-AHWGs meeting/s.

The product groups (PGs) under the scope of the EU Ecolabel criteria under revision are:

- "Dishwasher detergents" DD
- "Industrial and institutional automatic dishwasher detergents". IIDD
- "Laundry detergents" LD
- "Industrial and institutional laundry detergents" IILD
- "Hard surface cleaning products" HSC
- "Hand dishwashing detergents". HSC

These PGs are treated horizontally, meaning that there won't be a separated sub-AHWG for each particular product group but rather all discussions on a particular topic for the six PGs will be happening together on the same day.

The sub-AHWGs steps for the revision of the EU Ecolabel criteria for detergent and cleaning products are:

1. Sub-AHWG formation -> JRC released a Call for Expression of Interest (CfI) during May 2025 and then stakeholders confirmed their willingness to participate. After the CfI deadline, the JRC notified relevant parties about their membership in the sub-AHWGs and provided the necessary information for the upcoming meeting/s (i.e. background paper).
2. First (1st) sub-AHWG meeting -> In this 1st sub-AHWG meeting the JRC introduced the topic and clarified any doubt surrounding the background information provided beforehand, inclusive of any questions that may have been shared. The aim was to ensure effective understanding and gathering of relevant/missing data/information. Participants shared their comments and/or replies to these questions prior to the deadline set by JRC (e.g. via *EU survey* platform; using JRC's template). These substantiated/contributed to a new criteria draft proposal which was discussed in the 2nd sub-AHWG meeting. For this initial meeting the duration estimated was 1-2 hours, being modified according to expected participants/topics to be covered.
3. Second (2nd) sub-AHWG meeting -> In this 2nd sub-AHWG meeting the JRC presented a draft criteria proposal informed by/based on the feedback received in the 1st sub-AHWG meeting. This proposal was circulated prior to the 2nd AHWG meeting, highlighting changes made and specific new discussion points/questions. The aim was to gather specific feedback enabling fine-tuning of this draft criteria proposal. Participants shared their feedback during the meeting, then being reflected in a final version of the background document and used to fine-tune the proposal presented. This curated proposal, inclusive of any further work carried out by the JRC, will be brought for discussion during the 2nd AHWG meeting. For this last meeting, the expected duration was 2-4 hours, being modified depending on expected participants/topics to be covered.

# 2 Introduction – *Packaging (PACK)* sub-AHWG

Since long, packaging waste has been a growing environmental concern in the EU, with an estimated 188.7 kg generated per inhabitant in 2021.[1] In response to this, the EU has acted via different tools, as the circular economy action plan, which focuses on the recovery and recycling of packaging, and the Packaging and Packaging Waste Directive, which aims to reduce the environmental impact by promoting the use of recyclable and reusable materials. Additionally, new proposals, including increased recycling targets, aim to promote a more circular economy and decrease the amount of packaging waste sent to landfills. In line with and prior to some of these policies, the EU Ecolabel for detergents has set ambitious requirements to address the environmental challenges associated with packaging waste via specific packaging criteria, including design for recycling, and in its current revision has proposed a new criterion on recycled materials content.

*Pack sub-AHWG* overview

Aim/s: improve existing and new proposed criteria related to packaging of detergent and cleaning products (e.g. Design-for-Recycling criterion and Recycled Materials Content criterion) to balance environmental goals with recycling efficiency, innovation adaptability, and compliance feasibility.

Scope: *Criteria Packaging,* particularly sub-criteria *Recycled Materials Content*, *Design-for-Recycling*; All PGs.

Transparency: all discussions held in the dedicated sub-AHWG meetings and documents used will be publicly available (i.e. minutes; background paper).

Target audience: stakeholders with experience designing packaging and recycled material (e.g. industry – license holder, recycling associations), inclusive of functional traits (e.g. adhesives for labels), as well as the supply –chain involved (e.g. suppliers, recyclers) are especially welcomed here.

Sub-AHWG composition: The total number of sub-AHWG members registered was 30, with industry accounting for the greatest share (18/30), followed by *Other* entities (e.g. testing laboratories; consultancies) (4/30), Competent / ecolabelling bodies (5/30) and NGOs (3/30).

Stakeholders willing to have full details about the packaging criterion and sub-criteria are invited to read about:

- how existing provisions on packaging were set in the final report of the previous EU Ecolabel criteria revision ([2]).
- which is the information available and status in the current revision exercise via the preliminary report ([3]) and the 1st Technical report ([4]).

In order to bring "up-to-speed" with current products' reality (e.g. market & technological development; scientific evidences; etc.) the first step carried by JRC was mapping which aspects of the existing criteria or new proposal required further attention. Then, it inquires about the evidences that could lead (fill the gaps) to criteria changes (new/updated proposals), being some aspects very general while others are really specific, thus respectively leading to open or specific questions.

In the 1st meeting, held on the 16/07/24, discussions were articulated in what were perceived as meaningful thematic PACK blocks: 1) *Recycled materials content* criterion; 2) *Design for Recycling*

[1] https://ec.europa.eu/eurostat/statisticsexplained/index.php?title=Packaging_waste_statistics#Waste_generation_by_packaging_material

[2] See pages 83 - 88 https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/contentype/product_group_documents/1581681262/Technical%20background%20report.pdf

[3] https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2024-02/Detergents_Draft_Preliminary%20Report.pdf

[4] See the sections *Scope* (pages 24 – 25) and 7.6.9 *Micro-organisms* (pages 113 - 114) https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2024-02/Detergents_Draft_Technical%20Report%201_1.pdf

criterion. Consequently, the first two sections of this background version document follow this same structure. Each of these sections was split into the following sub-sections:

1. Mapping of aspects – A description/listing of the aspects requiring further assessment as identified by JRC and/or stakeholders prior to the 1st MCP sub-AHWG meeting (from focused questionnaire; written comments to TR1).
2. Potential actions – potential outcomes/actions leading to improved/updated of the existing criteria or new additions derived from the mapping exercise.
3. Feedback to 1st PACK sub-AHWG questions – summary of the feedback received on the questions shared during the 1st PACK working sub-group meeting, following the same correlative numbering used then (Q1 –Q25).

These sub-sections can be preceded/contain comments providing further context to interpret the information and/or questions shared (rationales). Finally, relative to JRC or participants comments/questions on existing requirements, inclusive of the recent proposals made, the version of the criterion text to be used as reference is that shown in the 1st Technical report ([5]).

Following the 1st PACK sub-AHWG meeting feedback was received from its participants, which either served as direct input or primed JRC's research leading to a draft proposal of the criteria *Recycled content* and *Design for Recycling* legal text. The last section added (*New draft criteria proposal)* was the focus of the discussions in the 2nd meeting of the PACK sub-AHWG, held on 15/10/24. It presented the new draft criteria proposal, the underlying rationales for changes made and proposed some further questions. The feedback received to these 2nd batch of questions (Q26 – 33) was assessed and summarised and it is included as the last sub-section to this chapter. Hence, the structure of the *New draft criteria proposal* section is:

1. Proposal text – the draft criteria text, showing previous proposal (as in Technical report 1, draft criteria version 1)[6] and current proposal with changes made to TR1 version highlighted in blue. Any deletion of text is displayed in strikethrough blue font (~~like this~~).
2. Rationales for proposals – which summarily present and discuss the rationales driving the draft proposal made.
3. New questions/discussion points - which address general and/or specific aspects. Each is numbered correlatively (starting in Q26) across the document. Sub-AHWG members are encouraged and expected to comment/discuss them during the 2nd PACK sub-AHWG.



[5] See the section 7.7 *Packaging* (pages 115 (Recycled Materials Content) and 124 (Design for Recycling)) https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2024-02/Detergents_Draft_Technical%20Report%201_1.pdf

[6] See the section 7.7 *Packaging* (pages 115 (Recycled Materials Content) and 124 (Design for Recycling)) https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2024-02/Detergents_Draft_Technical%20Report%201_1.pdf

# 3 Sub-criterion - Recycled materials content

In an effort to minimize the environmental footprint of packaging and packaging waste, as well as to promote recycling a proposal has been made to introduce the new sub-criterion "Recycled materials content". This sub-criterion sets specific targets for recycled content in paper/cardboard and plastic materials, being these inspired by the top 10 to 20 % of the most environmentally friendly products on the market. Following stakeholder consultations conducted by the JRC, there have been requests for further clarification of the requirements. Additionally, some concerns regarding the practicality of the proposed recycled content thresholds have been raised and will be further discussed.

The outline below identifies areas and aspects that require further discussion and possible actions for consideration and potential implementation.

## *3.1 Mapping of aspects*

Scope (professional HSC); The scope of the proposed EU Ecolabel criteria for recycled content in packaging includes product groups such as Laundry Detergent (LD), Dishwashing Detergent (DD), Hand Dishwashing Detergent (HDD), and Hard Surface Cleaning (HSC) products. However, it excludes Industrial and Institutional Laundry Detergent (IILD) and Industrial and Institutional Dishwashing Detergent (IIDD) from its requirements. Considering that HSC products encompass both professional and household applications, concerns have emerged regarding the distinct requirements applied to the professional segment of HSC products compared to those for IILD and IIDD. These concerns focus on the difficulties in achieving the minimum Post-Consumer Recycled (PCR) content in the packaging of professional products, where it seems that the reliance on virgin plastics is frequently justified by stringent safety.

Scope clarification; Within the proposed criterion there are specific provisions for recycled content of plastic packaging. Closures, trigger sprays, and pouches are currently exempt from the proposed recycled content requirement. However, stakeholder feedback indicates a need for further clarification regarding the scope and the exemptions.

Although the proposed criterion currently focuses on recycled content, stakeholders have also expressed need for information on whether recyclability considerations are included within the provisions.

In terms of recycled materials content the following requirements have been proposed:

Paper/cardboard:

- Sales (primary) packaging shall contain a minimum of 80% recycled material content.
- Grouped (secondary) packaging shall contain a minimum of 70% recycled material content.

Plastics

- PET, sales (primary) packaging shall consist of at least 70% recycled material content.
- Other plastics, sales (primary) packaging shall be made of a minimum of 50% recycled material content.

In terms of the feedback received on these requirements

- A share of stakeholders support the proposal and also suggest an increase of the minimum recycled content in paper/cardboard packaging.
- A share of stakeholders has expressed concerns regarding the feasibility of implementing the proposed recycled material content requirements for PET and other plastics, highlighting potential issues related to quality, safety, contamination risk and availability of recycled plastics.
- Stakeholders have mixed view on the proposal to include specific recycled content requirements for grouped plastic packaging, with some echoing concerns similar to those for sales plastic packaging.

Proponents, however, argue that a recyclability requirement for grouped packaging could be beneficial, especially as the market is expected to see an increase in secondary packaging driven by the growth of concentrates, dilutable refills.

## *3.2 Potential actions*

About the Scope (HSC professional); The approaches that can be proposed and/or discussed are:

- Consider the exclusion of the recycled material content requirement specifically for professional HSC products, similar to the current exclusion of IILD and IIDD
- Gather evidences about safety concerns regarding the use of recycled materials versus virgin plastics in professional HSC product packaging and assess feasibility of implementing specific provisions.
- Explore the potential for adjusting the PCR content requirements for professional HSC products based on the findings of the safety assessments (see previous bullet point).

About Scope clarification; Consider revising the proposed text of the 'Recycled Material Content' criterion (TR1) to ensure a comprehensive understanding and consistent application of the recycled content requirements across all packaging categories. Amend the criterion wording to clarify that recyclability requirement is not encompassed in the current proposal.

Current criterion text proposal

*Plastic used for packaging*

*Sales packaging (primary packaging) made of PET shall contain a minimum of 70% recycled material (PCR recycled plastic made from post-consumer recycled), other plastics (e.g. HDPE) shall contain a minimum of 50% recycled material (PCR).*

*All closures and trigger closures (e.g. removable closures and pump dosers) and pouches are exempt from this requirement.*

*Recycled content and recycliability of sales packaging (primary packaging) and grouped packaging (secondary packaging) shall be indicated on the sales packaging. The recycled content stated on the packaging shall refer to the total weight (body, closure, label/sleeve and trigger closure).*

Modification of the proposed criterion text

*Plastic used for packaging*

*Sales packaging (bottles, canisters) made of PET shall contain a minimum of 70% recycled material (PCR recycled plastic made from post-consumer recycled), other plastics (e.g. HDPE) shall contain a minimum of 50% recycled material (PCR).*

*All closures and trigger closures (e.g. removable closures and pump dosers) and pouches are exempt from this requirement.*

~~*Recycled content and recycliability of sales packaging (primary packaging) and grouped packaging (secondary packaging) shall be indicated on the sales packaging.*~~ If the recycled content is stated on the packaging this shall refer to the total packaging weight (body, closure, label/sleeve and trigger closure).

About recycled materials content;

Ambition levels

- Discuss and agree on whether to consider increasing the minimum recycled content in paper/cardboard for retail packaging (to over 80%) and grouped packaging (to over 70%), in order to ensure feasibility or to identify any potential technical barriers for the implementation.
- Address impurities / cross-contamination concerns potentially affecting packaging material quality and safety by gathering evidences (i.e. data, information) and discussing implications of recycled

content use in different type of plastic packaging (i.e. potential risks /differential contamination by plastic type).

- Address availability concerns for recycled plastics in detergent packaging by discussing supply chain challenges and ensuring relevant evidences are accessible to the JRC.

Grouped packaging

- Discuss and agree on which additional or alternative provisions should be considered to account for all type of grouped packaging materials. Different approaches that could be discussed:

    1. Grouped packaging shall be made exclusively of cardboard and/or paper and shall adhere to the recycled content requirements for paper/cardboard grouped packaging. Plastics grouped packaging would not be permitted.
    2. Plastic grouped packaging shall be recyclable with a recyclability performance grades of at least 95%. Recyclability shall be verified by complying with the EN 13430 or ISO 18604.
    3. Plastic grouped packaging shall comply with the same recycled content requirement as sale plastic packaging.

## *3.3 Feedback to 1st PACK sub-AHWG questions*

This sub-section provides a summary of the feedback received to each of the questions shared with PACK sub-AHWG participants during the 1st PACK sub-AHWG meeting. The intention is to be informative and transparent with regards to the inputs that JRC received and considered in the formulation of its proposals for update/modification of draft criteria relative to recycled materials content and design for recycling, highlighted in the next sub-section.

The main tool set by JRC for feedback collection was an EU survey (active from 17/07/24 to 12/08/24), containing all the question shared during the 1st PACK sub-AHWG meeting to which a total number of 11 participants replied. In the summaries to each question disclosed below the number of blank responses is highlighted to provide context.

| Q1 - Would you support the exclusion of Hard Surface Cleaning (HSC) products for professional use from the scope of the 'Recycled materials content' criterion? *Please, provide detailed data and a reasoned explanation to support your position, focusing on safety concerns or other relevant factors that justify your favourable or unfavourable view* |
|---|

*Blank responses* = 1

Several stakeholders supported the exclusion, either fully or partially. One stakeholder highlighted the unique requirements and challenges associated with professional cleaning products, versus household versions, containing recycled materials, such as:

- higher concentration rates to ensure performance for the expected use (e.g. hospital care, food catering);
- vulnerability to stress crack effects induced by surfactants in combination with other common ingredients for longer contact times;
- the need for medium to high molecular weight HDPE resin for chemical compatibility (as opposed to, for example, PET).
- Decreased performance packaging attributes in comparison with using virgin resin, potentially leading to packaging failure.

Other two stakeholders supported an exemption for particular packaging types, rather than excluding all HSC professional products. In particular, for the packaging approved for the transport of dangerous goods (ADR), which may not be compatible with recycled materials. They mentioned that such approach would be aligned with the PPWR.

One stakeholder agreed that it may be relevant having exemptions (i.e. allowing a higher proportion of virgin raw materials) for specific applications, due to legal requirements or technical demands. However, it also questioned the need for such exemptions (not restricted to HSC but to all PGs) since Article 7(3) of the PPWR,

which lists applications exempt from future mandatory recycled content targets, does not seem to contain any type applicable to detergents' packaging. Indeed, another stakeholder mentioned the exempted applications being pharmaceutical and hazardous goods. Consequently, it indicated that exemptions should only be granted if stakeholders can provide clear evidence that it is necessary for a particular use.

Two stakeholders, opposed to such exclusion, arguing that Ecolabel criteria should go beyond the PPWR targets. They further mentioned that technically professional products do not differ significantly from consumer products (e.g. same supplier / virgin plastic granules; manufacturing process), thus being feasible to maintain the same recycled content percentage.

Finally, two stakeholders explicitly recommended aligning with PPWR in terms of scoping and derogations, ensuring harmonization between Ecolabel and PPWR requirements (e.g. according to PPWR, any plastic part representing less than 5% of the total weight of the whole packaging unit is excluded from the requirements regarding recycled content targets).

Q2 - Do you find that the proposed modifications to the 'Recycled Material Content' criterion clarify the requirements for recycled content in plastic packaging? Do you support these modifications? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

Related to section 3.2 – Scope clarification.

*Blank responses* = 1

The majority of stakeholders agreed with the modifications (i.e. clarify that the recycled content stated on the packaging should be calculated over the total packaging weight). Several of them provided further remarks:

- one stakeholder recommended aligning to the PPWR to create a level playing field in terms of the targets and the exemptions (i.e. exclusion of plastic parts representing less than 5% of the total weight of the whole packaging unit from the requirements regarding recycled content targets)
- Two stakeholders suggested providing a clear time horizon for the targets to be achieved and specifying the calculation methodology for calculating total packaging recycled content, respectively.
- One stakeholder suggested considering an even higher minimum share of recycled content in plastic packaging, citing the technical report's statement that up to 100% PCR is used for PET bottles and up to 50-60% for HDPE.
- One stakeholder emphasized the importance of clearly defining PCR in the document.
- One stakeholder requested a more precise definition of the monitoring of the supply chain for recycled plastics, citing a lack of clarity on the evidence to be provided by the applicant/license holder and the elements to be controlled by the CB.

Q3 - Would you support expanding the recycled content requirements to include all plastic packaging components in the primary (sales) packaging, beyond only bottles and canisters? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

Related to section 3.2 – Scope clarification.

*Blank responses* = 0

Three stakeholders supported the inclusion of the recycled content requirements be expanded to all plastic packaging components (e.g. closures, triggers, and pouches) to ensure equal treatment of all packaging variants. Contrastingly, two stakeholders opposed on the basis of lack of recycling channels for caps and sourcing difficulty for some materials (e.g. PP).

The rest of stakeholders provided conditional and/or partial support to the proposal:

- One stakeholder recommended aligning with PPWR and focusing on primary packaging components, while also maintaining the exemption for components representing less than 5% of the packaging weight. Another stakeholder recommended this exclusion to represent less than 10% of the packaging weight
- One stakeholder opposed to the expansion if it includes all types of products, citing the need for a separation for professional use products.

- One stakeholder noted that recycled content is not yet possible for pouches due to security issues yet for closures, triggers, and pumps it could partially be via specific criteria.
- One stakeholder noted that the type of plastic used in secondary packaging makes it challenging to include recycled content.
- One stakeholder agreed to include standard caps in the requirement but suggested exempting dosing caps, which are heavier and provide an appropriate dosing system. It further raised questions about the scope of the requirement, specifically regarding the inclusion of sprays and the calculation methodology for products with recycled materials. Regarding this last aspect, another stakeholder emphasized the importance of including both outer carton boxes and sales items/units in the outer carton boxes in the declaration, particularly in professional markets where products are sold per unit and per outer carton box.

Q4 - Would you support increasing the minimum recycled content in paper/cardboard for sales packaging to over 80%, and for grouped packaging to over 70%? *Please provide reasoned explanation to support your position*

Based on evidence from previous consultations and survey data, the JRC has observed that the market currently includes products with significantly high levels of recycled paper and cardboard content, with some reaching up to 100%. Additionally, the Nordic Swan Ecolabel sets a minimum threshold of 90% recycled content for paper/cardboard packaging, confirming the availability of detergent products that meet these specifications in Nordic countries. In light of these insights, please provide an answer on the practicality of adopting similar recycled content requirement, accompanied by a rationale that addresses any significant technical aspect.

Related to section 3.2 – recycled material content (ambition levels)

*Blank responses* = 1

The majority of stakeholders supported increasing the minimum recycled content, differing in their views on whether the minimum content should be raised for:

- both sales and grouped packaging – stakeholders suggested 90% for sales packaging (thus aligning with Nordic Swan criteria 017) and 80% for grouped packaging (thus aligning with EUEL Absorbent hygiene products), specifying that recycled material derives from post-consumer waste.
- only for sales packaging or; - one stakeholder suggested 90%
- only for grouped packaging. – one stakeholder suggested 80% based on current practice for outer boxes.

However, other stakeholders either opposed or expressed concerns about the feasibility of increasing the minimum recycled content considering innovation and performance attributes:

- One stakeholder opposed to the increase, as it may hamper innovation in paper/cardboard packaging and transition from fossil-based plastic packaging. Similarly, another stakeholder opposed to the increase, specifically in scenarios where packaging formats have a pump or sprayhead, as the box containing such products requires enough vertical compression resistance and to achieve this recycled are mixed with virgin fibres. Therefore, both stakeholders implied that higher recycled content could imply more grams per square meter of material needed to compensate for the loss of performance attributes due to the recycled fibres, which could translate to a higher CO2 footprint and land use (among other environmental indicators).
- One stakeholder highlighted that 70% is sufficient for sales packaging, but only if there are no issues with humidity sensibility of the product inside.
- One stakeholder flagged that kraft paper, sometimes necessary for its strength, may not allow for high levels of recycling, and thus might fail the 90% threshold.

One stakeholder considered sufficiently stringent current levels, with higher levels potentially compromising meeting the technical specifications (strength and thickness) of the 4G standard

Q5 - Could you provide specific details on the safety risks associated with recycled plastics, specifying the information according to the different types of plastics? *Please provide as specific and comprehensive an answer as possible.*

Related to section 3.2 – recycled material content (ambition levels)

*Blank responses* = 1

The safety concerns clustered around contamination and lack of traceability of the plastic materials used, which potentially introduces contaminants and difficult putting pertinent controls in place. Those stakeholders sharing safety concerns indicated:

- that some types of plastics are more challenging (e.g. PP, PE) from a safety perspective than others (PET).
- that PE has a lower melting temperature than PET, making it more challenging.
- that PE and PP have poor barrier properties and can absorb components of the products they come into contact with, potentially releasing harmful substances during their second life (e.g. CMRs, PBTs, PBMs, vPvBs, and SVHCs). Furthermore, the suppliers of recycled PE or PP can't guarantee complete absence of contaminants and not enough share is available of quality recycled PE (e.g. food origin) to meet the demands of detergents producers

Several stakeholders shared comments along the line of tacking previous concerns. One stakeholder advised that effective packaging design for recycling is crucial for generating high-quality PCR, and that multiple recyclers have implemented technologies to deliver the quality of PCR requested by brands. One stakeholder proposed carrying out test on specific hazardous substances (e.g. heavy metals) to avoid cycling of hazardous substances. Another stakeholder suggested that having a standard and clear specification for granules and final products, as well as a specific declaration, can help bypass the problem of demonstrating and requesting elaborate documents from suppliers.

Finally, three stakeholders provided brief responses indicating: a lack of knowledge on the topic. Impossibility to disclose information on safety risks that cardboard recycling is advanced, but not relevant to the question.

Q6 – Some substances/materials have been identified as hindering the recycling process (e.g. fibre loss, presence of additives and/or dyes during the recycling process). In this sense, could share any insights about them? *Please provide as specific and comprehensive an answer as possible.*

Related to section 3.2 – recycled material content (ambition levels)

*Blank responses* = 3

One stakeholder provided detailed response about the multiple substances and materials can hamper the plastic recycling process and the quality of the recycled plastic:

- Paper fibers, which cannot be filtered and can burn, generating black dots on recycled plastic.
- Inks, which can color the recyclate, limit its application, hamper sorting, and promote plastic polymers degradation during recycling.
- Additives that can change the density of the plastic polymer, making it non-recoverable.
- Bio-, oxo-, and photo-degradable additives that can reduce tensile properties in packaging incorporating recycled plastic.
- PET additives that can induce degradation and a yellowish effect on the recyclate.

Two stakeholders suggested the following resources on the topic:

- The RecyClass Design For Recycling Guidelines - provide information on which parameters are fully, conditionally, or not compatible with the recycling process (https://recyclass.eu/recyclability/design-for-recycling-guidelines/).
- German minimum standard for packaging - specifically sections 4.2 and 4.3, as well as Annexes 2 and 3, which provide information on packaging characteristics and recycling incompatibilities (https://www.verpackungsregister.org/fileadmin/files/Mindeststandard/Minimum_standard_Packaging-Act_Edition_2023.pdf.)

Other comments from stakeholders were:

- One stakeholder indicated that for professional use products, blue masterbatch in HDPE containers is a well-known choice in the large container industry for its light protection properties, and is often a requirement from end-users as an unequivocal differentiation of products that require a specific use protocol or behavior.
- One stakeholder suggested contacting recycling experts and representatives from CosPaTox for more substantial feedback.

Two stakeholders focused on additives. One indicated that the packaging must not contain additives or features that are likely to result in low-value (i.e., low-quality) reprocessed material, as per the Association of Plastic Recyclers' Design-for-Recyclability Guidance, or all attributes are classified for at least "Limited Compatibility" as per the Plastics Recyclers of Europe's Guidelines for Recycling. The other highlighted the possibility of EU Ecolabel set new standards to be followed (e.g. plastic materials without specific additives)

Q7 – Acknowledging that stakeholders raised concerns on the ambition level of the recycled content for plastic packaging, could you share which would be feasible targets (set by plastic type)? *JRC would like to receive feedback on percentage over total packaging weight, inclusive of any relevant remark. Please provide as specific and comprehensive an answer as possible*

Related to section 3.2 – recycled material content (ambition levels)

*Blank responses* = 1

Two stakeholders recommended aligning the plastic recycling targets with those proposed by the European Commission in PPWR, which uses 2030 and 2040 as target years. One of them recommended at least mirroring the 2040 targets.

Two stakeholders supported currently proposed targets (PET 70%; Other plastics 50%), one of them highlighted being the same as Blue Angel and the other referring specifically to PE.

Contrastingly, another two stakeholders reported lower recycled content shares than those currently proposed. One suggested maximum recycled content targets of 50% for PET bottles with caps and 30% for PET bottles with triggers/pumps. The other reported sourcing from their packaging suppliers 50% recycled content for PEHD jerry cans below 5L.

One stakeholder argued that packaging should not be the limiting factor for brand owners, especially considering generally higher LCA-detectable impacts associated with the formula in EUEL aspiring products. It raised concerns about the complexity of the supply chain, especially for packaging producers, having different targets for different markets (ie. Medical devices, medicinal products, Dangerous goods). It further mention higher difficulty for professional products associated with larger volumes and impossibility to timely source fit-for-purpose packaging, as opposed to consumers that has lower volumes and can be more easily produced in-line at the manufacturing site. It concluded that stringent target would lead to increased value chain complexity, environmental footprint, and costs for brand owners and license holders.

As opposed to the former, another stakeholder argued that, in its experience, there is already a wide supply of packaging containing a high level of recycled materials and that ambitious ecolabel criteria can incentivize innovation rather than hinder it.

Finally, two stakeholders indicated that they do not have sufficient knowledge or feedback to provide at this time.

Q8 – Relative to grouped packaging and from the three proposed approaches (See section 3.2 *Recycled material content),* would you support the inclusion of a provision that requires grouped packaging to be composed exclusively of cardboard and/or paper, complying with the recycled content requirements for paper/cardboard secondary packaging, and thus excluding the use of plastic for grouped packaging (option 1)? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

Related to section 3.2 – recycled material content (grouped packaging)

Option 1: "Grouped packaging shall be made exclusively of cardboard and/or paper and shall adhere to the recycled content requirements for paper/cardboard secondary packaging. Plastics grouped packaging would not be permitted."

*Blank responses* = 1

Option 1 has been conditionally supported by the majority of stakeholders. Those supporting option provided the following remarks:

- having a criterion requiring minimum recyclability performance of 95% for paper/cardboard and plastics, thus ensuring an equal approach for plastic and paper packaging.
- clarify that this applies only disposable plastics grouped packaging, as reusable solutions for collective packaging may be conceivable in the future.
- the proposal is aligned with the PPWR ban on single-use plastic for grouped packaging in 2030 (Annex 5), thus the support provided.
- Option 1 should only apply to grouped packs of plastic sales products, while sleeved plastic for grouped packaging of sale products in cardboard should be allowed.

However, other stakeholders did not support Option 1, indicating that:

- EU Ecolabel should take a frontrunner role and implement a ban on single-use plastic for grouped packaging, as the PPWR will ban it by 2030 (Article 22 and Annex V) and consider whether to extend to any grouped packaging.
- Support to prohibiting materials without additional conditions is not granted - paper may not meet the necessary performance requirements (i.e. puncture, tensile and/or moisture resistance).
- it uses PE films in secondary packaging.

Additionally, three stakeholders provide feedback that is not directly supportive or opposed to Option :

- One stakeholder suggested that a comprehensive environmental impact study is needed, not solely focused on the recycling aspect, to assess the impact of cardboard versus plastic secondary packaging in order to support one material versus the other. It further asked for clarification on whether small-volume single-dose products with non-water soluble packaging sold in cardboard or plastic are considered grouped packaging.
- One stakeholder believed that secondary packaging should consist of recycled material, but does not need to be specifically from paper/cardboard.

Q9 - Relative to grouped packaging and from the three proposed approaches (See section 3.2 *Recycled material content),* do you agree with the proposal that plastic grouped packaging should be recyclable and meet a minimum recyclability performance grade of 95% (option 2)? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

Related to section 3.2 – recycled material content (grouped packaging)

Option 2: "Plastic grouped packaging shall be recyclable with a recyclability performance grades of at least 95%. Recyclability shall be verified by complying with the EN 13430 or ISO 18604"

*Blank responses* = 1

Four stakeholders supported the proposal, indicating that:

- plastic grouped packaging should comply with the same recyclability requirement as primary packaging and meet at least the 95% recyclability performance grade.
- if only options 1 & 2 are available, support is provided to the latter.
- if option 1 is ruled out, it would support option 2.

One stakeholder opposed since it was not in favour of allowing (plastic) grouped packaging.

Other stakeholders raised concerns and/or asked for clarification about the proposal:

- One stakeholder suggested that aiming for 95% may be overly ambitious and recommended aligning the target year with the PPWR timeline and re-evaluating the recyclability performance grade.

- One stakeholder requested further clarifications about:
    - the definition of the 95% recyclability performance grade in ISO 18604 ("*...more than 95% in table "C2- example of statement to determine the percentage of packaging unit that can be recycled*");
    - how country/region specific differences in the recycling infrastructure are accounted for and;
    - which guidelines (i.e. EN 13430 or ISO 18604) and within them which criteria should be used.
- One stakeholder expressed uncertainty about the recycling process and the value of the 95% threshold, suggesting that recycling experts and representatives from CosPaTox and packaging suppliers/manufacturers should be consulted.

Q10 - Relative to grouped packaging and from the three proposed approaches (See section 3.2 *Recycled material content),* do you support a provision that plastic grouped packaging should comply with the same recycled content requirements as primary (sales) packaging (option 3) ? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

Related to section 3.2 – recycled material content (grouped packaging)

Option 3: "Plastic grouped packaging shall comply with the same recycled content requirement as primary (sale) packaging."

*Blank responses* = 2

Three stakeholders supported the proposal without adding further reasoning.

Contrastingly, others did not support the proposal or had no opinion:

- One stakeholder recommended aligning with PPWR requirements.
- One stakeholder was not in favour of allowing plastic grouped packaging.

Additionally, the following feedback was received:

- One stakeholder believed that the requirement should be stricter for plastic grouped packaging than for plastic primary packaging, as the applicant/holder has the option to switch to cardboard.

One stakeholder mentioned that the proposal is possible, but it entails technical constraints during use, citing as example PE films.

Q11 (A&V) - Do you support the verification of plastic grouped packaging recyclability by compliance with EN 13430 or ISO 18604 standards? *Please provide your perspective on the suitability of these standards for recyclability assessment and verification.*

Related to section 3.2 – recycled material content (grouped packaging)

Option 2: "Plastic grouped packaging shall be recyclable with a recyclability performance grades of at least 95%. Recyclability shall be verified by complying with the EN 13430 or ISO 18604"

*Blank responses* = 3

One stakeholder supported the use of 13430 while another advocated for using the RecyClass tool and certification instead of the 13430 and 18604 standards.

However, other stakeholders raised concerns about the suitability of these standards for recyclability assessment and verification:

- One mentioned that the German minimum standard goes beyond the requirements of EN 13430, and that the assessment of recyclability in the German minimum standard considers the application of the recycled material.
- Another prefers the use of the CEN standards on "Design for recycling for plastic packaging products" that is currently under development. Until then, it suggested using the RecyClass guidelines (Grades A –C) as a more clear and crisp alternative to self-assessments according to EN 13430 or ISO 18604, which are difficult to verify and allow for multiple interpretations.

Other comments were:

- One stakeholder suggested checking with recycling experts and representatives from CosPaTox and packaging suppliers/manufacturers.
- One stakeholder was in favour of a verification, but does not specify which standard or methodology should be used.
- One stakeholder opposes the proposal, citing difficulties in collecting documents from suppliers.

Q12 (A&V) – If not already addressed in current criterion text proposal or in previous question, which are the factors/aspects impeding an effective *Assessment & verification* with regard to Recycled Material Content? *Please, be as specific as possible in your response.*

*Blank responses* = 4

Two stakeholders recommend using specific methodologies or certifications to ensure accurate calculation and verification of recycled content:

- One stakeholder suggested using the RecyClass methodology until the European Commission adopts a methodology for calculating recycled content targets by 31 December 2026.
- One stakeholder advocated for using chain of custody based on segregation or controlled blending methodologies only, thus discouraging others (mass balance with allocations, credit transfer, book and claim).

About currently used certificates or documentation to verify recycled content:

- One stakeholder receives an EUCertPlast certificate and requests confirmation from the manufacturer and technical documentation on the packaging.
- One stakeholder uses a certificate from the FSR and suggests including a logo indicating the percentage of recycled material on the container.

Issues mentioned about the lack of convenient and commonly recognized standards or certifications for verifying recycled content were:

- One stakeholder mentioned that EN15343 requires support of chain of custody through complicated logistic chains, and that requesting RecyClass certifications is costly.
- One stakeholder noted that they do not have control over the origin of the recycled material and may not always know whether they have PCR or PIR, regardless of the packaging type.

One stakeholder focused its comments about difficulties of applying and verifying the criteria and also mentioned that if JRC is not able to address the following two conditions, then requirements can't be included in the EU Ecolabel decision, being these:

- it is essential to maximise harmonization and minimise errors that all requirements are clearly defined within the decision and not spread across the User Manual, corrigenda, or external links (e.g. Recyclass).
- the JRC should not impose a requirement that:
  - is unachievable (e.g. conflicting with national regulations).
  - has not been clearly and comprehensively described the evidences to be provided for criteria verification purposes, inclusive the frequency of submission/verification.

Q13 – Do you have any further applicable observations/resources relevant to the recycled materials content sub-criterion? *Please, be as specific as possible in your response.*

*Blank responses* = 3

Two stakeholders recommended alignment with PPWR requirements:

- exclusion of plastic parts representing less than 5% of the total weight of the packaging unit from the requirements regarding recycled content targets.

- Reduction of packaging waste via restriction on grouped packaging and promotion of reusable packaging, referring to the obligation to economic operator by 2030 of having 10% and 25% by 2040 of reusable packaging embedded in a re-use system.

One of the former stakeholders indicated strong support to EU Ecolabel proposal, as aligned with other Ecolabels, and called for reflecting best available techniques (with regard to the environment) and only allow post-consumer recycled material.

One stakeholder indicated that recyclability of packaging is more important for circularity than the recycled material content and suggested handling this criterion first in the text. It further raised concerns about the potential impact of the sub-criterion on innovation and safety and called for lowering ambition levels.

One stakeholder supported the modification of the text towards "non-NIR detectable pigments" for professional use products, to ensure end-user safety and allow for colour coding.

One stakeholders provided the following references for consideration:

- https://www.verpackungsregister.org/fileadmin/files/Mindeststandard/Minimum_standard_Packaging-Act_Edition_2023.pdf
- https://www.umweltbundesamt.de/sites/default/files/medien/11850/publikationen/120_2023_texte_praxis_der_sortierung_und_verwertung_von_verpackungen.pdf

One stakeholder mentioned difficulties associated with supplier-related verification documentation and suggested creating a specific declaration to submit to suppliers containing guidance and all necessary fields to provide necessary information to CBs and other actors.

# 4 Sub-criterion – Design for Recycling

The "Design for Recycling" criterion, in line with the objectives of the proposed revision of the Packaging and Packaging Waste Directive (PPWD), underscores the need for thoughtful packaging design that bolsters high-quality recycling. This criterion aims to minimize impurities and discourage the combination of materials that complicate separation processes or reduce the quality of recyclable materials. Recognizing that monomaterial packaging is the most recyclable but not always practical or desirable, the criterion includes a proposed table detailing material combinations to avoid, thereby ensuring that recycling processes are not impeded. Through these measures, the criterion seeks to enhance the development of reusable packaging and propel the recycling industry forward.

## *4.1 Mapping of aspects*

The existing "*Design for Recycling*" criterion outlines a list of materials and components that are prohibited from being used in specific packaging elements/parameters, which include labels or sleeves, closures, and barrier coatings. During the initial revision proposal, an additional packaging element/parameters, referred to as "Body/Material," was suggested for inclusion. This proposed expansion aimed to introduce additional requirements applicable to the entire packaging body, addressing the use of dyes/pigments and the composition of pouch/bag materials. Stakeholder feedback highlights the necessity to better define which packaging elements are within the scope of the criterion to prevent ambiguity and overlaps.

Colours; Transparent and light-colored plastics typically have the highest potential for recovery and recyclability due to their compatibility with optical sorting technologies in recycling facilities. Conversely, darker pigments, particularly the use of carbon black, pose significant challenges for these automated sorting systems. Carbon black is notably problematic in the recycling stream because it absorbs infrared light, which hinders the effectiveness of NIR (Near-Infrared) sorting systems. Consequently, the exclusion of carbon black pigment from the packaging of EU Ecolabel detergents has been proposed. However, stakeholders have recommended that decisions on exclusions should be based on NIR detectability rather than colour.

Inks; As is the case for colours, inks can hinder the recycling process and impact the quality of the recyclates, especially dark ones. To support efficient recycling, the application of inks on packaging should be minimized and adhere to the EuPIA-exclusion policy ([7]), as reported also by RecyClass. The current criteria do not include specific requirements for the use of inks in packaging. The JRC has identified this as suitable aspect to potentially bring forward for inclusion, thus discussing about it.

Barrier coating, EVOH; EVOH (Ethylene vinyl alcohol) can influence the recyclability in different way. It is not admitted at all in the case of clear/light blue PET bottles to preserve high recycling quality and to avoid yellowing effects. However, for transparent coloured PET bottles, a 3% threshold is allowed, which would slightly impact the recycling process (limited compatibility). For other plastics like HDPE and PP, EVOH usage is allowed up to a specific maximum proportion to ensure good recyclability and quality of the recyclate.

Although the current criteria do not have specific requirements for EVOH, in the ongoing revision it has been proposed to limit its use only in the specific case that the tie layers are made by a polymer different that the one used for the packaging body (see TR1). After the consultations stakeholders have expressed the need for clarifications of the new proposed requirement for EVOH barrier coating.

Laminated (composite packaging); Although the separate collection of flexible films is in place across most EU 27+3 countries, the volume collected remains low, highlighting its limited effectiveness. Currently, multilayer films, particularly those made from polyethylene (PE) and polypropylene (PP), are rarely sorted for recycling. This is primarily due to their design constraints, which often lead to them being part of the rejected fractions destined for incineration. The challenge with recycling these multi-material films is exacerbated by contaminants such as inks, pigments, and adhesives, which complicate mechanical recycling processes([8]). To

[7] EuPIA_Exclusion_Policy_for_Printing_Inks_and_Related_Products_-March-2024_6th-Edition
[8] Flexible Films Market in Europe - State of play 2023 -Plastics Recyclers Europe

enhance both the quality and quantity of recycled materials, a transition from multi-material multilayer film to mono-material multilayer films is essential. With this in mind, and to promote greater circularity within the industry, the ongoing revision process has suggested introducing a mandate to phase out pouches and bags made from laminated layers of different materials. However, during the consultation phase, concerns were raised by some stakeholders about the practicality of using mono-material pouches for large-sized refills (1 litter or more). They argue that mono-materials lack the necessary robustness to stand on their own and present challenges in welding and sealing.

Pressure Sensitive Labels (PSL) and Adhesives; Pressure-sensitive label (PSL) requirements are not explicitly addressed in the current EU Ecolabel "Design for Recycling" criterion for Detergent products. In contrast, the EU Ecolabel criteria for Cosmetics include specific requirements that preclude the use of PSL unless the adhesive is water-releasable under recycling wash conditions. Stakeholders have raised concerns regarding the PSL requirement in cosmetics:

- Requirements may conflict with the CLP regulations that mandate labels be firmly attached to packaging.
- Availability of PSLs that comply with the washing conditions of the recycling process, specifically those demonstrating water releasable adhesive properties based on washing quick test procedure (cold temperature washing step) of the Recyclass protocol.

However, recent industry feedback has highlighted that these concerns may not fully consider advancements in label and adhesive technologies. Developments have shown that PSL with standard acrylic adhesives can completely release after undergoing the full recycling process, including the critical step of mechanical friction that facilitates label release. Therefore, it has been recommended to revise the requirements to reflect the entire recycling process, not just the washing conditions (cold wash) as currently stated in the EU Ecolabel criteria for cosmetics.

Additional concerns have been raised regarding the new proposed adhesive application requirements for PET bottles in the "Design for Recycling" criterion for detergents (see TR1):

- The new proposed requirement does not align with the wording used in the Recyclass guidelines.

## *4.2 Potential actions*

Consider refining the packaging elements/ parameters within the scope of the criterion to align with the parameters for setting design for recycling criteria reported in the revised PPWD, i.e.:

- Additives
- Label and Sleeves
- Adhesives
- Closures
- Colours
- Material composition
- Barriers coatings

About Colours; Consider evaluating and revising the criterion text for the exclusion of pigments in packaging, focusing on the NIR detectability of materials rather than their color. Nonetheless, acknowledge that the carbon black pigment causes the most significant issues during recycling.

Current criterion text proposal

Excluded materials and components: “Dyed black, using soot-carbon-based pigments”

Modification of the proposed criterion text

Excluded materials and components: “All non-NIR detectable pigments such as carbon black”

Inks; Consider integrating specific requirements for inks used in packaging into the current criteria to ensure compliance with the EuPIA exclusion policy and also in line with Recyclass guideline.

Text proposal for new inks requirements

Excluded materials and components: "Non-toxic and non-bleeding inks according to EuPIA guideline"

Barrier coating, EVOH; Consider amending the wording of the proposed requirement to eliminate uncertainties, and if necessary, propose distinct requirements for different types of plastics, taking into account various recyclability guidelines.

Current criterion text proposal

Excluded materials and components: "EVOH provided with tie layers made by a polymer different that the one used for the packaging body"

Laminated (composite packaging); Discuss possible recyclable alternative solutions for refill packaging, over 1 L, specifically for pouches. Gather and analyse further information, especially from stakeholders, on structural characteristics of mono-material multilayers films to determine their feasibility as a robust alternative for these applications.

Pressure Sensitive Labels (PSL) and Adhesives;

Discuss the potential alignment of the newly proposed adhesive requirement for PET packaging in detergents with the wording in the Recyclass guidelines:

Current criterion text proposal

Excluded materials and components: "Non-removable washable adhesive applications (in water or alkaline at 80° C) for PET bottle"

Modification of the proposed criterion text

Excluded materials and components: "Alkali/water soluble adhesive; Alkali/water non-soluble or non-releasable adhesive at 60-80°C for PET bottle"

Discuss the potential inclusion of specific requirements for PSLs and adhesives, taking into consideration the recent technological advancements in this area.

Discuss about the possible wording of the potential requirements for PSLs and adhesives to overcome the concerns related to the requirements in the EU Ecolabel for Cosmetics, thus taking into account the full recycling process, including the mechanical friction step and avoid using specific reference to cold wash.

Text proposal for new potential PSL requirements

Excluded materials and components for HDPE packaging: "Pressure sensitive labels in PP, PE or PO material (with density <1g/cm3) unless the adhesive is releasable in the recycling process for HDPE packaging"

Excluded materials and components for PET packaging: "Pressure sensitive labels in PP, PE or PO material (with density <1g/cm3) unless the adhesive is releasable in alkali water at 60-80 C for PET packaging"

## *4.3 Feedback to 1st PACK sub-AHWG questions*

This sub-section provides a summary of the feedback received to each of the questions shared with PACK sub-AHWG participants during the 1st PACK sub-AHWG meeting. The intention is to be informative and transparent with regards to the inputs that JRC received and considered in the formulation of its proposals for update/modification of draft criteria relative to microorganisms containing products, highlighted in the next sub-section.

The main tool set by JRC for feedback collection was an EU survey (active from 17/07/24 to 12/08/24), containing all the question shared during the 1st PACK sub-AHWG meeting to which a total number of 11

participants replied. In the summaries to each question disclosed below the number of blank responses is highlighted to provide context.

Q14 – Would you support refining of the packaging elements/ parameters included within the scope of design for recycling criterion to align with the revised PPWD (i.e. additives, label and sleeves, adhesives, closures, colours, material composition, barriers coatings? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

In Table 4 of the provisional agreement text of PPWD ([9]) are reported a list of parameters for setting design for recycling criteria under Article 6 *'Recyclable packaging'*. Please note that this implies the inclusion of specific packaging elements and parameters that are currently not directly considered in the current criterion, for instance additives.

Please see section 4.1 and 4.2 for further information for packaging elements/ parameters within the scope

Blank answers = 3

A substantial number of stakeholders (n=5) expressed support for the alignment and harmonisation of the parameters of the EU Ecolabel Design for Recycling criterion with the list of parameters in the most recent text of the revised PPWR.

One participant stated that harmonisation ensures consistency and clarity in industry's approach to Design for Recycling. Another participant that support harmonization suggest to refer to the RecyClass Design for Recycling guidelines.

A stakeholder referred to the Blue Angel criteria and particularly to table 3 of (DE-UZ 194), https://produktinfo.blauer-engel.de/uploads/criteriafile/en/DE-UZ%20194-202201-en%20criteria-V1.2.pdf

Another participant indicated the current absence of verification criteria, which will be detailed in forthcoming delegated acts.

A respondent that did not support the alignment with the revised PPWR parameters express the following two concerns:

- The PPWR criteria are in revision
- The PPWR criteria might not have considered a differentiation on consumer goods versus professional use products

Q15 – Do you agree with the modification of the criterion text for 'Excluded Materials and Components' to specify the exclusion of *'All non-NIR detectable pigments such as carbon black'* instead of the current proposal which excludes *'Dyed black, using soot-carbon-based pigments'*? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

Please see section 4.1 and 4.2 for further information -Colours

Blank answers = 4

All respondents (n=7) are in favour of the modification.

Different reasons for supporting the proposal were expressed and further suggestions were indicated as follow:

- The terminology is consistent with RecyClass guidelines, which is a recognized standard in the industry
- The modification corresponds with the German minimum standard. In addition it was recommended to exclude dark coloured packages (black, dark blue) to improve the quality of recyclate.
- Suggestion to verify the detectability by using the NIR testing route of the RecyClass Sorting Protocol
- Suggestion to rephrase the text as "All pigments, such as carbon black, hindering NIR detection of plastic packaging in sorting" since it was stated that the issue lies with the identification of the packaging material itself, rather than the detection of the individual pigment.

9

- Support of the modification especially for professional products where safety and functional requirements such as light protection and user identification are crucial. The stakeholder emphasizes the significance of colour coding for end-user safety, advocating for the blending of masterbatch pigments in a way that ensures NIR detectability while maintaining visible colour identification and optimal light protection. It was highlighted the industry practice of using blue masterbatch in HDPE containers for professional products, citing its effectiveness in protecting contents from light, especially in large containers designed for outdoor use, and its lesser impact on recycling processes compared to black pigments.
- Support for the exclusion of non-NIR detectable pigments is contingent upon the clear definition of the excluded wavelength or wavelength range, and ensuring the requirement is practical and achievable.

Q16 – Are there any materials or components that are NIR-detectable or that exhibit specific characteristics like fluorescence, which, in your opinion, should be excluded from use due to their negative impact on the recycling process? If so, please specify which ones. *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

Please see section 4.1 and 4.2 for further information - Colours

Blank answers = 6

Three stakeholders expressed a lack of information or expertise to adequately respond to the question.

One respondent suggested the RecyClass Recyclability Methodology document as a resource that lists disqualification criteria for various types of packaging.

Another participant indicated that NC (Nitrocellulose) or PVC (Polyvinyl Chloride) binders in inks are problematic when directly applied to packaging, stating that they can degrade the quality of recycled plastics. It was also note that washable inks have a strong negative effect on recycling processes and the safety and quality of the resulting recycled material.

Q17 – *Would you support the introduction of a new requirement that limits the use of inks that can impact the recycling process? Do you agree with the proposed wording for excluded materials/components in the Design for Recycling criterion: 'Non-toxic and non-bleeding inks according to EuPIA guidelines'? Please provide as specific and comprehensive a response as possible, indicating also if any additional considerations related to inks should be taken into account.*

Please see section 4.1 and 4.2 for further information - Inks

Blank answers = 3

Almost all the respondents (n=7) support the introduction of the new requirement that limits the use of inks impacting the recycling process.

Although some stakeholders pointed out potential confusion in the current wording, suggesting clearer language to avoid misinterpretation and also indicated the need to specify the exact EuPIA document referred to in the criterion to avoid ambiguity.

Another responded indicated that the characteristics corresponding to "toxic" and "bleeding" should be clearly defined and also question the lack of a defined colour requirement (with a defined wavelength) for inks.

Only one stakeholder expressed concerns and points out a potential conflict between the requirement and the need for indelible inks to display essential product information (batch number/UFI number), suggesting that the proposed change might not be fully compatible with certain labelling needs.

Q18 – Regarding the proposed requirement for EVOH barrier coatings and its impact on recyclability, could you specify any aspects of the current wording that may be unclear or lead to uncertainties? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

Related to section 4.2 – EVOH, Barrier coating

Blank answers = 3

Three stakeholders either had no feedback to provide or perceived no issues with the clarity of the proposed wording.

A respondent stated that "EVOH concerns are primarily associated with the recycling of PET bottles rather than HDPE or PP containers" and pointed out the relevance of EVOH primarily in food packaging and questions its necessity in non-food contact packaging like detergents. In addition suggested aligning the requirement with RecyClass guidelines which detail compatibility issues of EVOH and also other materials.

Another stakeholder recommended specifying a limit for EVOH content and the EVOH/tie layer ratio, citing RecyClass thresholds based on extensive testing: 'EVOH less than 5%wt and EVOH/tie layer less than 2, with the layer based on the same polymer than the packaging'.

A participant referred to the German minimum standard while another respondent indicated that wording of requirement does not appear to be sufficiently clear without providing further detail or specific feedback on the wording.

A stakeholder advocated for the Ecolabel certification to prioritize environmental benefits in the detergency sector and emphasized that simpler product compositions facilitated recycling, minimising environmental impact.

Q19 – Do you believe that the requirement for EVOH barrier coatings should be amended to account for different types of plastics, reflecting their recyclability guidelines? *Please provide as many details as possible, ideally a wording proposal that align with widely recognized industry recyclability guidelines.*

Related to section 4.2 – EVOH, Barrier coating

Blank answers = 6

Three participants supported the idea that different types of plastics require different considerations regarding EVOH barrier coatings, and two of these suggest alignment with RecyClass's existing requirements for barrier technologies, indicating that there is already a framework in place that could be used as a reference.

Two stakeholders indicated that they do not have a comment or admit a lack of knowledge on the subject.

Q20 – Given the challenges of recycling multi-material multilayer films and acknowledging that mono-material multilayer films may face limitations in terms of robustness and issues with welding and closure, could you share any developments or successful implementations that have enhanced their structural stability and sealing reliability for use in large-sized packaging? *Please, provide as many details as possible, including any specific research findings, or technical data that could contribute to understanding the current landscape and potential solutions for these challenges.*

Related to section 4.2 Laminated (composite packaging)

Section 4.1 provides the rational and further information on laminated composite packaging.

Blank answers = 4

Some stakeholders feedback suggests that while there is some progress and available data on mono-material multilayer films, challenges with robustness, welding, and closure remain in large-sized packaging.

Two participants suggested addressing the question to flexible packaging producers and a recycler.

A stakeholder indicated that reference should be made to the list of LDPE and PP flexible films tested and certified by RecyClass.

Another stakeholder reports ongoing work to address issues with resistance and welding in monomaterial pouches, particularly those with spouts or in large sizes, but does not assure a solution by 2026.

A respondent conveyed that monomaterial films have not met their robustness standards for professional use products, emphasizing the need for chemical resistance and impact durability throughout the product's lifecycle

License holders shared insights into their current practices and identified challenges associated with packaging materials, as follows:

- They expressed difficulties in transitioning to alternative materials that could replace EVOH barrier coatings due to technical and practical constraints.

- While acknowledging the existence of viable alternatives to multilayer multimaterials films, they noted that cost implications and lack of customer demand as obstacles to adopting these solutions.

- Their decision-making processes are guided by the recommendations from COTREP

Q21 – Would you agree to extend the requirement for the exclusion of laminates with layers of different materials to packaging types other than pouches/bags? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

Related to section 4.2 Laminated (composite packaging)

Blank answers = 3

The responses reveals a split in perspectives. Some stakeholders are hesitant to support the extension of exclusion requirements due to concerns about functionality, technological constraints, and communication needs. Others, particularly PRE, are in favor of the extension and believe that monomaterial solutions are achievable and aligned with regulatory requirements

Four stakeholders expressed agrement with the extension of the exclusion of laminates multimaterial packaging to other packaging types. It was stated that monomaterial solutions are achievable and aligned with the regulatory requirements of the Plastic Packaging Waste Regulation (PPWR). In addition it was reported that there is viability of other monomaterial solutions beyond pouches and bag such as tubes, tubs, pots, and other containers.

Other participants who disagree with extending the exclusion of laminates to other packaging types raised the following concerns:

- Such measures could restrict the use of essential packaging solutions that provide necessary barrier protection, strength, and durability. They emphasized that multilayer solutions are crucial for reducing material usage and the carbon footprint associated with packaging.

- Concerns were also expressed about labeling, with the argument that labels with multiple layers could be classified as laminates. Excluding these labels could hinder the communication of regulatory and safety information, particularly through multi-page labels made of polyolefins. It was argued that multi-page labels should be permitted as long as they can be detached from the main container during the recycling process.

- There were also apprehensions about the limitations of production lines due to heat sensitivity, with monomaterials being more vulnerable to heat than their multi-material counterparts.

One respondent indicated that their certification work have been confined to multi-material pouches/bags and small-volume single-dose products.

Meanwhile, another participant noted that their experience is limited to tubes made from laminated materials, with no reported experience in monomaterial tubes. They pointed out that in France, PBL (Plastic Barrier Laminates) tubes are recognized as fully recyclable, indicating no perceived need to change the current practices.

Q22– Would you support modifying the newly proposed requirement of excluded materials/components **regarding adhesive for PET packaging to align with the wording of Recyclass guideline i.e "***Alkali/water soluble adhesive; Alkali/water non-soluble or non-releasable adhesive at 60-80°C for PET bottle***"?** *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

Related to section 4.2 – PSL and adhesive

Blank answers = 4

4 stakeholders expressed agreement with the modification to align with RecyClass guidelines and supported the exclusion of adhesives that are not alkali/water releasable at 60-80°C from the list of prohibited materials in PET bottles, considering the importance of using the same language for clarity and uniformity within the industry.

One of these stakeholders indicated that RecyClass had recently updated the guidelines in relation to adhesives and highlighted the following link for reference: https://recyclass.eu/recyclability/design-for-recycling-guidelines

Another respondent indicated that RecyClass updated the wording and criteria for PET bottles to differentiate between releasability and solubility. According to this update, releasable adhesives ensure that the label separates from the bottle while the adhesive remains on the label surface. In contrast, soluble adhesives disperse in the washing water and can partially readhere to the PET flakes, potentially causing a yellowish effect on the recyclate. The following link was provided: https://recyclass.eu/guidelines/clear-pet-bottles/

A participant requested more clarity in the wording on whether specific adhesives are excluded or allowed.

Among the participants who do not support the proposed requirement (n=2), one noted that label suppliers have not yet caught up with these adhesive requirements and are only beginning to investigate alternatives. Another participant mentioned that such adhesives are only now starting to be introduced to the market by label suppliers and that it is premature to implement this new requirement. Furthermore, it was highlighted that these adhesives still encounter technical issues, such as ensuring proper adhesion to bottles and preventing the formation of bubbles after application.

Q23 – Would you support the inclusion of specific requirements for pressure-sensitive labels (PSLs) and adhesives in light of the recent technological advancements in label materials (PO, PP, PE) and adhesives for HDPE packaging? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

Related to section 4.2 - PSL and adhesive

Section 4.1 provides the rational and further information on PSL and adhesives.

Blank answers = 3

Five stakeholders expressed support for the proposal, citing the following reasons and recommendations:

- Agreement with the proposal to not exclude pressure-sensitive labels (PSLs) from recycling design criteria. However, it was mentioned that if any exclusion of PSLs is considered, the criteria should not mandate water-releasable adhesives but instead focus on adhesives that can be released during the HDPE recycling process. This view is supported by the findings from the NTCP study and the updated RecyClass guidelines:

  https://label.averydennison.com/eu/en/home/press-releases/label-solutions.html

  https://label.averydennison.com/eu/en/home/news/new-version-of-recyclass-guidelines-reflect-findings-from-recent-label-releasability-trial.html

  https://recyclass.eu/recyclability/design-for-recycling-guidelines/

- Alignment with RecyClass definitions, reinforced by recent tests demonstrating a high removability rate of labels from HDPE containers of more than 90% due to mechanical and washing processes. The test results and protocol can be found in the provided RecyClass documentation:

  https://recyclass.eu/recyclability/design-for-recycling-guidelines/

- Support for the inclusion of specific requirements for PSLs to resolve ongoing debates and provide much-needed clarity on the issue.

On the other side, a participant raised concerns about the lack of clarity in defining releasability of adhesives in the recycling process and the need for clear evidence and defined testing protocols. It was question the feasibility of removing PSLs without a caustic bath, based on their experience with cosmetics. In addition it was suggested the inclusion of certain exemptions based on material compatibility, as found in amendments and guidelines of the EU ecolabel for cosmetics:

- Allow PP labels and PO sleeves used in a PP packaging
- Allow PE labels and PE sleeves used in a HDPE packaging

Among the participants who do not support the proposed requirement (n=2), one indicated that this type of adhesives are new in the market and they still have technical problems (e.g. good styicking on the bottles, no bubble appearance after sticking). The other respondent highlighted that there are many constraints on the printing industry (compatibility with printers, inks, resistance on packaging, etc.) and the difficulty in balancing these with additional constraints.

Q24 - If you agree with the inclusion of specific requirements for pressure-sensitive labels (PSLs) and adhesives, would you support the proposed text for the requirements regarding excluded materials and components for different packaging as follow: 1) For HDPE packaging: 'Pressure-sensitive labels in PP, PE, or PO material (with density <1 g/cm³) unless the adhesive is releasable in the recycling process.' 2). For PET packaging: 'Pressure-sensitive labels in PP, PE, or PO material (with density <1 g/cm³) unless the adhesive is releasable in alkali water at 60-80°C.'? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

Related to section 4.2 - PSL and adhesive

Section 4.1 and 4.2 provide the rational and further information on PSL and adhesives.

Blank answers = 4

Four stakeholders agree with the inclusion of specific requirements for PSL and adhesive. Although further suggestions were reported.

A stakeholder suggested alignment with RecyClass Design for Recycling guidelines, which is a common practice to ensure that packaging designs are compatible with existing recycling infrastructure. The use of specific industry-standard terms like "PET bottles," "PP containers," and "HDPE containers" is recommended for clarity and consistency. Using the term "facestock label materials" instead of "pressure-sensitive labels" to align with RecyClass language was also recommended. This stakeholder also emphasizes the importance of distinguishing between facestock and adhesive materials, recognizing that each has a different impact on the recycling process. In addition it was suggested that requirements for adhesives and facestock materials should be specified separately, following the density recommendations provided by RecyClass.

Another respondent supported the use of labels made from the same material as the packaging (PP on PP, PE on PE) to facilitate recycling and also recommended that any deviations, particularly for larger labels and sleeves, should be tested using the RecyClass sorting protocol. Alignment with RecyClass design for recycling guidelines was encouraged.

A participant requested the explicit exclusion of non-PO plastics with a density greater than 1 g/cm³ for HDPE, unless they can be removed. For PET, the same exclusion was recommended for non-PET plastics with a density above 1 g/cm³, such as PVC and PS, as they pose problems in the density separation process. It was also suggested to set the minimum temperature for release adhesives at 80°C, in line with the minimum standards mentioned in the provided link: https://www.verpackungsregister.org/fileadmin/files/Mindeststandard/Minimum_standard_Packaging-Act_Edition_2023.pdf

Other stakeholders pointed out that they have no feedback on this topic.

Q25 - Do you have any further applicable observations/resources relevant to the design for recycling sub-criterion? *Please, be as specific as possible in your response*

Blank answers = 3

A stakeholder emphasized the importance of aligning with RecyClass Design for Recycling guidelines and pointed out the need to consider additional design elements like sleeves and decorative technologies that can negatively affect sorting and recycling. It was recommended a 'traffic light system' to categorize packaging

elements based on their impact on recyclability, which could enhance decision-making during the design phase in line with the PPWR and Recyclass guideline.

Another participant pointed out the complexity of self-assessment standards, such as EN 13430 or ISO 18604, due to their interpretative nature and the difficulty of verifying standard criteria. It was suggested that if such standards are mentioned in the Ecolabel criteria, it would be helpful to clarify the specific requirements within these standards to ensure that they can actually be met.

A respondent asked for more emphasis to be placed on the use of mono-materials to facilitate recycling. It was suggested adopting criteria similar to those of Bra Miljoval or Nordic Swan, which require packaging components to be easily separable and made of one type of material. This stakeholder believes that this approach should be the general principle, with clearly defined exemptions for certain product categories or packaging parts where necessary.

Another stakeholder raised concerns about sharing technical information, and uploading data as supporting factors. These are considered confidential R&D proprietary documentation. It was suggested that a Confidential Disclosure Agreement (CDA) that extends beyond EU Data Protection policy might be necessary to enable the sharing of such information while participating in surveys and consultations.

A participant pointed out that there is confusion around the term "excluded materials and components" in the current criteria. This suggests a need for clearer definitions and language to avoid ambiguity in the criteria related to design for recycling.

The other stakeholders provided no response

.

# 5 New draft criteria proposal

## *5.1 Proposal text*

Sub-criterion Recycled Materials Content

| NEW sub-criterion (x) recycled materials content | |
|---|---|
| LD<br>DD<br>HDD<br>HSC | The criterion sets requirements for sales packaging (primary packaging) and grouped packaging (secondary packaging).<br><br>a) Paper/cardboard used for packaging<br><br>Sales packaging (primary packaging) made of paper and/or cardboard shall contain a minimum 80 % of recycled material.<br><br>Grouped packaging (secondary packaging) made of paper and/or cardboard shall contain a minimum 70 % of recycled material.<br><br>Cardboard packaging for liquid products is exempt from this requirement.<br><br>The remaining share (100% minus recycled content percentage) of paper and/or cardboard used for the sales and grouped packaging shall be covered by valid Sustainable Forestry Management certificates issued by an independent third-party certification scheme such as FSC, PEFC or equivalent. The certification bodies issuing Sustainable Forestry Management certificates shall be accredited/recognised by that certification scheme.<br><br>b) Plastic used for packaging<br><br>Sales packaging (primary packaging) made of PET shall contain a minimum of 70% recycled material (PCR - recycled plastic made from post-consumer recycled), other plastics (e.g. HDPE) shall contain a minimum of 50% recycled material (PCR).<br><br>All closures and trigger closures (e.g. removable closures and pump dosers) and pouches are exempt from this requirement.<br><br>Recycled content and recyclability of sales packaging (primary packaging) and grouped packaging (secondary packaging) shall be indicated on the sales packaging. The recycled content stated on the packaging shall refer to the total weight (body, closure, label/sleeve and trigger closure).<br><br>*Assessment and verification*: The applicant shall submit: (1) a signed declaration of compliance specifying the percentages of recycled content in the sales (primary) and grouped (secondary) packaging when relevant; (2) a high resolution photograph of the sales packaging where information regarding recycled content appear clearly.<br><br>The applicant shall provide audited accounting documents that demonstrate that the remaining share (100% minus recycled content percentage) of the paper and/or cardboard used for the sales and grouped packaging is defined as certified material according to valid FSC, PEFC or equivalent schemes. The audited accounting documents shall be valid for the whole duration of the EU Ecolabel license.<br><br>Recycled content shall be verified by complying with the EN 45557 or ISO 14021. Plastic recycled content in the packaging shall comply with chain of custody standards such as ISO 22095 or EN 15343. Equivalent methods may be accepted if considered equivalent by a third-party, and shall be accompanied by detailed explanations showing compliance with this requirement and related supporting documentation. Invoices demonstrating the purchase of the recycled material shall be provided. |

| NEW sub-criterion (x) recycled materials content | |
|---|---|
| | The criterion sets requirements for sales packaging (primary packaging) and grouped packaging (secondary packaging).<br><br>c) Paper/cardboard used for packaging<br><br>Sales packaging (primary packaging) made of paper and/or cardboard shall contain a minimum 80 % of recycled material.<br><br>Grouped packaging (secondary packaging) made of paper and/or cardboard shall contain a minimum 70 % of recycled material.<br><br>Cardboard packaging for liquid products is exempt from this requirement.<br><br>The remaining share (100% minus recycled content percentage) of paper and/or cardboard used for the sales and grouped packaging shall be covered by valid Sustainable Forestry Management certificates issued by an independent third-party certification scheme such as FSC, PEFC or equivalent. The certification bodies issuing Sustainable Forestry Management certificates shall be accredited/recognised by that certification scheme.<br><br>d) Plastic used for packaging<br><br>Sales packaging (primary packaging) made of PET shall contain a minimum of 70% recycled material ~~(PCR - recycled plastic made from post-consumer recycled)~~, other plastics (e.g. HDPE) shall contain a minimum of 50% recycled material ~~(PCR).~~ |
| LD | ~~All closures and trigger closures (e.g. removable closures and pump dosers) and pounches are exempt from this requirement.~~ |
| DD<br>HDD<br>HSC<br>IILD | Any plastic part representing less than 5% of the total weight of the whole packaging unit is exempt from the plastic packaging requirements.<br><br>The requirements set for recycled materials content shall not apply to packaging used for the transport of dangerous goods in accordance with Directive 2008/68/EC, which refers to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). |
| IIDD | Recycled content ~~and recyclability~~ of sales packaging (primary packaging) and grouped packaging (secondary packaging) shall be indicated on the sales packaging. The recycled content stated on the packaging shall refer to the total weight of the whole packaging unit ~~(body, closure, label/sleeve and trigger closure).~~<br><br>*Assessment and verification*: The applicant shall submit: (1) a signed declaration of compliance specifying the percentages of recycled content in the sales (primary) and grouped (secondary) packaging when relevant; (2) a high resolution photograph of the sales packaging where information regarding recycled content appear clearly.<br><br>The applicant shall provide audited accounting documents that demonstrate that the remaining share (100% minus recycled content percentage) of the paper and/or cardboard used for the sales and grouped packaging is defined as certified material according to valid FSC, PEFC or equivalent schemes. The audited accounting documents shall be valid for the whole duration of the EU Ecolabel license.<br><br>Recycled content shall be verified by complying with the EN 45557 or ISO 14021. Plastic recycled content in the packaging shall comply with chain of custody standards such as ISO 22095 or EN 15343. Equivalent methods may be accepted if considered equivalent by a third-party, and shall be accompanied by detailed explanations showing compliance with this requirement and related supporting documentation. Invoices demonstrating the purchase of the recycled material shall be provided. |

Sub-criterion Design for recycling

| TR1 -Proposed sub-criterion (x) design for recycling | | | |
|---|---|---|---|
| ALL | Plastic packaging shall be designed to facilitate effective recycling by avoiding potential contaminants and incompatible materials that are known to impede separation or reprocessing or to reduce the quality of recyclate. The label or sleeve, closure and, where applicable, barrier coatings shall not comprise, either singularly or in combination the materials and components listed in Table 4. Pump mechanisms (including in sprays) are exempted from this requirement. | | |
| ALL | | Packaging element | Excluded materials and components (*1) |
| | | Body/Material | — Dyed black, using soot-carbon-based pigments<br>— Pouch/bag laminates with layer of different materials (composite packaging) |
| | | Label or sleeve | — PS label or sleeve in combination with a PET, PP or HDPE ~~bottle~~ packaging<br>— PVC label or sleeve in combination with a PET, PP or HDPE ~~bottle~~ packaging<br>— PETG label or sleeve in combination with a PET ~~bottle~~ packaging<br>— PET label or sleeve (except LDPET (< 1 g/cm3 )) in combination with a PET ~~bottle~~ packaging<br>— Any other plastic materials for sleeves/labels with a density > 1 g/cm$^3$ used with a PET ~~bottle~~ packaging<br>— Any other plastic materials for sleeves/labels with a density < 1 g/cm3 used with a PP or HDPE ~~bottle~~ packaging (except for PP labels and polyolefins (PO) sleeves used in combination with a PP packaging or PE labels and PE sleeves used in combination with a HDPE packaging)<br>— Labels or sleeves that are metallised or are welded to a packaging body (in mould labelling)<br>— Glued cellulose-based labels for PP, HDPE, LDPE, PS packaging, that cannot be removed in cold washing<br>— Non-removable washable adhesive applications (in water or alkaline at 80° C) for PET bottle |
| | | Closure | — PS closure in combination a with a PET, HDPE or PP ~~bottle~~ packaging<br>— PVC closure in combination with a PET, PP or HDPE ~~bottle~~ packaging<br>— PETG closures or closure material with a density > 1 g/cm$^3$ in combination with a PET ~~bottle~~ packaging<br>— Closures made of metal, glass, EVA which are not easily separable from the ~~bottle~~ packaging<br>— Closures made of silicone. Silicone closures with a density < 1 g/cm$^3$ in combination with a PET ~~bottle~~ packaging and silicone closures with a density > 1 g/cm$^3$ in combination with ~~PEHD~~ HDPE or PP ~~bottle~~ packaging are exempted.<br>— Metallic foils or seals which remain fixed to the ~~bottle~~ packaging or its closure after the product has been opened |

| | | | |
|---|---|---|---|
| | | Barrier coatings | Polyamide, functional polyolefins, EVOH provided with tie layers made by a polymer different that the one used for the packaging body, metallised and light blocking barriers |
| | | (*1) EVA — Ethylene Vinyl Acetate, EVOH — Ethylene vinyl alcohol, HDPE — High-density polyethylene, LDPET – Low Density Polyethylene terephthalate, PET — Polyethylene terephtalate, PETG — Polyethylene terephthalate glycol-modified, PP — Polypropylene, PS — Polystyrene, PVC — Polyvinylchloride, PO - Polyolefins | |
| ALL | | *Assessment and verification:* the applicant shall provide a signed declaration of compliance specifying the material composition of the packaging including the container, label or sleeve, adhesives, closure and barrier coating, as appropriate, along with photos or technical drawings of the primary packaging. | |
| **Proposed sub-criterion (x) design for recycling** | | | |
| ALL | | Plastic packaging shall be designed to facilitate effective recycling by avoiding potential contaminants and incompatible materials that are known to impede separation or reprocessing or to reduce the quality of recyclate. The label or sleeve, closure and, where applicable, barrier coatings shall not comprise, either singularly or in combination the materials and components listed in Table 4. Pump mechanisms (including in sprays) are exempted from this requirement. | |
| ALL | | Packaging element | Excluded materials, components and treatment (*1) |
| | | Main Body/ Material composition | <u>For fibre-based packaging</u><br>— Lacquered surface (excluding clear protective lacquer up to a thickness of ≤ 5 µm)<br>— Plastic-coated surface<br><u>For pouches/plastic bags and other laminates</u><br>— Multilayer structure composed of different polymers/materials (except PP up to 5 wt% in PE flexibles and PE up to 10 wt% in PP flexibles)<br><u>For all plastic packaging</u><br>— Fluorination treatment<br>— Electrobeam treatment |
| | | Colours | <u>For all plastic packaging</u><br>— Non-NIR detectable colours<br>— Black, carbon black, inner black layer, fluorescent, opaque |
| | | Label or sleeve | <u>For all plastic packaging</u><br>— Metallised labels or sleeves<br>— Non-releasable or welded to a packaging body (in mould labelling)<br>— Paper labels with fibre loss<br>— Label/sleeve on container > 500 ml covering more than 70% of the container. Label/sleeve on container ≤ 500 ml covering more than 50% of the container[10].<br><u>For PET packaging</u> |

[10] The calculation of the percentage shall be based on the two-dimensional profile of the container i.e., the area of the top and bottom of the packaging and the sides of a box/ container/bottle/can shall not be included in the calculation.

| | | | |
|---|---|---|---|
| | | | — PS, PVC, PETG, C-PET, POM, PET (except LDPET (< 1 g/cm3 )) labels/sleeves or any other plastic materials for sleeves/labels with a density > 1 g/cm$^3$<br><br>For HDPE and PP packaging<br><br>— PS, PVC, PET, PETG, C-PET, PLA, PE-X (crosslinked PE), or any other plastic materials for sleeves/labels with a density < 1 g/cm$^3$ (except for PE labels/sleeves, PP labels and PO sleeves)<br><br>For PE and PP flexible films packaging<br><br>— Labels of a different material to the main material<br><br>— PE-X (cross-linked PE),<br><br>— Fibre-based (paper) labels |
| | | Adhesives | For PET packaging<br><br>— Alkali/water non-soluble adhesive<br><br>— Alkali/water non-releasable adhesive at 60-80°C<br><br>For HDPE packaging<br><br>— Non-releasable in the recycling process for HDPE packaging<br><br>For PP packaging<br><br>— Non-releasable in the recycling process for PP packaging<br><br>For PE and PP flexible films packaging<br><br>— Non-soluble in water or non-releasable in water at less than 40°C |
| | | Closure | For all plastic packaging<br><br>— Closures made of metal, glass, ~~EVA which are not easily separable from the packaging~~<br><br>— Closures made of silicone. ~~Silicone closures with a density < 1 g/cm$^3$ in combination with a PET bottle packaging and silicone closures with a density > 1 g/cm$^3$ in combination with PEHD HDPE or PP bottle packaging are exempted.~~<br><br>— Metallic foils or any seals which remain fixed to the bottle or its closure after the product has been opened<br><br>For PET packaging<br><br>— PS, PVC, C-PET, POM,PETG closures with a density > 1 g/cm$^3$ and any other materials and blends with density >1 g/cm$^3$<br><br>— EVA- containing component (e.g. liner or valve) with density ≥1 g/cm$^3$<br><br>For HDPE packaging<br><br>— PS, PVC closures,<br><br>— PET, PETG, PLA (all with density > 1 g/cm$^3$)<br><br>— PP, PE-X (cross-linked PE),<br><br>— Non-PO-plastics with a density of < 1 g/cm$^3$<br><br>— Foams with density < 1 g/cm$^3$ |

| | | | |
|---|---|---|---|
| | | | For PP packaging<br>— PS, PVC closures,<br>— PET, PETG, PLA (all with density > 1 g/cm³)<br>— HDPE, LDPE, LLDPE, MDPE, PE-X (cross-linked PE),<br>— Non-PO-plastics with a density of < 1 g/cm³<br>— Foams with density < 1 g/cm³<br>For PE and PP flexible films packaging<br>— Closure of a different material to the main material<br>— Aluminium, PVC, PET, PETG, PS, PLA, nonPO<br>— Foams with density < 1g/cm³ |
| | | Barrier coatings | For all plastic packaging<br>— Polyamide (PA)<br>— Functional polyolefins<br>— Metallised and light blocking barriers<br>For PET packaging<br>— EVOH<br>— PGA<br>For HDPE and PP packaging<br>— EVOH ≥ 6 wt% provided with tie layers ratio ≥ 2 made by a polymer different that the one used for the packaging body<br>— PVDC<br>— PVOH<br>For PE and PP flexible films packaging<br>— EVOH ≥ 5 wt% provided with tie layers made by a polymer different that the one used for the packaging body<br>— PVC, PVDC, PE-X (cross-linked PE),<br>— PVOH, AlOx coating with PVOH primer<br>— Aluminium |
| | | Additives | For all polyolefin plastic packaging<br>— Additives that do increase the density higher than 0,97 g/cm³ (e.g.$CaCO_3$, etc.)<br>— Bio-/oxo-/photodegradable additives;<br>For PET packaging<br>— Nanocomposites<br>— Bio-/oxo-/photodegradable additives<br>— UV stabilizers; Acetaldehyde (AA) blockers; Optical brighteners; Oxygen scavengers<br>For HDPE and PP packaging<br>— Flame-retardant additives, plasticizers<br>For PE and PP flexible films packaging |

| | | | |
|---|---|---|---|
| | | | — Foaming agents used as expanding chemical agents |
| | | Inks/Printing | For all plastic packaging<br>— Direct print (excluding production codes, date codes and UFI codes[11])<br>— Inks non-compliant with EuPIA Exclusion Policy for Printing Inks and Related Products[12]<br>— Bleeding inks<br>— De-inking/washable inks<br>— NC and PVC binders<br>For PET packaging<br>— Metallic inks<br>For HDPE and PP packaging<br>— PVC copolymers and terpolymer binders and any other chlorinated binders |
| | | (*1) EVA — Ethylene Vinyl Acetate, EVOH — Ethylene vinyl alcohol, HDPE — High-density polyethylene, LDPET – Low Density Polyethylene terephthalate, PET — Polyethylene terephthalate, PETG — Polyethylene terephthalate glycol-modified, POM – Polyoxymethylene, PP — Polypropylene, PS — Polystyrene, PVC — Polyvinylchloride, PO - Polyolefins | |
| ALL | *Assessment and verification:* the applicant shall provide a signed declaration of compliance specifying the material composition of the packaging including the container, label or sleeve, adhesives, closure, barrier coating, Main Body/ Material composition, Colours, Adhesives , Additives, Inks/Printing, as appropriate, along with photos or technical drawings of the primary packaging. | | |

## *5.2 Rationales for proposals*

Recycled Materials Content

*Criterion wording*

Feedback received prior to the PACK sub AHWG meeting on the Recycled Materials Content criterion indicated that the proposed wording for paper/cardboard requirements is not consistent with the wording proposed for plastics. Specifically, the term 'PCR' is employed for plastics but omitted for paper. The JRC suggests modifying the wording by removing "(PCR - recycled plastic made from post-consumer recycled)" and simultaneously clarifying and including the definition of 'recycled material' according to ISO 14021:2016. A precise definition of 'Recycled Material' and 'Recycled Content,' which considers only post-consumer materials, is now proposed for adoption:

[11] The UFI (Unique Formula Identifier) code is used to uniquely identify hazardous mixtures in order to enable poison control centres to administer first aid faster. The code is found on products classified as hazardous to health or physical hazards under EU Regulation (EC) 1272/2008 (CLP Regulation).

[12] EuPIA Exclusion Policy for Printing Inks and Related Products

*"The recycled content is the proportion, by mass, of recycled material in a packaging. 'Recycled material' refers to material that has been reprocessed from recovered material by means of manufacturing process and made into a final product or into a component for incorporation into a product.*

*Only post-consumer materials shall be considered as recycled content, consistent with the following definition:*

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

To address the criterion of Recycled Material Content, it is important to refer to the 'recycled material' definition, which is set to be included in the definitions section of Technical Report 2 and in Article 2 of the legal text.

The wording proposed for paper/cardboard and packaging requirements in this criterion is also in line with the Packaging criterion of the EU Ecolabel for absorbent hygiene products (Commission Decision (EU) 2023/1809)[13] with the intention of harmonising the wording across the different EU Ecolabel criteria for different products.

*Criterion scope*

During the first PACK sub AHWG meeting, stakeholders have been consulted on whether to include or exclude professional detergents and cleaning products alongside consumer products within the scope of the newly proposed criterion for Recycled Material Content.

Various stakeholders provided differing perspectives. Some argued for the exclusion of professional products from the recycled materials content criterion, citing several challenges. These include the need for higher concentration rates to ensure the performance of professional products, which leads to vulnerability to stress cracking due to surfactants and other ingredients, thus compromising packaging integrity (see feedback to Q1).

Conversely, stakeholders advocating against the exclusion argued that the manufacturing processes and raw materials, including virgin plastic granules, and the suppliers for professional products are largely similar to those for consumer products. They suggested that it is feasible to apply the same recycled content requirements to both sectors.

Further recommendations from stakeholders called for alignment with the scope of the Packaging and Packaging Waste Regulation (PPWR) and exemption from future mandatory recycled content requirements (see feedback to Q1).

Considering the EU Ecolabel's objective to promote products with the best environmental performance within the European market, it aims to exceed the minimum provisions set by mandatory legislation. The revised PPWR text, provisionally agreed upon by co-legislators, mandates a minimum recycled content percentage for all plastic packaging components, with several exemptions, but without a specific exception for industrial or professional detergent packaging.

Nonetheless, packaging used for the transport of dangerous goods, as regulated by Directive 2008/68/EC, is exempt from the PPWR. This directive refers to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) and its packaging provisions for road transport.

In pursuit of harmonization with PPWR's scope and exemptions, the JRC proposes that the Recycled Material Content requirements encompass both consumer and professional detergents and cleaning products under revision, including professional HSC, IILD, and IIDD. Furthermore, in alignment with the PPWR's derogations, the EU Ecolabel's recycled material content criterion will not extend to packaging designated for the transport of dangerous goods under Directive 2008/68/EC.

The following text is being included in the new criterion proposal:

*"Recycled materials content requirements specified in points a) and b) shall not apply to packaging intended for the transportation of dangerous goods, adhering to Directive 2008/68/EC, which corresponds to the Agreement on the International Carriage of Dangerous Goods by Road (ADR)."*

*Criterion requirements*

*Paper/Cardboard*

[13] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023D1809

Stakeholders were asked to provide their feedback on the possibility of increasing the minimum recycled content in paper/cardboard packaging to above 80% for sales packaging and above 70% for grouped packaging.

Most stakeholders supported increasing the minimum recycled content. However, some stakeholders raised concerns that such an increase could limit innovation in this type of packaging or create issues with humidity sensibility of the product inside. They also mentioned potential challenges with vertical compression resistance, especially for packaging formats with pump or spray heads.

Paper and board are the most recycled packaging materials in Europe. In fact, in the EU, paper and cardboard packaging are recycled more than all other materials combined, largely due to the well-functioning market for secondary raw materials in the paper and cardboard industry[14].

However, in the case of paper and cardboard packaging for detergent products it is important to take into account the specificities of the product. The Nordic Swan Ecolabel requires a minimum of 90% recycled paper/cardboard for packaging household laundry detergent and for household and industrial dishwasher detergents. Nevertheless, exceptions apply for corrugated cardboard, where the recycled material requirement ranges from 50% to 70% by weight, depending on the type of detergent.

Additionally, the EU Ecolabel for Absorbent Hygiene Products mandates 80% recycled content for grouped packaging.

The JRC would like to inform that is still looking for more information and evidences to make a final decision on increasing the recycled content requirements beyond 80% for sales packaging and 70% for grouped packaging. This decision will also take into consideration the potential inclusion of different requirements for specific detergent product categories, such as LD and DD, as well as possible reduced thresholds that may be necessary for certain types of paper and cardboard.

*Plastics*

In the initial proposal for recycled material content requirements in plastics, the JRC included the following:

- Primary (sales) packaging made of PET must contain at least 70% recycled material.
- Primary (sales) packaging made of other plastics must contain at least 50% recycled material.

Following stakeholder consultations, the JRC has decided to maintain these requirements for consumer products (LD, DD, HDD, and HSC consumer category). This decision is based on:

— Data and evidence collected through targeted questionnaires and after the AHWG and Sub-AHWG consultations, which indicated that products meeting the proposed recycled material content are already on the market, although the recycled PET industry appears more mature than other plastics sectors.

— Same levels of ambition in other ecolabel schemes, such as the Blue Angel, where licenses have been awarded.

For professional products, the JRC received limited data, showing minimal use of recycled content. Stakeholder feedback also highlighted challenges specific to professional cleaning products, including susceptibility to stress cracking due to higher concentrations of surfactants and other ingredients that may compromise packaging integrity (see feedback Q1).

As discussed in the previous scope section, EU Ecolabel requirements cannot fall below future mandatory standards set by the PPWD, which mandate a minimum recycled content of 35% for plastic packaging by January 2030, and 65% by January 2040, for all plastic packaging, regardless of whether they are consumer or professional products. Therefore, as professional products fall within the criterion scope, a minimum recycled content requirement exceeding PPWR standards should also apply to these products.

However, considering the higher market value and volume of consumer products compared to professional products (as reported below), it is proposed to reduce the recycled content threshold for professional products.

[14] https://www.cepi.org/wp-content/uploads/2023/09/EPRC-Monitoring-Report-2022_Final.pdf

In this way, additional time is allocated for professional products to ensure that any necessary technical features or characteristics are developed appropriately, in order to meet the higher ambition level required for consumer products.

Market segmentation

In 2021, the total market share value of dishwashing care across Europe (EU-27 + CH + NO) was 78.8% for household dishwashing, while professional dishwashing care accounted for the remaining 21.2% ([15]). For the laundry care market across Europe (EU-27 + CH + NO), the market share was 97.4% for household laundry, with professional laundry care comprising the remaining 2.6% ([16]) (AISE, 2022). The total value of the surface care market across Europe (EU-27 + CH + NO) was 89% for household products, while professional surface care represented the remaining 11% ([17]).

*Components of plastic packaging fall within the scope of the criterion*

Following feedback from stakeholders regarding the initial proposal for the "Recycled Material Content" criterion, there has been a clear need for further clarification concerning which components of plastic packaging fall within the scope of the criterion and which are exempt.

After consulting stakeholders during the first PAK sub-AHWG and in alignment with the EU Ecolabel's objectives, a decision has been made to revise the exemption requirements of the criterion. The criterion should not impose requirements that are less stringent than the legally mandated minimum standards. Moreover, to avoid confusion and ensure consistent interpretations, the JRC is advocating for alignment with the upcoming mandatory PPWR and their respective exemptions.

In light of the above, it is proposed that any plastic part accounting for less than 5% of the total weight of the entire packaging unit should be exempt from the plastic packaging requirements. This means that previous exemptions for pouches, closures, pump dispensers, and additional closure components are now eliminated.

*Plastic grouped packaging*

During the first sub-AHWG meeting, three proposals were presented to include a requirement addressing plastic grouped packaging, as follow:

1. Grouped packaging shall be made exclusively of cardboard and/or paper and shall adhere to the recycled content requirements for paper/cardboard secondary packaging. Plastics grouped packaging would not be permitted.

2. Plastic grouped packaging shall be recyclable with a recyclability performance grades of at least 95%. Recyclability shall be verified by complying with the EN 13430 or ISO 18604.

3. Plastic grouped packaging shall comply with the same recycled content requirement as primary (sale) packaging.

After analysing the feedback received from stakeholders, the JRC decided to exclude Option 1, as banning any plastic group packaging may hinder future innovations. However, the JRC proposes to ban single-use plastics for grouped packaging in line with the PPWR ban (as reported in the Annex V).

Furthermore, it is proposed that the other type of plastics (non-single-use plastics) used for grouped packaging must achieve recyclability performance grades of at least 95%, as outlined in Option 2.

Given that verifying recyclability according to EN 13430 or ISO 18604 standards is deemed complicated and potentially subject to different interpretations based on what highlighted from stakeholders feedback, the JRC proposes to refer to the CEN 'Design for recycling of plastic packaging' standards currently under development, which are expected to be published in August 2025 or alternatively to refer for to the RecyClass recyclability methodology, available at https://recyclass.eu/recyclability/methodology/.

[15] AISE 2022. International Association for Soaps, Detergents and Maintenance Products (AISE) Activity & Sustainability report 2021-22. https://www.aise.eu/cust/documentrequest.aspx?UID=5783b16f-3bc7-4f65-98df-7f910337c371 (Accessed 22/05/2023)

[16] AISE 2022. International Association for Soaps, Detergents and Maintenance Products (AISE) Activity & Sustainability report 2021-22. https://www.aise.eu/cust/documentrequest.aspx?UID=5783b16f-3bc7-4f65-98df-7f910337c371 (Accessed 22/05/2023)

[17] AISE 2022. International Association for Soaps, Detergents and Maintenance Products (AISE) Activity & Sustainability report 2021-22. https://www.aise.eu/cust/documentrequest.aspx?UID=5783b16f-3bc7-4f65-98df-7f910337c371 (Accessed 22/05/2023)

Design for recycling

The 'Design for Recycling' criterion underwent significant revision and changes, leading to the implementation of more ambitious provisions aimed at preventing characteristics or materials/components combinations that might downgrade or disqualify packaging recyclability. Feedback gathered before and after the PACK sub-working group, together with consultations with recycler experts and a review of well-established recycling guidelines in Europe and well-established ISO Type I ecolabel schemes, were instrumental in the proposed changes. This approach was also aimed at aligning with the new provisions of the proposed revisions of the Packaging and Packaging Waste Regulation (PPWR).

The existing criterion delineates a list of materials and components that are prohibited from use in specific packaging elements/parameters, including labels or sleeves, closures, and barrier coatings. During the initial proposal for revision, the JRC recommended the inclusion of an additional packaging element/parameter, namely the "Body/Material." This proposed expansion was intended to introduce further requirements that would apply to the entire packaging body, specifically addressing the use of dyes/pigments and the composition of pouch/bag materials. Stakeholder feedback underscored the need for a clearer definition of the packaging elements to avoid ambiguity and prevent overlaps.

In the first sub-AHWG, it was proposed to align with the list of parameters for setting design for recycling criteria under Article 6 of the provisionally agreed text of the PPWD with the co-legislators. This proposal received a positive response from stakeholders, and in this new proposal, additional packaging features/components have been included in accordance with the PPWD text. Such features/components, which influence the overall packaging recyclability, include:

- Main Body/ Material composition
- Colours
- Label or sleeve
- Adhesives
- Closure
- Barrier coatings
- Additives
- Inks/Printing

Additionally, the design-for-recycling requirements have been categorized by packaging type (e.g. fibre-based, pouches/plastic bags) and plastic types (e.g. PET, HDPE, PP, PE and PP flexible films) to enhance accessibility and prevent confusion.

In revising the requirements and parameters to be factored in the setting of design for recycling criteria, various well-established European recycling guidelines were consulted, focusing especially on:

- The RecyClass Design for Recycling guideline[18] developed by Plastic Recyclers Europe (PRE), and supported by various stakeholders throughout the value chain. This guideline addresses design incompatibilities according to the commonly-used technologies of recycling infrastructures in Europe.
- The minimum standard for determining the recyclability of packaging subject to system participation pursuant to section 21(3) of the Verpackungsgesetz (Packaging Act)[19], in consultation with the German Environment Agency (Umweltbundesamt, UBA) and in agreement with the Zentrale Stelle Verpackungsregister (ZSVR), the German authority.
- The CEFLEX Design for a Circular Economy guidelines (D4ACE) for the recyclability of polyolefin-based flexible packaging[20]. CEFLEX, or the Circular Economy for Flexible Packaging, is a collaborative European consortium involving companies and organizations across the flexible packaging value chain.

Additionally, the Nordic Swan and Blue Angel ecolabels have been selected as references due to their status as well-established ISO Type I schemes in the European market, to inform the revision of the ambition level of the criterion.

[18] https://recyclass.eu/recyclability/design-for-recycling-guidelines/
[19] https://www.verpackungsregister.org/fileadmin/files/Mindeststandard/Minimum_standard_Packaging-Act_Edition_2023.pdf
[20] https://guidelines.ceflex.eu/assets/public_docs/D4ACE_guidelines_An_Introduction.pdf

The subsequent section provides a comprehensive overview of the modifications across various packaging parameters and components, which collectively influence the overall recyclability of packaging products.

*Main Body/ Material composition*

The current criterion lacks explicit requirements for fibre-based packaging. Under the German Minimum Standards for Packaging Act, there are clear provisions concerning materials that hinder recycling for paper, paperboard, and cardboard packaging. These specifications and material-specific recycling incompatibilities are informed by the German Environment Agency's annual reviews of sorting and recycling practices[21]. Furthermore, the Blue Angel ecolabel outlines prohibited materials and components for fibre-based packaging, emphasizing the exclusion of certain elements that impede the recycling process. To align with both the German minimum standards and the Blue Angel requirements, it is proposed that fibre-based packaging should not include lacquered surfaces (apart from clear protective lacquer with a thickness of ≤ 5 micrometres) and plastic-coated surfaces.

In the initial proposal of the current revision process, the JRC proposed that pouches should be made of monomaterial, meaning they should not be laminates composed of layers of different materials. To enhance the quality and quantity of recycled materials, it is essential to transition from multi-material, multilayer films to mono-material, multilayer films. Bearing this in mind, the JRC is proposing an expansion of the policy to exclude all laminated packaging that incorporates layers of different materials or polymers. However, after consultations and receiving information from recycling experts, it appears that laminated packaging can remain compatible with recycling processes if the types of laminating materials are carefully selected and used in the correct amounts. RecyClass tests have confirmed this compatibility.
The RecyClass Technical Committees examined the effect of polypropylene (PP) on the recyclability of high-density polyethylene (HDPE) rigid packaging, as well as the impact of HDPE on the recyclability of PP rigid packaging. This investigation followed the RecyClass Recyclability Evaluation Protocol for HDPE or PP. According to the study's results, PP content up to 5 wt% in polyethylene (PE) and PE content up to 10 wt% in PP are deemed compatible for recycling purposes.

After consulting with experts in recycling processes, it has been proposed to exclude the use of both fluorination and electronbeam treatments for all plastic packaging because they negatively affect the materials' recyclability. Additionally, fluorination will be further restricted in packaging applications in accordance with the revised restrictions on per- and polyfluoroalkyl substances (PFAS) as outlined in the updated Plastic Packaging Waste Regulation (PPWR). Meanwhile, electronbeam treatment has been found to induce crosslinking in polymers, complicating the recycling process.

*Colour*

Transparent and light-coloured plastics are generally the easiest to recycle due to their compatibility with optical sorting technologies. In contrast, darker colours, especially carbon black, complicate automated sorting because they absorb infrared light, reducing the effectiveness of NIR (Near-Infrared) systems. As a result, excluding carbon black from EU Ecolabel detergent packaging has been suggested in the first proposal made during the revision process. As stakeholders advised that exclusion decisions should focus on NIR detectability rather than colour, the JRC proposed to modified the proposal and consider the exclusion of "All non-NIR detectable pigments such as carbon black". The collected feedback predominantly supported the proposed modification on the grounds that it aligns with the terminology established by the industry-recognized RecyClass guidelines, and is in accordance with the German minimum standard. Some respondents also recommended excluding as well dark-colored packaging to improve the quality of the resulting recyclate. Furthermore, additional consultations indicated that materials and components with specific characteristics detrimental to the recycling process, such as fluorescent and opaque plastics, should also be considered for exclusion.
Given the former, the JRC is proposing the exclusion of non-NIR detectable colours and black, carbon black, inner black layer, fluorescent, opaque materials from all packaging.

*Label or sleeve*

[21] https://www.umweltbundesamt.de/publikationen/praxis-der-sortierung-verwertung-von-verpackungen-0

The list of materials and components related to labels, which may impact the recycling of various packaging types, was expanded based on insights gathered through stakeholder consultations, consolidated European recycling guidelines, and the requirements of other ISO Type I certification schemes.

Paper labels with fibre loss have been excluded, as residual paper fibres can adversely impact the properties and quality of the recycled material. These fibres contaminate the wash water and may adhere to plastic flakes, reducing overall material quality. Additionally, the hot caustic bath used in PET recycling renders paper labels into pulp that cannot be filtered out. Small fibres remain and carbonize during extrusion, leading to unacceptable quality. Therefore, paper labels must be free of fibre loss.

Labels must be designed so that NIR sorting machinery can identify the bottle polymer even with the label attached. Large labels or sleeves can reduce the efficiency of NIR detection; if the NIR sensor at the sorting facility reads the label instead of the bottle, the bottle may end up in the rejected fraction. To ensure optimal detection efficiency, a requirement has been added to limit label or sleeve coverage to a maximum of 70% of the surface area for containers over 500 ml and a maximum of 50% for containers of 500 ml or less. These limits align with guidelines set by recyclers[22].
The calculation of the percentage shall be based on the two-dimensional profile of the container. The area of the top and bottom of the packaging and the sides of a container/bottle shall not be included in the calculation. If the label on the front of container/bottle and back of container/bottle are of different size, the maximum percentage shall be fulfilled for each side separately. For a cylindrical bottle, the calculation can also be based on the three-dimensional profile exclusive bottom and top of the bottle.

Feedback from stakeholders indicated that PE and PP packaging and labels are compatible for recycling but are currently not permitted under the existing design-for-recycling requirements. For this reason, exceptions were added to allow the use of PE, PP, and PO labels and sleeves with HDPE and PP packaging to support compatibility.

*Adhesive*

After consulting stakeholders, the JRC has chosen to address requirements for labels and adhesives separately, as each affects the recycling process differently. This approach also aligns with the new PPWR and recycler guidelines.

During the first PACK AHWG, it was proposed to revise the requirements to reflect the entire recycling process, not just the washing conditions (cold wash) as currently stated in the EU Ecolabel criteria for cosmetics. This revision also aims to avoid potential conflicts with existing requirements in the CLP regulation for labels to remain firmly attached to packaging. Furthermore, it was suggested to consider specific requirements for PSLs and adhesives, given recent technological advancements in this area.
Feedback received after the first Sub-AHWG indicated that the wording of the requirements should align with RecyClass's new guidelines.
Additional information gathered acknowledged that RecyClass tests verified a label removal rate of more than 90% from HDPE packaging due to mechanical stress during grinding and subsequent washing.
Given the former, the JRC has revised the requirements to align with the updated RecyClass guidelines[23], taking into account the complete recycling process, including the critical step of mechanical friction that facilitates label removal, rather than focusing solely on washing conditions, as was previously proposed.

*Closure*

Also in this case additional exclusion have been considered based on the information gathered.

The exclusion of EVA from all types of packaging was removed following studies by the RecyClass Technical Committee, which demonstrated that EVA is compatible with both flexible and rigid PE and PP[24]. EVA is also

[22] https://recyclass.eu/recyclability/design-for-recycling-guidelines/

[23] https://recyclass.eu/wp-content/uploads/2024/07/REP-HDPE-02.pdf
https://recyclass.eu/wp-content/uploads/2024/01/RecyClass-Recyclability-Evaluation-Protocol-for-adhesives-for-labels-on-PET-bottlesv1.0-FINAL.pdf

[24] https://recyclass.eu/wp-content/uploads/2023/07/Technical-Review-EVA-in-PE-Films.pdf

compatible with PET when the EVA-containing component (typically a liner or valve) has a density lower than 1 g/cm³. Consequently, a requirement has been added to limit the use of EVA in PET packaging when the EVA-containing component has a density of ≥1 g/cm³.

Based on the information obtained, the exemptions for silicone closures with a density < 1 g/cm³ in combination with PET bottle packaging and those with a density > 1 g/cm³ in combination with HDPE or PP bottle packaging were removed. Since silicone separation is never fully effective, and many alternatives are available on the market, it is recommended to use closures made from alternative materials rather than silicone.

*Barriers*

The list of materials and components related to barriers, which may impact the recycling of various packaging types, was expanded based on insights gathered through stakeholder consultations, consolidated European recycling guidelines, and the requirements of other ISO Type I certification schemes.

The EVOH (Ethylene Vinyl Alcohol) barrier can impact recyclability in various ways. In the current proposal for recycling criteria, EVOH with tie layers made from a polymer different from that of the packaging body is excluded from all packaging. After gathering insights from recycling guidelines and industry feedback, the proposed requirements have been amended to specify distinct conditions for different types of plastics. This differentiation is due to the fact that concerns regarding EVOH primarily affect the recycling of PET bottles, whereas they have a lesser impact on HDPE or PP containers. For PET bottles, EVOH is problematic as it significantly reduces recyclability quality, causing a yellowing effect.
The newly proposed criterion requirements set the exclusion of EVOH from PET packaging. Additionally, for rigid HDPE and PP, it is proposed to exclude EVOH at levels ≥ 6 wt% when the tie layer has a ratio ≥ 2 and is made from a polymer different from the packaging body. For flexible PE and PP, the exclusion threshold for EVOH is set at levels ≥ 5 wt% when the tie layer is made from a polymer different from that of the packaging body.

Based on insights gathered from recyclers' guidelines, the JRC is establishing the exclusion of PVOH (polyvinyl alcohol) due to its use as a barrier in multilayer packaging, as PVOH primers can significantly compromise the quality of recyclates and the stability of the recycling process.
The RecyClass Technical Committee investigated the impact of polyvinyl alcohol primer used with AlOx coating on the recycling of PE films. The results indicated that PVOH primer has low compatibility with both PE and PP film recycling, as demonstrated by multiple quality defects. These included rough surfaces, increased gel formation, black particle presence, and a notable decrease in dart impact resistance. These issues are likely due to PVOH degradation during processing or its interaction with laminating adhesives.
The study also found pronounced discoloration in pellets containing the primer. Although these pellets could be used in blown film production, samples with higher PVOH concentrations exhibited volatiles and odors[25].

*Additive*

Regarding additives, alignment is proposed with the recommendations of packaging recycling experts to exclude biodegradable, oxo-degradable, and photodegradable additives. These materials are used in plastic packaging and films to accelerate degradation; however, concerns from the packaging community suggest that degradable additives may negatively impact plastic recycling[26][27].

The new criterion requirements also restrict the use of foaming agents and additives that increase the density above 0.97 g/cm³ (e.g., $CaCO_3$) in polyolefin plastic packaging. This restriction is due to the fact that fillers, foams, and other additives that alter density can adversely affect the proper separation process of plastics based on their intrinsic densities. Certain additives, such as inorganic fillers, can significantly change a polymer's density, leading to material recovery losses or a reduction in recycle quality.

Additional exclusions relate to nanocomposites, UV stabilizers, flame retardants, plasticizers, and other additive materials in line with recyclers' guideline.

*Inks*

[25] https://recyclass.eu/wp-content/uploads/2024/01/Technical-Review-PVOH-primer-for-AlOx-coating.pdf
[26] https://recyclass.eu/recyclability/design-for-recycling-guidelines/
[27] https://plasticsrecycling.org/resources/press-release-apr-updates-formal-position-and-recyclability-category-for-degradable-additives/

During the recycling process, flakes are washed to reduce contamination from product residues, but bleeding inks can contaminate the wash water during this phase. To address this, RecyClass has developed the quick test procedure for bleeding inks[28], allowing companies to easily evaluate their inks' behavior. In this procedure, inks are considered "non-bleeding" and pass if no noticeable discoloration is observed in either the wash or flotation water, and if no discoloration of the flakes is visible after drying. To prevent interference with the recycling process and protect recyclate quality, the first PACK sub-AHWG proposed integrating specific requirements for inks used in packaging. This proposal was supported by most stakeholders, though some pointed out potential confusion in the current wording and suggested clearer language to avoid misinterpretation. They also noted the need to specify the exact EuPIA document referenced in the criteria to eliminate ambiguity. In response, the JRC is proposing updated ink requirements that limit the use of bleeding inks, clarify the language, and specify the EuPIA document referred to in the requirements—namely, the Exclusion Policy for Printing Inks and Related Products.

Additionally, the JRC is proposing further requirements for the general exclusion of bleeding inks, washable inks, and direct printing, with exceptions for production codes, date codes, and UFI (Unique Formula Identifier) codes.

The exclusion of NC (nitrocellulose) and PVC (polyvinyl chloride) binders in inks is also considered in the new proposal, as these binders can degrade the quality of recycled plastics. Due to their instability at recycling temperatures, they create volatile compounds, cause a change of colour to black, and lead to defects in new products.

## *5.3 Feedback to 2nd PACK sub-AHWG meeting*

This sub-section provides a summary of the feedback received during & after the 2nd PACK sub-AHWG meeting. The intention is to be informative and transparent with regards to the inputs that JRC received and considered in the formulation of its proposals for update/modification of draft criteria relative to recycled materials contents and design for recycling.

The main tool set by JRC for feedback collection was the recording and notes of the 2nd PACK sub-AHWG meeting and feedback shared post-meeting via email (deadline 15/11/24). Feedback was received from 8 of the 11 participants in the meeting), irrespective if orally during it or in written after it. On what follows, such feedback is arranged in two blocks: 1) directly addressing the questions shared by JRC (A26 –Q33); 2) addressing other aspects.

Q26 -Recycled material content: Would you support increasing the recycled content requirements for paper and cardboard beyond 80% for sales packaging and beyond 70% for grouped packaging, either for all product groups or specific detergent product categories (e.g., LD and DD)? Are there specific types of paper and cardboard on the market where limitations on recycled content should be considered? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

A stakeholder raised concerns regarding the use of recycled cardboard for laundry pod packaging. It was noted that achieving product stability with recycled cardboard is currently challenging, and that imposing a restriction on cardboard for this particular type of product could discourage the use of cardboard packaging for laundry pods. The stakeholder suggested that laundry pod packaging needs should be considered in packaging criteria to balance environmental goals with practical product requirements.

Another stakeholder raised concerns about the potential risks associated with the increasing emphasis on using higher levels of recycled materials in packaging. They highlighted that this focus could hinder innovation and the transition to more sustainable packaging solutions, such as flexible paper packaging, which currently cannot be produced with recycled fibers. The stakeholder emphasized the anticipated surge in demand for recycled fibers and the necessity of incorporating fresh fibers to maintain quality. They suggested greater flexibility in mixing recycled, certified forest, and alternative fibers, such as those derived from agricultural waste, to better prepare for future sustainability challenges. The stakeholder proposed introducing exemptions to the criteria for flexible packaging, while also expressing that the proposed levels of recycled material content may be suitable for cardboard.

[28] https://recyclass.eu/wp-content/uploads/2022/02/RecyClass-QT-Procedure-for-bleeding-inks-on-HDPE-and-PP-Containers_v1.0.pdf

Additionally, a different stakeholder observed that high recycled content levels could compromise the strength and thickness of packaging materials, arguing that the existing standards are sufficiently stringent without necessitating an increase.

A stakeholder expressed agreement with increasing the recycled content for paper and cardboard used in sales packaging, proposing a ratio of 90%. Support was also expressed for establishing a threshold for recycled content in similarly grouped packaging. However, the stakeholder expressed uncertainty regarding the appropriateness of a 70% threshold. Another stakeholder reported that Kraft paper cannot incorporate the desired recycled content due to durability issues.

Another stakeholder proposed increasing the recycled content requirements for paper packaging. They noted that the updated criteria for absorbent hygiene products require at least 80% recycled content for grouped packaging and cited TR1, which states that industry representatives report recycled content in secondary packaging ranging from 60% to 90%. The stakeholder also referenced the Nordic Swan criteria, which mandate a minimum of 90% recycled paper content. Highlighting the availability of Nordic Swan-labelled detergents as evidence of feasibility, they recommended setting the EU Ecolabel requirements at a minimum of 90% recycled content for sales packaging and 80% for grouped packaging.

Q27 - Recycled material content: Would you be in favour of setting the recycled material content requirement for household product sales plastic packaging to 70% for PET and 50% for other plastics? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

A stakeholder expressed support to this requirement.

One stakeholder asked clarification regarding the requirement for pouches, specifically concerning their exemption from the recycled materials content stipulated in the previous criterion proposal. The JRC explained that in the new proposal, presented during the 2nd sub-AHWG, the exemption had been removed to ensure consistency with the forthcoming mandatory provisions of the PPWR and the related exemptions. Furthermore, the JRC clarified that pouch packaging must also adhere to the 'Design for recycling' criterion, which mandates that pouches should be made of monomaterial. However, it is considered acceptable for recycling purposes to have polypropylene (PP) content of up to 5 wt% in polyethylene (PE), and PE content of up to 10 wt% in PP.

Another stakeholder raised concerns about the use of recycled content, especially in HDPE and paper. It was stated that beyond a certain threshold, it becomes necessary to add more plastic or paper to preserve the technical performance associated with recycled materials, and this leads to an increased environmental footprint. In addition, it was stated that packaging requirements should not be an impediment to introducing environmentally friendly formulas into the market because packaging is not the primary factor in a product's environmental footprint. Interest was expressed in sharing a life cycle assessment (LCA) data to demonstrate the impact on the carbon footprint when additional plastic is needed to incorporate a certain percentage of PCR content and to accommodate ultra-concentrated products. The JRC welcomed the stakeholder's proposal to share the life cycle assessment (LCA) data.

A stakeholder expressed a keen interest in expanding the requirements beyond the current PPWR restrictions in line with the JRC proposal. However, it was noted that PPWR encompasses numerous criteria and delegated acts, many of which are not yet available. There was a recognition of potential details or exemptions that could have an impact on the requirements. The same stakeholder raised concerns regarding the price and availability of recycled plastic. It was highlighted that if the cost of recycled plastic exceeds a 10-30%, as it seems is the case with HDPE, it may deter consumers from purchasing ecological products. It was also mentioned that the availability of recycled plastic is predominantly influenced by the food industry, and that the scarcity of certain types of recycled plastics, such as rHDPE, should be taken into account when defining criteria for recyclable products.

Another stakeholder recommended increasing the minimum share of recycled content in plastic packaging under the EU Ecolabel criteria. They referred to the TR1 and industry representatives that report using up to 100% post-consumer recycled (PCR) content for PET bottles and 50-60% for HDPE. To promote the best available techniques, the stakeholder suggested setting a minimum of 95% PCR content for hard or rigid plastic packaging made from PE or PET.

A stakeholder raised concerns regarding the use of recycled content in PE and PP plastics. It was emphasized that there are inherent risks associated with these types of sponge plastics, which can absorb contaminants or unexpected ingredients during their previous lifecycle. These contaminants could potentially be released during the secondary use of the recycled product. The stakeholder highlighted the limitation of not being able to fully

analyse all contaminants in the recycled plastics received, which poses a challenge in ensuring the safety and quality of the final product.

A stakeholder referenced discussions from the first PACK sub-AHWG meeting, clarifying their position against the proposed requirement of 70% recycled content for PET and 50% for other plastics, like HDPE. It was stated that the targets are overly ambitious and, based on an initial assessment, suggested that they are unachievable given the current range of certified products.

Q28 - Recycled material content: Would you be in favour of setting the recycled content requirement for professional products (i.e. HSC professional, IILD and IIDD) at a lower level than for plastic consumer packaging (70 per cent for PET and 50 per cent for other plastics), but still higher than the minimum PPWR requirement of 35% for all plastics? If you support the proposal, what target percentage do you consider feasible? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

A stakeholder acknowledged the exemption of recycled content requirements for ADR-classified products and suggested extending the exemption to include products within the ADR scope from the design for recycling requirements. It was highlighted that any goods deemed dangerous are exempt from compliance with the standards for design for recycling according to the ADR.

A stakeholder questioned the reasoning for proposing lower recycled content levels for professional products than for consumer plastic packaging, pointing out that the formulas and applications are similar and comparable for both professional and consumer uses.

A stakeholder expressed support for setting higher recycled content targets for professional detergent products compared to those mandated by the Packaging and Packaging Waste Regulation (PPWR) for all detergent packaging. They acknowledged concerns that professional detergents, due to their concentrated nature and specific properties, might require more robust packaging. However, the stakeholder argued that this general concern should not automatically lead to lower recycled content requirements for all professional detergents. They emphasized the need for evidence demonstrating that professional detergents cannot be packaged using materials with high recycled content before considering setting lower requirements than those for household detergent packaging.

Another stakeholder recommended considering an exemption for professional products that are designed for the transport of hazardous materials, in line with the provisions of the forthcoming PPWR regulation.

Q29 - Recycled material content: Would you support exempting any plastic part that accounts for less than 5% of the total weight of the entire packaging unit from the plastic 'Recycled Materials Content' requirements? *Please, provide detailed data and a reasoned explanation to support your position, focusing on safety concerns or other relevant factors that justify your favourable or unfavourable view*

Two stakeholders expressed support for the exemption of packaging elements that constitute less than 5% of the packaging weight from the packaging requirements.

A stakeholder raised concerns about the proposed 5% exemption for recycled plastic. It was highlighted that for laundry and dishwashing detergents, as well as all-purpose cleaners, the closure represents up to 20% of the total weight of the packaging, while spray nozzles can account for as much as 60% of the packaging weight. The stakeholder stated that the mere 5% exemption would predominantly exempt only the label from the use of recycled plastic and pointed out potential challenges in the implementation of the recycled content requirements. In addition, the same stakeholder suggested excluding pouches from the recycled material content requirement due to concerns about the safety, stability, and security of products packaged in recycled plastic pouches.

Another stakeholder stated that the wording of the criterion requirement (e.g., 'excluded'/'exempted') can lead to confusion and suggested specifying what is included in the scope of the criterion rather than what is exempted.

Q30 - Recycled material content: Would you support a ban on single-use plastics for grouped packaging? Additionally, do you agree that non-single-use plastics used for grouped packaging should achieve a minimum recycl**ability of 95%? Would you endorse the use of the CEN "Design for Recycling of Plastic Packaging"** standards currently under development or the RecyClass recyclability methodology for verifying recyclability? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

The stakeholder expressed support for the proposal, noting its alignment with the Packaging and Packaging Waste Regulation (PPWR). They identified the RecyClass methodology as the current best standard for verifying recyclability. However, they emphasized that once a methodology for assessing recyclability according to PPWR is established, it should become the standard for verifying recyclability for the EU Ecolabel.

Another stakeholder expressed strong support for the proposed ban on single-use plastic for grouped packaging, in line with the Packaging and Packaging Waste Regulation (PPWR). They advocated for even stricter requirements for grouped packaging, emphasizing the EU Ecolabel's role in reducing packaging volume. One suggestion was to require reusable packaging for grouped and transport packaging, drawing inspiration from the PPWR's reuse target, which mandates that from January 1, 2030, at least 10% of such packaging be reusable within a system for reuse. They suggested that this approach could be particularly relevant for professional detergents, where regular interactions between producers and professional consumers might facilitate packaging return schemes. Additionally, the stakeholder recommended a complete ban on grouped packaging targeting consumers, arguing that the EU Ecolabel should promote sustainable lifestyles and avoid overpackaging, thereby allowing consumers the freedom to choose how many products they wish to purchase.

A stakeholder commented on the necessity of preventing a ban on adhesive tape within the context of single-use plastics. It was highlighted that adhesive tape is used to close or sometimes fasten group packaging, and there are no available alternatives. The JRC clarified that the packaging requirement apply to sales packaging and grouped packaging, with transport packaging being exempted. The JRC has already provided definitions for sales packaging, grouped packaging, and transport packaging, whereas the definition of single-use packaging will be included in alignment with the PPWR.

Another stakeholder expressed support for phasing out single-use plastics in grouped packaging, provided that viable, practical, and cost-effective alternatives exist. It was emphasized that such alternatives should also meet standards of availability and durability to justify the ban. The same stakeholder affirmed support for adopting the CEN standard for the design for recycling of plastic packaging. However, they stipulated that adoption should only occur if the JRC can ensure the standard's clarity, practicality, and unambiguous interpretation.

A stakeholder provided feedback on the topic of grouped packaging, expressing strong support for the proposed ban on single-use packaging. The stakeholder advocated for a more ambitious approach to regulating grouped packaging, emphasizing that it is not an essential packaging type, particularly when sold directly to consumers. The stakeholder pointed out that offering products marketed as sustainable, but wrapped in additional packaging, sends a mixed message to consumers and reduces their ability to make environmentally conscious choices, such as purchasing only the amount of product they need without excess packaging. The stakeholder suggested that a ban on group packaging could be a step forward. The JRC explained that a complete ban on all packaging is not currently seen as a viable option. It was highlighted that packaging, including grouped packaging, can play a role in the market by facilitating the sale of products that are ready to use or are diluted alongside their undiluted counterparts. The JRC's response indicates a preference for a balanced approach that considers both market needs and environmental goals, rather than an outright ban on grouped packaging. This approach is in line with proposals to ban single-use plastics in grouped packaging and to ensure that other grouped packaging is at least 95% recyclable.

Q31 – Design for recycling: Do you agree with the new structure of the **'Design for recycling'** table? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

It was suggested from a stakeholder that exceptions should not be enclosed in brackets, as they are essential information, and should be separated into a distinct table to improve readability. Concerns were raised about the current presentation of exemptions and exclusions, which may cause confusion and misinterpretation.

Q32 - Design for recycling: Do you support the extensive modification of the table to cover all the features and components that can affect recycling? *Please provide as specific and comprehensive an answer as possible, and specify which parameters, packaging types, and materials/components you are referring to*.

A stakeholder expressed concern that the current draft of the EU Ecolabel criteria does not include liquid packaging board as an accepted packaging material. They highlighted that in Europe, liquid packaging board is efficiently sorted and recycled, with an expanding infrastructure and alignment with guidelines like the German minimum standard on recyclability. The stakeholder urged its inclusion as a sustainable packaging solution for detergent and cleaning products, suggesting the adoption of the EN 643 definition, which specifies it as used liquid packaging board with a plastic layer (with or without aluminum), containing at least 50% fibers by weight.

Another stakeholder raised concerns regarding the exclusion of "plastic-coated surfaces" from the list of acceptable packaging materials in the EU Ecolabel criteria. They argued that eliminating this exclusion is crucial to facilitating the transition from plastic to fiber-based packaging. The stakeholder emphasized that plastic coatings can serve essential purposes, such as providing barriers for liquid packaging or securing closures in flexible paper packaging. Referencing the 4evergreen alliance's "Circularity by Design" guidelines, they highlighted that thermoplastic extrusion barrier coatings on the inside of packaging are considered fully or conditionally compatible with standard recycling processes. Although double-sided coatings are not standard-compatible, they can still be processed in specialized mills for used beverage cartons. Thus, they concluded that a single plastic-coated surface should not pose a problem in standard recycling systems, supporting its inclusion in the EU Ecolabel criteria.

The stakeholder raised concerns about the proposal's prohibition of direct printing on all plastic packaging. While they acknowledged that this restriction might be appropriate for rigid plastic packaging, where sleeves or labels can be used, they argued that it is not suitable for flexible film packaging, which requires direct printing for necessary information. They recommended aligning with RecyClass guidelines for flexible film, suggesting that direct print coverage of less than 50% is fully compatible with the recycling process, while coverage greater than 50% shows limited compatibility. Therefore, they proposed limiting direct print on flexible film to less than 50%, or preferably, regulating it based on the amount of printing ink per kilogram of material.

Some stakeholders requested clarification and a specific definition of the term 'opaque' in the colour provisions.

Stakeholders also indicated that PP closures are widely used in conjunction with HDPE bottles, and prohibiting their use could present considerable challenges for current market products.

Q33 – All sections: Do you have any other remarks on any aspect about the draft criteria proposal not already included within previous questions? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*

A stakeholder inquired whether the JRC intended to differentiate the HSC criteria into separate versions for professional and consumer products, similar to the distinctions made for laundry and dishwashing detergents. Alternatively, they asked if companies could self-identify as professional and follow specific rules for packaging based on that classification during the application process. The JRC stated that it is currently evaluating the structure of potential Commission Decisions and their implications for the categorization of consumer and professional products.

A comment was raised regarding the proposed exemption from recycled materials content requirements for packaging used in the transport of dangerous goods, as outlined in accordance with Directive 2008/68/EC and the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). One participant expressed a need for clarification on the definition of 'dangerous goods' and queried the application of this exemption to detergents, seeking to understand the scope of the products affected.

Another stakeholder indicated received that label suppliers are currently unable to confirm compliance with the proposed adhesive requirements in the design for recycling criterion. They have expressed concerns about their readiness and the implementation timeline.

A stakeholders provided feedback regarding the definitions of "recycled content" within the Recycled materials content criterion. They expressed support for establishing separate definitions for "recycled material" and "post-consumer material" to ensure consistency across sub-criteria. However, they raised concerns about referencing ISO 14021:2016, noting that this standard is currently under revision and its future definitions may not be suitable for the EU Ecolabel's scope. Instead, stakeholders recommended aligning definitions with existing EU

legislation. For "recycled material," they suggested using the definition from the Packaging and Packaging Waste Regulation (PPWR), which defines:

*'secondary raw materials' means materials that have undergone all necessary checking and sorting and been obtained through recycling processes and that can substitute primary raw materials;*

For "post-consumer waste," they proposed using the definition from the implementing decision (EU) 2023/2683 of the Single Use Plastic Directive, which defines:

*'post-consumer plastic waste' means waste, as defined in Article 3(1) of Directive 2008/98/EC, that is plastic and that has been generated from plastic products that have been placed on the market;'*

They suggested that the definition can be broadened to encompass materials beyond plastic by omitting the word "plastic."

## List of questions

Q1 - Would you support the exclusion of Hard Surface Cleaning (HSC) products for professional use from the scope of the 'Recycled materials content' criterion? *Please, provide detailed data and a reasoned explanation to support your position, focusing on safety concerns or other relevant factors that justify your favourable or unfavourable view* ..... 7

Q2 - Do you find that the proposed modifications to the 'Recycled Material Content' criterion clarify the requirements for recycled content in plastic packaging? Do you support these modifications? *Please provide as specific and comprehensive an answer as possible, including the reasons why.* ..... 8

Q3 - Would you support expanding the recycled content requirements to include all plastic packaging components in the primary (sales) packaging, beyond only bottles and canisters? *Please provide as specific and comprehensive an answer as possible, including the reasons why.* ..... 8

Q4 - Would you support increasing the minimum recycled content in paper/cardboard for sales packaging to over 80%, and for grouped packaging to over 70%? *Please provide reasoned explanation to support your position* ..... 9

Q5 - Could you provide specific details on the safety risks associated with recycled plastics, specifying the information according to the different types of plastics? *Please provide as specific and comprehensive an answer as possible.* ..... 10

Q6 – Some substances/materials have been identified as hindering the recycling process (e.g. fibre loss, presence of additives and/or dyes during the recycling process). In this sense, could share any insights about them? *Please provide as specific and comprehensive an answer as possible.* ..... 10

Q7 – Acknowledging that stakeholders raised concerns on the ambition level of the recycled content for plastic packaging, could you share which would be feasible targets (set by plastic type)? *JRC would like to receive feedback on percentage over total packaging weight, inclusive of any relevant remark. Please provide as specific and comprehensive an answer as possible* ..... 11

Q8 – Relative to grouped packaging and from the three proposed approaches (See section 3.2 *Recycled material content),* would you support the inclusion of a provision that requires grouped packaging to be composed exclusively of cardboard and/or paper, complying with the recycled content requirements for paper/cardboard secondary packaging, and thus excluding the use of plastic for grouped packaging (option 1)? *Please provide as specific and comprehensive an answer as possible, including the reasons why.* ..... 11

Q9 - Relative to grouped packaging and from the three proposed approaches (See section 3.2 *Recycled material content),* do you agree with the proposal that plastic grouped packaging should be recyclable and meet a minimum recyclability performance grade of 95% (option 2)? *Please provide as specific and comprehensive an answer as possible, including the reasons why.* ..... 12

Q10 - Relative to grouped packaging and from the three proposed approaches (See section 3.2 *Recycled material content),* do you support a provision that plastic grouped packaging should comply with the same recycled content requirements as primary (sales) packaging (option 3) ? *Please provide as specific and comprehensive an answer as possible, including the reasons why.* ..... 13

Q11 (A&V) - Do you support the verification of plastic grouped packaging recyclability by compliance with EN 13430 or ISO 18604 standards? *Please provide your perspective on the suitability of these standards for recyclability assessment and verification.* ..... 13

Q12 (A&V) – If not already addressed in current criterion text proposal or in previous question, which are the factors/aspects impeding an effective *Assessment & verification* with regard to Recycled Material Content? *Please, be as specific as possible in your response.* ..... 14

Q13 – Do you have any further applicable observations/resources relevant to the recycled materials content sub-criterion? *Please, be as specific as possible in your response.* ..... 14

Q14 – Would you support refining of the packaging elements/ parameters included within the scope of design for recycling criterion to align with the revised PPWD (i.e. additives, label and sleeves, adhesives, closures, colours, material composition, barriers coatings? *Please provide as specific and comprehensive an answer as possible, including the reasons why.* ..... 19

Q15 – Do you agree with the modification of the criterion text for 'Excluded Materials and Components' to specify the exclusion of *'All non-NIR detectable pigments such as carbon black'* instead of the current proposal which excludes *'Dyed black, using soot-carbon-based pigments'*? *Please provide as specific and comprehensive an answer as possible, including the reasons why.* ..... 19

Q16 – Are there any materials or components that are NIR-detectable or that exhibit specific characteristics like fluorescence, which, in your opinion, should be excluded from use due to their negative impact on the recycling process? If so, please specify which ones. *Please provide as specific and comprehensive an answer as possible, including the reasons why.* ..... 20

Q17 – *Would you support the introduction of a new requirement that limits the use of inks that can impact the recycling process? Do you agree with the proposed wording for excluded materials/components in the Design for Recycling criterion: 'Non-toxic and non-bleeding inks according to EuPIA guidelines'? Please provide as specific and comprehensive a response as possible, indicating also if any additional considerations related to inks should be taken into account.* ..... 20

Q18 – Regarding the proposed requirement for EVOH barrier coatings and its impact on recyclability, could you specify any aspects of the current wording that may be unclear or lead to uncertainties? *Please provide as specific and comprehensive an answer as possible, including the reasons why.* ..... 21

Q19 – Do you believe that the requirement for EVOH barrier coatings should be amended to account for different types of plastics, reflecting their recyclability guidelines? *Please provide as many details as possible, ideally a wording proposal that align with widely recognized industry recyclability guidelines.* ..... 21

Q20 – Given the challenges of recycling multi-material multilayer films and acknowledging that mono-material multilayer films may face limitations in terms of robustness and issues with welding and closure, could you share any developments or successful implementations that have enhanced their structural stability and sealing reliability for use in large-sized packaging? *Please, provide as many details as possible, including any specific research findings, or technical data that could contribute to understanding the current landscape and potential solutions for these challenges.* ..... 21

Q21 – Would you agree to extend the requirement for the exclusion of laminates with layers of different materials to packaging types other than pouches/bags? *Please provide as specific and comprehensive an answer as possible, including the reasons why.* ..... 22

Q22– Would you support modifying the newly proposed requirement of excluded materials/components regarding adhesive for PET packaging to align with the wording of **Recyclass guideline i.e "***Alkali/water soluble adhesive; Alkali/water non-soluble or non-releasable adhesive at 60-80°C for PET bottle***"?** *Please provide as specific and comprehensive an answer as possible, including the reasons why.* ..... 23

Q23 – Would you support the inclusion of specific requirements for pressure-sensitive labels (PSLs) and adhesives in light of the recent technological advancements in label materials (PO, PP, PE) and adhesives for HDPE packaging? *Please provide as specific and comprehensive an answer as possible, including the reasons why.* ..... 23

Q24 - If you agree with the inclusion of specific requirements for pressure-sensitive labels (PSLs) and adhesives, would you support the proposed text for the requirements regarding excluded materials and components for different packaging as follow: 1) For HDPE packaging: 'Pressure-sensitive labels in PP, PE, or PO material (with density <1 g/cm³) unless the adhesive is releasable in the recycling process.' 2). For PET packaging: 'Pressure-sensitive labels in PP, PE, or PO material (with density <1 g/cm³) unless the adhesive is releasable in alkali water at 60-80°C.'? *Please provide as specific and comprehensive an answer as possible, including the reasons why.* ..... 24

Q25 - Do you have any further applicable observations/resources relevant to the design for recycling sub- criterion? *Please, be as specific as possible in your response*.....24

Q26 -Recycled material content: Would you support increasing the recycled content requirements for paper and cardboard beyond 80% for sales packaging and beyond 70% for grouped packaging, either for all product groups or specific detergent product categories (e.g., LD and DD)? Are there specific types of paper and cardboard on the market where limitations on recycled content should be considered? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*.....40

Q27 - Recycled material content: Would you be in favour of setting the recycled material content requirement for household product sales plastic packaging to 70% for PET and 50% for other plastics? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*..41

Q28 - Recycled material content: Would you be in favour of setting the recycled content requirement for professional products (i.e. HSC professional, IILD and IIDD) at a lower level than for plastic consumer packaging (70 per cent for PET and 50 per cent for other plastics), but still higher than the minimum PPWR requirement of 35% for all plastics? If you support the proposal, what target percentage do you consider feasible? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*.....42

Q29 - Recycled material content: Would you support exempting any plastic part that accounts for less than 5% of the total weight of the entire packaging unit from the plastic 'Recycled Materials Content' requirements? *Please, provide detailed data and a reasoned explanation to support your position, focusing on safety concerns or other relevant factors that justify your favourable or unfavourable view*.....42

Q30 - Recycled material content: Would you support a ban on single-use plastics for grouped packaging? Additionally, do you agree that non-single-use plastics used for grouped packaging **should achieve a minimum recyclability of 95%? Would you endorse the use of the CEN "Design** for Recyclin**g of Plastic Packaging" standards currently under development or the RecyClass** recyclability methodology for verifying recyclability? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*.....43

Q31 **– Design for recycling: Do you agree with the new structure of the 'Design for recycling'** table? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*.....43

Q32 - Design for recycling: Do you support the extensive modification of the table to cover all the features and components that can affect recycling? *Please provide as specific and comprehensive an answer as possible, and specify which parameters, packaging types, and materials/components you are referring to*.....44

Q33 – All sections: Do you have any other remarks on any aspect about the draft criteria proposal not already included within previous questions? *Please provide as specific and comprehensive an answer as possible, including the reasons why.*.....44