

GOLDEN DESIGN RULES

For optimal plastic design, production and recycling

Demonstrating leadership in the progress towards a circular economy, members of the CGF Plastic Waste Coalition of Action have aligned on Golden Design Rules for packaging design to increase the circularity of their packaging portfolios where appropriate. These are voluntary, independent commitments made by individual companies, and the first two of these Rules are detailed here. For more information about the Coalition, visit www.tcgfplasticwaste.com.

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GOLDEN DESIGN RULE

Increase Value in PET Recycling

- Use transparent and uncoloured **PET** (preferred), or transparent blue or green in all PET bottles¹
- Ensure material choice, adhesive choice and size of sleeve or label is not problematic for recycling²

PET is polyethylene terephthalate, one of the most commonly used plastic materials. This Golden Design Rule applies to all PET bottles in food and non-food applications, including beverages, home care products, personal care products, and more. Switching from coloured to transparent PET bottles will positively impact supply of high quality recycled PET, and helps ensure only materials that have a viable closed loop recycling pathway are used.

1) With a minimum L value of 40; 2) Including phase out of PETG and PLA labels/sleeves, non-water soluble/dispersible adhesives and sleeves that cover more than 75% of bottle (unless proven not to limit the recyclability of the product).

THE SCALE

PET bottles represent 13% of plastic packaging on the market, according to data from Plastics Europe and Eunomia.

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GOLDEN DESIGN RULE

Remove Problematic Elements from Packaging

- No **undetectable¹ carbon black**
- No **PVC** or **PVDC**
- No **EPS** or **PS**
- No **PETG** in rigid plastic packaging
- No **oxo-degradable**

Undetectable carbon black is undetectable in the sorting process when using Near Infra-Red (NIR) technology, which is widely used in plastics recycling systems. As a result, dark-coloured packaging commonly ends up as residue and is disposed of in landfill or incineration. It is commonly used in meat and vegetable trays and bottles. As well as minimising avoidable environmental impacts, removing carbon black would help increase the volume of recycled plastic.

PVC or PVDC is polyvinylidene chloride or polyvinylidene dichloride. It can be problematic if in the recycling stream by disrupting the recycling of some other plastics. It is found in several types of plastic packaging, including meat trays, plastic film around vegetables or blister packs.

EPS or PS is expanded polystyrene or polystyrene. (E)PS is too uncommon the packaging materials stream to make recycling economically viable. As a result, it is rarely sorted from household waste and recycled, with the majority of it incinerated or landfilled. Examples of its application are food takeaway containers, yoghurt pots, and cushioning/filler. This element of Golden Design Rule 2 excludes other types of polystyrene such as SAN or ABS.

1) Undetectable means by commonly used sortation technologies.

PETG is polyethylene terephthalate, and is a contaminant in the PET recycling stream which lowers the value of recycled PET materials. It is found in, for example, drinking bottles and cooking oil containers. This element applies to all single-use rigid packaging materials in the consumer goods market.

Finally, **oxo-degradable** plastics contribute to microplastic pollution and are not suited for long-term reuse, recycling at scale or composting. Uses include shrink and stretch film, carrier bags, blister packs, bottles, labels and caps. This element of Golden Design Rule 2 applies to all oxo-degradable plastics as defined by CEN, the European Standards authority, unless use is required by law.

THE SCALE

According to the Ellen MacArthur Foundation, these problematic elements are present in over 10% of plastic packaging.