




Recyclability of Packaging

Science- and enforcement-based evidence regarding Art. 6 and Annex II of the Proposal for a Regulation on Packaging and Packaging Waste, amending Regulation (EU) 2019/1020 and Directive (EU) 2019/904, and repealing Directive 94/62/EC


Lessons Learned

 In order to achieve the circular economy goals, packaging must be designed in a way that enables all recycling processes, including high-quality mechanical recycling (open to all technologies). Criteria for a recyclability enabling all technologies are essential.

 Recyclates of recycled packaging must therefore also be of a quality that allows for the substitution of virgin material in new packaging typically made of that material.

 In order to prevent greenwashing and close the loop, a method to determine recyclability must consider the following core criteria:

- Availability of sorting and recycling infrastructure
- Sortability of the packaging and separability of its components
- No recycling incompatibilities due to components or substances.

 A definition for recyclability needs to be based on the aspects mentioned above:
“Recyclability is the fundamental and gradual suitability of any given packaging to substitute virgin material in applications typically made of that material, e.g. new packaging, after undergoing high-quality mechanical recycling processes available on an industrial scale.”

Different goals for packaging design and waste management:

Packaging development phase (design for recycling):

Designing packaging in a such way that it can be recycled to a high-quality material in order to close the loop and substitute virgin material in packaging (support recycled content targets in Art. 7). The most environmentally friendly recycling processes should be enabled.

Waste management at end of life (recycling targets):

Ensure recovery according to the waste hierarchy, depending on the conditions of the packaging waste generated. Waste shall be treated in such a way as to contribute to recycling targets set in Art. 46.

Background Information

Examples of applications that are considered as recycling according to the PPWR proposal based on the Waste Framework Directive 2008/98/EC are:

- black glass bottle fragments in road constructions on landfill sites;
- plastics replacing bitumen in asphalt;
- plastics in foot plates for construction site signs and fences;
- plastics used as a reductant in smelting furnaces.

Such one-time low-quality recycling does not substitute materials in packaging and has not closed any loops. It does not lead to a circular economy. Therefore, such recycling cannot be the yardstick for the design for recycling. It may only make sense in cases where the quality of the packaging waste does not allow for a high-quality recycling.

However, if the Circular Economy package is to be put into practice and recycled content targets (Art. 7) should be reached, high-quality mechanical recycling and recyclability determined accordingly are necessary (see fact sheet “Recycled Content Requirements”).

Different methods for determining the recyclability of packaging are currently used by stakeholders. They share some similarities but also differ greatly regarding how realistic the results are with a view to the current practice of collection, sorting and recycling. In order to prevent greenwashing and to support the recycling and recycled content targets, the method mentioned in Art.6 of the draft Regulation needs to ensure realistic results.

A packaging may only be considered recyclable to a high degree if, after becoming waste, it is fed into high-quality mechanical recycling processes in reality, and if it can successfully generate high-quality recyclates. The German Minimum Standard for Determining the Recyclability of packaging follows this approach. The method has become a good orientation for packaging producers and is widely referred to by German producers optimizing their packaging.

Comparison of the recyclability of packaging designs



If producers optimize the packaging of their products, harvesting so called “low-hanging fruits” already has big effects to increase recyclability. Examples show that packaging for most products can be designed in a way as to reach a recyclability of 90 % or higher. Such optimizations need to be encouraged by ambitious Eco Fee Modulation ensuring that packaging that is recyclable to a high degree is economically advantageous for producers.

Links

[Recommendations for the Revision of the Packaging and Packaging Waste Directive 1994/62/EG \(umweltbundesamt.de\)](https://www.umweltbundesamt.de/en/recommendations-for-the-revision-of-the-packaging-and-packaging-waste-directive-1994/62/eg)

[Minimum Standard for determining Recyclability in Germany \(verpackungsregister.org\)](https://www.verpackungsregister.org/)

[Praxis of Sorting and Recycling of Packaging on the German Market \(research report, umweltbundesamt.de\)](https://www.umweltbundesamt.de/en/praxis-of-sorting-and-recycling-of-packaging-on-the-german-market)

[Evaluation of Eco Fee Modulation in Germany \(research report, umweltbundesamt.de\)](https://www.umweltbundesamt.de/en/evaluation-of-eco-fee-modulation-in-germany)

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Section III 1.6 Plastics and Packaging and
Subsection Implementation of the German Packaging Act