European meat industry's and Advanced Packaging Association's (APA) joint position paper on the Packaging and Packaging Waste Regulation regarding the role of polyamide

AVEC Poultry, the Liaison Centre for the Meat Processing Industry in the European Union (CLITRAVI), the European Livestock and Meat Trades Union (UECBV) and Advanced Packaging Association (APA) would like to express their views over the upcoming delegated acts of the Packaging and Packaging Waste Regulation (EU) 2025/40. We respectfully ask the Commission and relevant services to consider the food industry's operational realities to safeguard competitiveness, food safety, and economic sustainability, as well as ensure the rapid implementation of the new measures so as to achieve Europe's circular economy ambitions.

The European meat industry is fully committed to the recyclability objectives laid out in the Regulation.

1. *Polyamide as an essential packaging material*

Polyamide (PA) is crucial in high-performance food packaging, particularly in applications where mechanical performance such as puncture resistance, strength and thermal resistance are key to ensure perfect sealing and resistance to heat treatments. It offers barrier protection against oxygen, oils, aroma and chemicals, helping to preserve food for its intended shelf-life.

In advanced packaging structures, PA is typically combined with polyethylene (PE) and polypropylene (PP), enabling strong food-preservation properties with a minimal amount of material. These characteristics are essential for ensuring that meat and other highly-perishable and valuable food products remain safe and shelf-stable throughout the entire supply chain.

PA's durability provides reliable protection for products with sharp edges and variable shapes, including meat with bones. It is one of the few materials capable of maintaining packaging integrity under demanding conditions such as deep-freezing, long-distance transport, or high-speed industrial processing. In this sense, PA-containing packaging enables the highest performance for a packaging generally used for valuable goods which also tend to be GHG emission intensive.

Indeed, not enabling PA-containing packaging could lead to:

- **Increased amounts of plastic used in packaging,** since alternatives often require thicker structures to compensate for lower mechanical strength.
- **Reduced shelf life and increased food waste** due to weaker packaging performance.
- **Cause significant capital expenditures** as alternatives are not compatible with many existing machinery lines and could entail unrealistic implementation timelines.
- **Compromised food safety,** especially for products with sharp edges or irregular shapes.

In short, limiting PA use could increase environmental impacts rather than reduce them, which runs contrary to the PPWR's ambitions and a genuine waste hierarchy. **Polyamide enables the highest packaging performance with the least amount of material, embodying both functionality and circularity at an economically viable rate.**

2. *Polyamide is recyclable*

PA is an important material in advanced flexible packaging, typically accounting for around 10–30 % of the total material used in such solutions. Multi-layer structures combining polyethylene and polyamide (PE/PA) are sometimes considered difficult to recycle. However, this perception is not supported by

evidence. **Their recyclability has been verified under major recycling protocols**, and multiple recent studies and certifications have confirmed that flexible packaging containing co-extruded PA can be recycled with existing polyethylene flexible packaging streams.[1]

The recycling of polyolefin–polyamide blends is technically straightforward and proven in practice. The process produces recycled packaging film with valuable material properties suitable for new applications. **When PA is used in advanced packaging, it does not negatively affect the quality of recycled polyethylene**. This is due to the use of tie layers and compatibilizers that ensure material compatibility, allowing the materials to be processed using existing recycling equipment without requiring costly upgrades to waste management infrastructure or the creation of separate recycling streams.[2]

In line with the above, the European Meat Industry and APA request that the Commission ensures that the delegated acts on the Design for Recycling (DfR) guidelines and recyclability performance grades, due by 1 January 2028, recognize the scientific evidence proving PA's recyclability with existing polyethylene flexible packaging streams.

In fact, the recyclability of PE/PA multilayer films has already been recognized in regulatory frameworks. Since 2022, polyamide 6 (PA6) and co-polyamide 6/6.6 (PA6/6.6) used in co-extruded PE/PA films have been recognized as recyclable under the German Packaging Act (VerpackG) minimum standard for packaging subject to system participation under Section 21(3), confirming their compatibility with existing recycling systems.[3]

Thus, overall, independent and scientifically-sound test protocols validate PE/PA recyclability in the PE waste streams, and this should be acknowledged within the PPWR's mandatory recyclability ambition as well as its prescribed material neutrality. PA-containing packaging represents an application as not only high-functional for its critical goods but also equally recyclable, and the former should not be sacrificed for the latter. Both go hand-in-hand, and can be recognized in the Delegated Act.

3. Technical explanation: how the PPWR may affect the use of polyamide (PA)

By 1 January 2028, the European Commission is set to adopt delegated acts to establish the **Design for Recycling (DfR)** framework, the **recyclability performance assessments** and express its results in recyclability grades (A–C) per packaging unit in terms of weighting, and the **framework of EPR fees modulation. EPR fees will be modulated based on packaging recyclability.**

At present, there are no alternatives to PA that offer comparable high-performance properties in many advanced packaging applications. However, PPWR may affect the future use of polyamide through the above frameworks.

Annex II of the PPWR includes an indicative list of packaging materials, types and categories relevant to Article 6, which governs future Design for Recycling requirement. PA is included in Annex II Table 1, Category 18 as *"other flexible plastics including multi-materials – flexible."*

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[1] See e.g. Certificate 2187-2021-002630-W3 granted to BASF SE for Co-Polyamide (PA 6/6.6) made from PA6 and PA6.6 monomers with melting points < 200°C as layer in coextruded PE films, granted by cyclos-HTP Institute on 17.7.2025, or Certificate 2187-2021-002124-W4, granted by cyclos-HTP Institute to BASF SE for PA6 on 17.7.2025.

[2] Advanced Packaging Association, 2024. Polyamide: an important and sustainable raw material in advanced flexible packaging. Accessed 10.3.2026.

[3] BASF: Recyclability of polyamides extended in the 2024 minimum standard for packaging, 12.9.2024. Accessed 9.3.2026.

EU recycling infrastructure is primarily organized around high-volume polymer streams such as PET, PE and PP. **Materials outside these streams are generally, and – more importantly – arbitrarily, considered more difficult to sort and recycle within existing systems, even where evidence suggests that effective recycling solutions exist.** As a result, PA-containing packaging is being assessed within broader categories that are not necessarily optimized for its material properties, as there is no dedicated recycling stream for it.

Additionally, the recyclability grades' classification is based on the recyclability performance of a packaging unit as a whole. According to the thresholds set in Annex II, packaging must reach at least 95 % recyclability to qualify for class A, at least 80 % for class B, and 70 % for class C. Packaging with recyclability below 70 % is considered not technically recyclable and cannot be placed on the market from 2030 onwards.

As a result, and because **PPWR inadvertently places the emphasis on mono-material packaging[4], multilayer structures such as PA-containing packaging may receive lower recyclability scores under the future Design for Recycling criteria if the scientific evidence is not taken into account.**

If **PA-containing packaging formats receive lower recyclability classifications under the PPWR framework, this would also result in higher EPR fees for the industry as well as uncertainty surrounding future market entry**. As regulatory requirements tighten between 2030 and 2038, this could pose challenges for the long-term viability of certain advanced packaging solutions that rely on PA.

It is for these reasons why we call on the European Commission, the European Committee for Standardization, and key stakeholders in the recycling industry to recognize the recyclability of polyamide in line with recent scientific evidence. Our more detailed asks are laid out in part 4 below.

4. European meat industry's key policy asks and points of attention

- The European Commission, the Joint Research Centre (JRC), the European Committee for Standardization (CEN), and key stakeholders in the recycling industry should **recognize the recyclability of polyamide (PA) in line with existing scientific research** and ensure its continued status as a crucial material in advanced flexible packaging solutions.
- **PPWR's Design for Recycling guidelines should recognize functionality as a key criterion for future packaging materials, alongside recyclability.** This balance is particularly critical for perishable food packaging, where packaging typically accounts for less than 5% of the product's overall environmental impact. In this category, the potential to achieve high-quality mechanical recycling remains very limited and may ultimately be negligible compared with the unintended environmental consequences of shifting to lower-performance alternatives, as outlined in Part 1.
- **We request that the Commission clarify the relationship between Annex II, Table 4**, which identifies the preservation of functionality as a parameter for setting Design for Recycling criteria, and **Annex IV, Part A, point 8**, which implies a preference for monomaterial packaging even where this may require increased packaging weight or volume to enable more rotations. In our view, these provisions risk creating a contradiction that should be resolved in the delegated acts.
- **The Commission should clarify the use of the term "mono-materials" in PPWR**, particularly in Annex II, Table 4 and Annex IV, Part A, point 8, and **explain how a shift towards mono-material**

[4] See Part 4 for further comments on mono-material packaging.

packaging is consistent with the waste hierarchy under Article 4 of Directive 2008/98/EC. The current wording appears to favor mono-materials even where this may increase the amount of material used, as highlighted above, creating tension with the waste hierarchy. Moreover, the absence of a harmonized definition of mono-material packaging creates uncertainty for operators, while there is currently insufficient technical evidence that mono-material packaging delivers significant improvements in recycling outcomes.

- **Industries should be granted an adequate transition period and technical support in order to adapt to the PPWR's provisions.**

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On behalf of the following associations:

AVEC – Association of Poultry Processors and Poultry Trade in the EU countries https://avec-poultry.eu/

CLITRAVI - Liaison Centre for the Meat Processing Industry in the European Union https://www.clitravi.com/

UECBV - The European Livestock and Meat Trades Union https://uecbv.eu/

APA – Advanced Packaging Association https://advanced-packaging-association.org/