Fédération Européenne des Activités de la Dépollution et de l'Environnement
European Federation of Waste Management and Environmental Services
Europäische Föderation der Entsorgungswirtschaft

Packaging: Better Essential Requirements for Better Recyclability

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FEAD is the representative body of the private waste management and resource industry in the European Union. In this capacity, FEAD determines the Commission's examination of the potential reinforcement of the essential requirements of Annex II of the Packaging and Packaging Waste Directive to be of utmost importance in the transition to a circular economy.

Successful reinforcement of the requirements found in Annex II of the Packaging and Packaging Waste Directive should be enacted with the objective of improving design for re-use, promoting high quality recycling, as well as strengthening enforcement in the aforementioned areas.

To this end, FEAD Members have prepared a list of main criteria concerning Annex II of the Packaging and Packaging Waste Directive to be taken into account in revision of the essential requirements for packaging. These criteria have been subdivided into distinct sections composed of: (1) Product Design, (2) Market Issues, and (3) Issues with Current Technology.

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1. Product Design

1.1 Composite Layer Issue

Multilayer packaging of a complex nature contributes to a high level of contamination in collected waste that reaches sorting and recycling facilities, as opposed to monolayer packaging which generally does not exhibit such traits. Particularly when composed of different materials, composite layers of packaging increase the physical and chemical complexity of products, thereby causing difficulties in end-of-life treatment at recycling facilities (e.g. multilayer packaging present in recyclates can cause colouring of plastic products and change their chemical, physical and mechanical properties). The issue of packaging with composite layers is a key concern and must be addressed in the forthcoming study.

1.2 Lack of Global Eco-Design Guidelines

Well-constructed global eco-design guidelines requiring specific designs which reflect recycling standards will increase homogeneity of waste streams, in turn promoting high quality recycling. Therefore, partnerships between producers and waste management organisations must be established to facilitate recyclability of products as well as financial incentives for products designed in accordance with eco-design guidelines.

1.3 Lightweight Packaging

Lightweight packaging is problematic for recycling facilities, particularly when waste is sorted by weight. Small plastic components of products could technically be recycled, but it is expensive and impractical to do so. As an example, coffee pods are currently rejected by waste treatment facilities as contaminants for the aforementioned reasons.

1.4 Additive/Colours Issue

Certain additives in polymers could present challenges for recycling. For instance, basic molecules could be incapable of being broken down where certain additives are present, or a collection of various additive-containing packaging could hamper recycling of plastic packaging. In addition, it is problematic to sort coloured packaging (e.g. black, red) as it is often not recognised by optical systems. One of the potential solutions to this could be a "modulation fees system," which would levy fees upon producers who create packaging which is hard to recycle. A balance must be struck between recyclability of the packaging and innovation, marketing and functionality.

1.5 Chemical Issue

As long as hazardous substances can be placed on the market legally by manufacturers of virgin raw materials, recycling companies will at some point in time have to deal with those "legacy substances". The long-term policy goal should be to achieve toxic/ risk free material cycles, but this should start at the initial design stage where products enter the material cycle for the first time. While ambitious targets push for more recycling in terms of quantity, a qualitative approach is also needed, as recyclers are investing in downstream parts of the value chain. This investment will only be made possible by the proper implementation of the existing international and European legislation (REACH, RoHS, POPs) at all stages and by all actors. Regarding the treatment of waste containing specific substances, a risk-based approach should be implemented. FEAD members hope that the current work on an improved interface between waste, chemicals and products will handle the aforementioned issues.

1.6 Biodegradable, oxo-degradable and bio-based packaging

FEAD supports the use of bio-based plastics as long as they are not promoted at the expense of recycled plastics. Indeed, it is important to make a clear distinction, on the one hand, between bio-based and biodegradable plastics and on the other hand, between biodegradability and compostability. Today, some bio-based plastics do not biodegrade in bio-waste treatment plants and none degrade completely in the natural environment (including waterways). Compostable plastics do not degrade in anaerobic conditions (AD) unless followed by an aerobic process and given the difficulty to distinguish between compostable plastics and conventional plastics, even if they are correctly disposed of by the householders, they are likely to be sorted out at the composting plant and sent for recovery. Biodegradable plastics are also problematic when they are mixed with recyclable plastics as they do not have the same material properties and may impact the integrity of the recyclates. The use of biodegradable plastics must be so specific that the correct recycling route is clearly identifiable for the consumer/user. The mere risk that this might happen has already been known to discourage manufacturers to use recycled content.

1.7 Features

Reducing the use of features such as labels, printing, colours, glues, covers, caps and content residues on a package is crucial and can increase the possibility of recycling and the value of the plastic.

1.8 Economically efficient recycling

A recyclable packaging should be designed to be cost-effectively collected, sorted and recycled, in practice, with the available state-of-the-art technology. In achieving economically efficient recycling, large flows of recycling are required for the recycling process. Unfortunately, certain recycled plastics from packages are capable of being recycled, but there is limited demand for secondary raw materials (e.g. PS, mixed PET and film plastics other than LDPE). Therefore, mandatory recycled

content for packaging is one of the solutions to create a market allowing investments, by increasing the flow of plastic packaging into the recycling sector. Additional instruments could help as well as better measures to encourage green public procurement, reduce VAT on products for which the packaging may be easily recycled and voluntary agreements in the private sector, in addition to economic incentives.

1.9 Difference between "recyclable" and "recycled"

In the essential requirements of the Packaging and Packaging Waste Directive, it is crucial that the definition of "recyclable" is made clear. Indeed, material that is technically recyclable is not necessarily recycled for economic reasons, giving a potentially false impression that the packaging will be recycled. For instance, it is impractical for consumers to separate every different kind of packaging, e.g. not even all forms of beverage cardboard packaging are alike in terms of recyclability, highlighting the variance found in product packaging and so, mixed packaging becomes impossible to adequately recycle because of unclear composition. Finally, regular revision of the definition should be allowed for to adjust for technological development.

1.10 Food Contact Requirements

Food contact requirements are set by the European Food Safety Authority (EFSA) and override the environmental concerns of plastics waste treatment. The provision of secondary raw materials for food grade quality is difficult, due to collection and sorting issues, especially when both food and non-food packaging are collected together. Food grade packaging should be sorted and recycled in a closed loop in order to increase the waste stream of recyclable food grade plastic packaging.

2. Market Issues

2.1 Labelling

The development of a common label showing the percentage of recyclates in plastic packaging would build trust between consumers and producers, eventually leading to an increase in consumer demand for products for which the packaging contains high levels of recycled content. When affixing to the packaging, it should be borne in mind that using glue would pollute the packaging material and better solution must be found.

2.2 Import Issue

Products using plastic packaging imported into the EU should necessarily follow Community rules on the content of such packaging, which is not necessarily the case at present. The packaging of products imported into the EU ends up in the European waste management sector, creating potential for discrepancies between the additive and substantive content of packaging made in the EU and non-EU third countries. Such a discrepancy leads to a multitude of challenges for the waste management sector, given the differing chemical compositions of the packaging to be processed.
The language of the essential requirements of Annex II should be clear, facilitating interpretation for the producers of imported products. Strengthened enforcement of the essential requirements rules of Annex II should also be imposed, preventing third-country producers from deviating from the essential requirements. Such measures are necessary to ensure the transition to a circular economy.

3. Issues with Current Technology

3.1 Mechanical Recycling

Post-consumer plastic waste can be very varied, comprising a large range of material types, which is not always suited to mechanical recycling. Indeed, reaching high quality of recycled material is possible with the current technology but it requires a closed loop (e.g. to achieve transparent plastic), better ecodesign requirements (e.g. materials easily separated from packaging) and better compatibility between plastic types composing the packaging and the most commonly NIR technique used in sorting and recycling facilities. Besides, currently, not all plastic packaging can't be recycled. Alternative methods of recycling such as chemical recycling are still developing, underlining the crucial role that collection and sorting still plays in the recycling process.

3.2 Traceability

Chemical traceability of plastic packaging is crucial, as information about the composition of the initial packaging is required for recycling. This information should necessarily be supplied by producers, with ECHA currently addressing this issue. Improved data collection is of paramount importance in the uptake of recycling of plastic packaging, in order to increase adequacy of recyclates in the waste stream. In addition, improved data collection can help to inform legal and financial instruments to trigger an increase in demand for secondary raw materials, thereby increasing cost efficiency of the recycling process and closing the loop into the circular economy.

FEAD, the European Federation for Waste Management and Environmental Services, represents the private waste and resource management industry across Europe. FEAD's members are national waste management associations covering 19 Member States, Norway and Serbia.
FEAD's members represent about 3,000 companies with activities in all forms of waste management. Our companies have an approximate 60% share in the household waste market and handle more than 75% of industrial and commercial waste in Europe. Their combined annual turnover is approximately € 75 billion. These companies employ over 320,000 people who operate around 2,400 recycling and sorting centres, 1,100 composting sites, 260 waste-to-energy plants and 900 controlled landfills.
They enable the transition to a circular economy by producing resources which can be re-injected in the economy and by supplying energy. Our companies add value through innovative and cost-efficient collection, sorting, and recycling of secondary raw materials. As a result, they play a crucial role in achieving the best economic and environmental outcomes.