

GUIDELINE ON

More Eco-Friendly Packaging



in which packaging is systematically checked and, where possible, avoided, reduced or improved with regard to its environmental impacts. The measures focus on efforts to use less packaging material and thus preserve resources. This includes taking into account the eco-friendliness of packaging in all of the company's purchasing decisions without impairing other packaging functions (see chapter II).

In addition, in 2021 REWE Group has adopted a strategy for circular economy in the supply chains of private labels and documented it in the [Guideline on Circular Economy](#). The strategic principles of the circular economy in the area of packaging have thus been supplemented by a holistic approach for products.

Goal and Scope of the Guideline

The scope of this guideline covers the eco-friendliness of sales and service packaging for REWE Group's private labels, which are sold in Germany by REWE, PENNY and toom Baumarkt DIY stores. The present guideline defines a binding framework for REWE Group's actions and the business relationships with its contractual partners. Defined requirements and targets are consistently reviewed, and new measures and targets are agreed as required. In addition, the guideline is updated on the basis of future trends and developments.

Communication

REWE Group is convinced that transparency and the provision of comprehensive information are important components of successful sustainability management and can also contribute to the promotion of a circular economy. REWE Group reports regularly and publicly on progress in implementing the measures and achieving the targets outlined. This is done through press releases, via the REWE Group website or via the Group's sustainability report. In addition, REWE Group informs its customers in order to make them aware of the ecological impacts of packaging. After all, their behaviour – in particular the correct separation and disposal of packaging – also contributes to strengthening the circular economy.

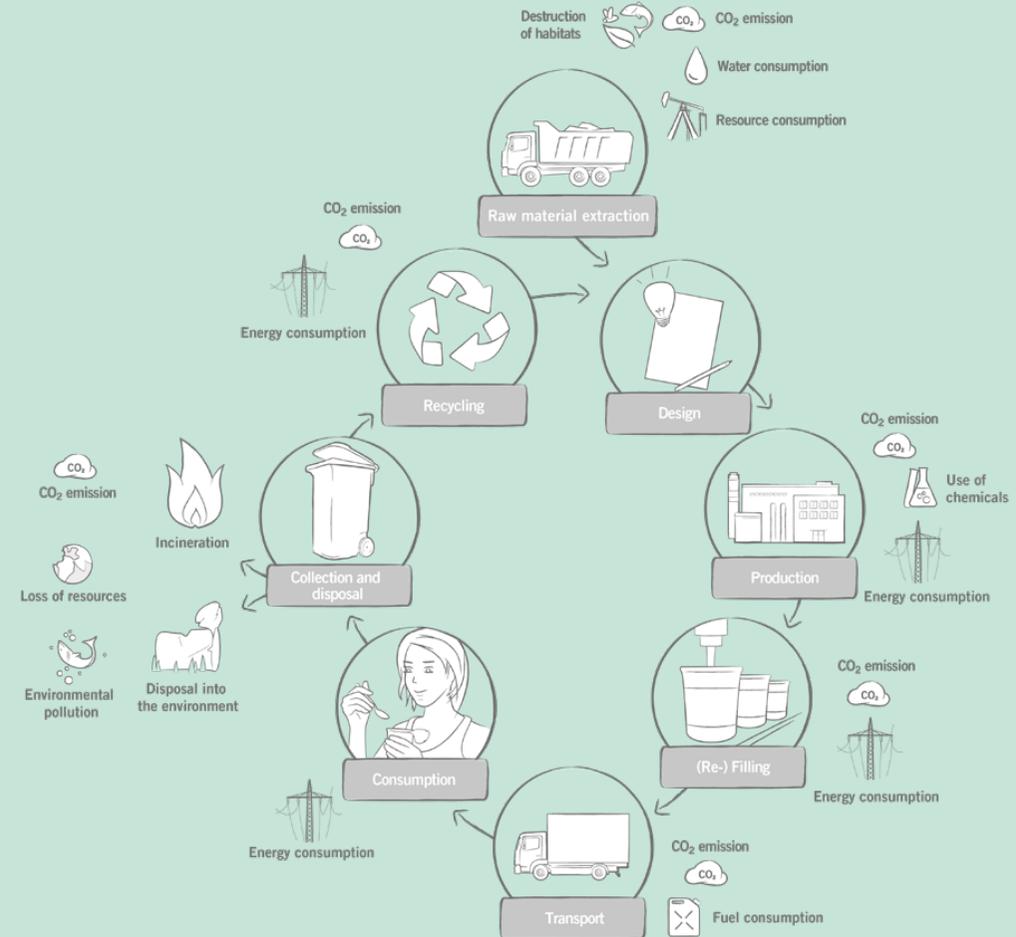


Figure 1: Examples for impacts in the value chain of packaging

II. CHALLENGES

Packaging has lots of different functions such as protecting goods, transporting them as well as providing a surface to apply information for the customers. It is therefore part of everyday life. However, many negative ecological effects can arise along the packaging value chain (see Figure 1). In order to avoid or reduce them, it is indispensable, on the one hand, to use as little packaging as possible and necessary and, on the other hand, to make unavoidable packaging more eco-friendly and recyclable. In doing so, it is necessary to meet the challenges in the design, production and disposal of packaging.

The Design of Packaging

In order to reduce the negative impacts of packaging to a minimum, it is necessary to think about the end from the very beginning in line with the concept of circular economy. The core idea of the circular economy is that the raw materials are used for as long and as often as possible – by reusing, reprocessing or recycling them. In this way, the life cycle of packaging can be extended (European Parliament 2022).

A major challenge in packaging design is the integration of eco-friendliness with various additional requirements, properties and functions (see Figure 2). Depending on which features a packaging should or must ideally have, this may even lead to conflicting goals: Packaging that can be optimally recycled, for example, can no longer fully protect the product. If the packaging is omitted in order to save resources, food may spoil more quickly due to a lack of protection, resulting in food waste. Therefore, product protection and the hygienic aspect are often key requirements that may preclude the omission of packaging. Accordingly, the optimal packaging for the product must be considered on a case-by-case basis. This applies to

disposable and reusable packaging as well as to different materials with their specific properties and functions from plastics and paper to metal, glass or composite materials. Eco-friendly packaging design requires, on the one hand, the use of eco-friendly raw materials and as little of them as possible. On the other hand, packaging must be recyclable and thus be suitable for high-quality recycling. This, however, depends on the used materials. Plastics in particular often impede such recycling.

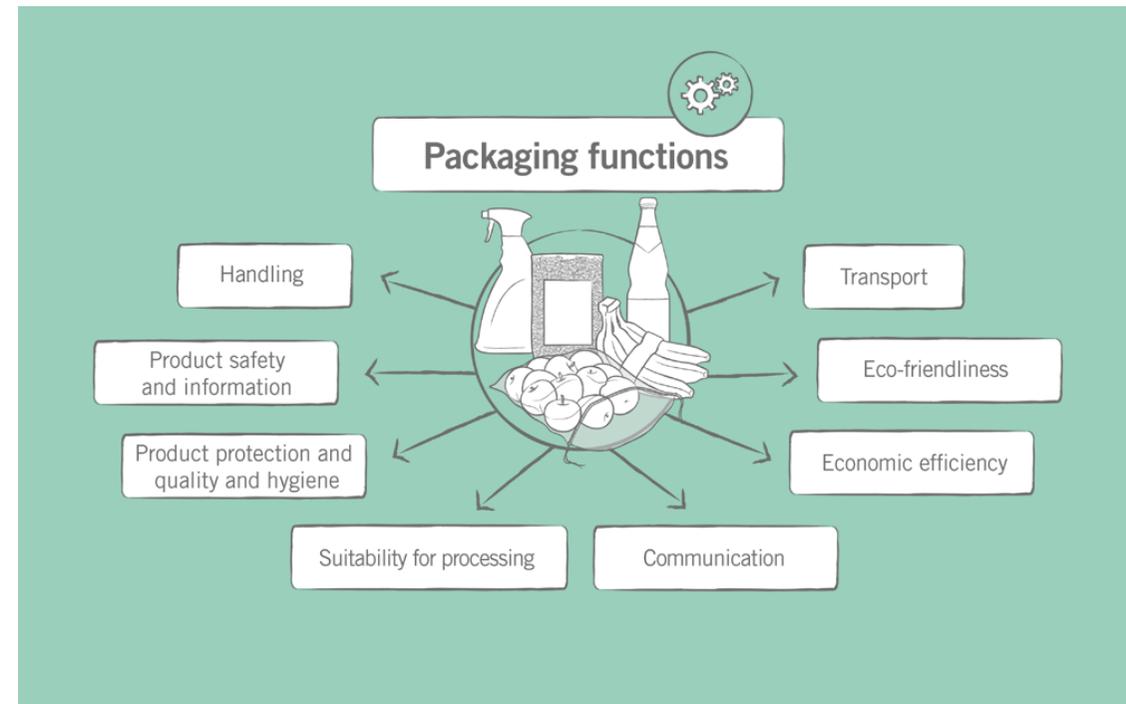


Figure 2: The functions of packaging

The Production of Packaging

Even with an optimised packaging design, the consumption of resources in the production and the resulting consequences for the environment are immense – especially given the usually very short service life. For the extraction of raw materials for the manufacture of packaging materials, for example, natural resources are exploited, energy and water are consumed and emissions are released. Plastics are mainly made from crude oil, and iron ore must be mined to produce tinplate. The deposits of bauxite used for aluminium production are mainly located in rainforests, which is why its extraction often requires deforestation. The chemical process also produces toxic sludge. Wood is needed for the production of paper and cardboard – again trees need to be felled for this purpose. The cultivation and extraction of raw materials destroys the habitat of many animal and plant species and has a considerable impact on biodiversity. For these reasons, it is necessary to use materials produced in an eco-friendly manner and, where possible, secondary raw materials, so-called recyclates (e.g. recycled paper and recycled plastics) instead of primary material. It is also possible to use alternative, more environmentally friendly materials. However, not only the production of the packaging materials is resource-intensive. For the production of the actual packaging, energy and water are consumed, chemicals are used and emissions are released into the atmosphere.

The Disposal of Packaging

On its way to the customer, the packaging is filled, transported and sold before it is finally used and disposed of. A large part of the packaging is disposed of immediately after use – in the worst case, it ends up in the environment, creating a lot of waste: Every year, over 18.78 million tonnes of packaging waste are generated in Germany (Federal Environment Agency 2022). Even though packaging consumption in Germany in 2020 decreased somewhat across all fractions compared to the past two years, it increased slightly among private end users, especially the consumption of plastic packaging. For liquid packaging board and tinplate packaging, the increase was even above average. The reasons for this are, among other things, a growing demand for small units for optimal portioning or the increasing consumption of food and drinks away from home (Federal Environment Agency 2022).

It is therefore even more important to avoid packaging materials and to enable a functioning high-quality recycling as this is the only way to reuse and recycle waste materials. Many packaging materials are already being collected and recycled in Germany. However, valuable raw materials are too often lost, for example, because they were not supplied to the correct disposal system (e.g. plastic packaging ends up in residual waste). In these cases, a high-quality (material) recycling is not possible, instead packaging is utilised as a source of energy through incineration.

III. APPROACH AND OBJECTIVES FOR MORE ECO-FRIENDLY PACKAGING

In their entire value chain – from raw material extraction to disposal – packaging has negative impacts on the environment. With its approach for more eco-friendly packaging, REWE Group focuses on avoiding or reducing these ecological impacts. It is therefore assigned to the environmental field of action within the “Green Products” strategy. In this way, REWE Group also contributes to avoiding the emission of climate-damaging greenhouse gases and thus to achieving its climate targets. REWE Group has documented its climate strategy in its [Guideline on Climate Protection in the Supply Chain](#).

For REWE Group, the circular economy is a key approach to conserving resources and protecting the environment and climate. Since packaging consumes a considerable amount of resources, REWE Group developed a comprehensive approach towards more eco-friendly packaging

and followed the four-stage process of its [Approach for More Sustainable Supply Chains](#): At first, a data analysis was conducted. In the second step, major impacts and promising parameters were identified. Subsequently, the approach was fleshed out by objectives and measures. In the process, REWE Group worked closely with key stakeholders – from purchasing departments and selected NGOs to experts in packaging design. In the fourth step, the effectiveness of this approach will be examined, evaluated and constantly further developed as part of a stakeholder review process.

REWE Group is pursuing its course to more eco-friendly packaging using the following three crucial building blocks (see Figure 3):

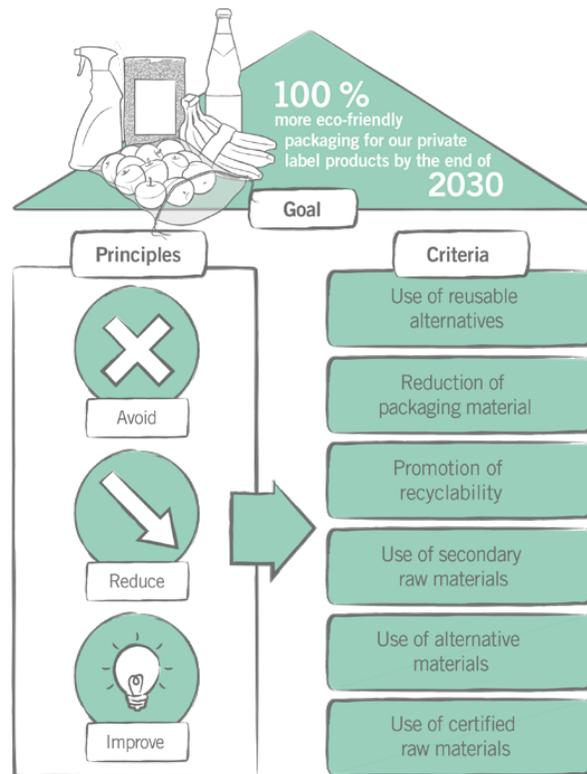


Figure 3: The way to more eco-friendly packaging at REWE Group

1 Goal

REWE Group has set itself a strategic packaging goal. It gives REWE Group's involvement a clear orientation and is subject to a continuous progress review.

Strategic packaging goal

REWE Group is pursuing the goal of using 100 per cent more eco-friendly private label packaging by the end of 2030.¹

3 Principles

“More eco-friendly packaging” is packaging that has the lowest possible impact on the environment. It is therefore necessary to

- avoid,
- reduce or
- improve packaging with regard to its environmental impacts.

These principles are to be applied in the order of priority given here – the ecologically best packaging is the one that can be completely avoided. Due to these principles, unpacked goods and reusable packaging have highest priority at REWE Group.

¹ Based on the reference quantity of private label packaging. This goal applies to REWE GROUP in Germany (REWE, PENNY, toom Baumarkt DIY stores) and since 2019 also to the international brands (BILLA, BILLA PLUS, PENNY and ADEG), which are otherwise outside the scope of this guideline.

6 Criteria

The assessment of the environmental impact of packaging is not always easy. Therefore, the following six criteria are used as parameters to lower the negative environmental impacts of packaging.

-  Use of **reusable alternatives**
-  Reduction of **packaging materials**
-  Promotion of **recyclability**
-  Use of **secondary raw materials**
-  Use of **alternative materials²**
-  Use of **certified raw materials**

By applying these criteria, REWE Group aims to improve packaging in terms of its ecological impact. REWE Group regards life cycle assessments as a helpful instrument for the evaluation of the eco-friendliness of packaging, for example when changing materials.

Each optimisation of packaging or a packaging component in accordance with the criteria basically has a positive environmental impact – and thus contributes to achieving the goal of “100 per cent more eco-friendly packaging”. Packaging should always be optimised or reduced to the greatest possible extent. Packaging is constantly checked and improved on the basis of the current state of research and current developments.

7 Sub-goals

Besides the strategic packaging goal of “100 per cent more eco-friendly packaging”, REWE Group has set itself further sub-goals for its private labels that are also subject to a constant progress review.

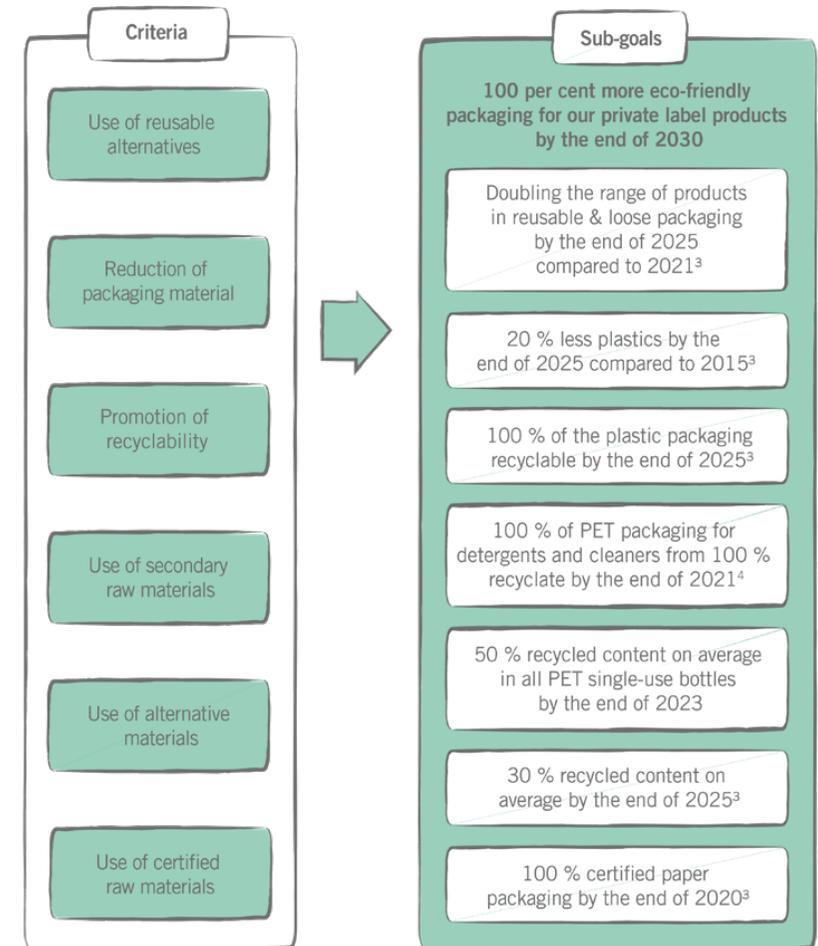


Figure 4 : Sub-goals for more eco-friendly packaging at REWE Group

² If their life cycle assessment results are superior to the previously used material.

³ This goal currently only applies to REWE Germany and PENNY Germany.

⁴ Wherever possible, REWE Group strives for at least 20 per cent Recycled content from recycling bags.

Implementation of the Approach

Through a detailed analysis of all packaging data, REWE Group identified both relevant suppliers and major packaging fractions. Building on this, the company initiated optimisation projects and supplier discussions in all product areas with the aim of avoiding, reducing and improving packaging materials with a view to eco-friendliness.

The approach for more eco-friendly packaging will be systematically integrated in the purchasing processes across all product ranges. Great importance is attached to the transfer of knowledge within the company, which is promoted, among other things, by a permanent working group on the subject of packaging.

For the implementation, REWE Group relies on three tiers that build on one another (see Figure 5): The trading group defines requirements on more eco-friendly packaging, which are outlined in this guideline (cf. chapter IV). For the evaluation of packaging and packaging alternatives, REWE Group has developed instruments that allow the classification of packaging in terms of its eco-friendliness based on the requirements.

In addition, discussions with suppliers form the basis for cooperation with a view to potential improvements in the eco-friendliness of packaging. Moreover, new packaging concepts are developed within the framework of innovation projects, e.g. in cooperation with supply chain partners, involvement in research projects and industry initiatives or the cooperation with start-ups.

The projects may e.g. focus on the use of alternative raw materials or on the prevention of packaging by using innovative technologies.

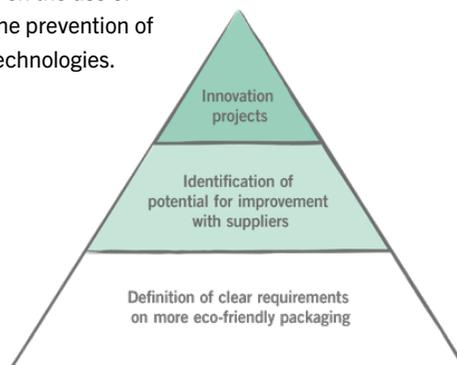


Figure 5: The implementation of the approach for more eco-friendly packaging

Initiatives and Partners

In order to work on innovative approaches and advances for more environmentally friendly packaging along the entire value chain, to drive further development on the market and to be in constant contact with relevant stakeholders, REWE Group is involved in a large number of initiatives and cooperates with partners. These include:

NABU

Naturschutzbund Deutschland has been a partner of REWE Group since 2009 and a strategic partnership exists since 2015. Issues such as biodiversity, climate and marine life protection or resource conservation are continuously advanced. NABU is also an important source of inspiration for the further development of the packaging strategy.

Recyclate Initiative

As part of the Recyclate Initiative, the partnership of members from various industries with regard to effective recycling has been pursuing the goal of developing sustainable material cycles and using recyclable material collected in recycling bags since 2012. As a member of the initiative, REWE Group advocates value chains that are in line with the circular economy.

HolyGrail 2.0 - Digital Watermarks Initiative

The initiative pursues the goal of using digital watermarks on packaging to enable improved sorting behaviour and thus high-quality and high-quantity recycling. As a founding member, REWE Group has been committed to developing improved conditions for the circular economy in the packaging area since July 2020.

Consumer Goods Forum

Under the motto “Better Lives through Better Business”, the global industry network is aiming at establishing better business practices for the benefit of consumers. REWE Group is involved in the Board of Directors and works actively in a working group on the subject of plastics.

More detailed and constantly updated information on the initiatives can be found in the [sustainability report](#) or on the [website](#) of REWE Group.

Orientation for the Consumer

On products with more eco-friendly packaging, REWE Group ensures transparency by using corresponding labelling information. With the labels on more and more products, customers can see at a glance which measures have already been implemented to optimise packaging.



Reduced use of materials

This label marks packaging made with less material, for example by reducing the packaging volume or the thickness of the material.



Use of secondary raw materials

This label marks packaging that has been optimised by using recycled material (at least 25 per cent) instead of primary material.



Use of alternative materials

This label marks packaging that has been improved by the use of alternative materials, such as grass paper.

* Percentages may vary on individual packaging.

IV. REQUIREMENTS AND MEASURES

REWE Group has laid down the basic values that apply to all business relationships with REWE Group's contractual partners in its [Guideline on Sustainable Business Practices](#). This includes respect for human rights, compliance with labour and social standards, environmental protection and respecting animal welfare. The approach for more eco-friendly packaging gives substance to REWE Group's requirements and measures with regard to the protection of the environment and resources.

With the following “dos” and “don'ts”, REWE Group formulates **general** and **material-specific** requirements on more eco-friendly packaging with the principles “**avoid, reduce, improve**”. They describe which factors have fundamentally positive (“dos”) and negative (“don'ts”) effects on the eco-friendliness of packaging. All packaging functions (cf. Chapter II) must be taken into account.



General “dos”



The following aspects have a fundamentally **positive** impact on the eco-friendliness of packaging. Consequently, these must be considered as a matter of principle and independent of the packaging type or material.

Avoid

- ✓ Use of unpackaged goods wherever possible without negative impact on the product's quality
- ✓ Omitting individual packaging components
- ✓ Switch from single-use to reusable systems, preferably within regional loops

Reduce

- ✓ Reduction of packaging thickness and size, also in consideration of the ratio of packaging and product volume
- ✓ Elimination of empty space
- ✓ Use of labels or direct markings on the product to avoid wrappings such as flowpacks or foils

Improve

- ✓ Use of mono-material (e.g. use of plastics of one type of synthetics such as pure PP)
- ✓ Use of secondary raw materials (recyclate), e.g. recycled paper, rPET, rPE, etc. – primarily in recyclable packaging
- ✓ Use of packaging that can be emptied completely and easily

General “don'ts”



The following aspects have a fundamentally **negative** impact on the eco-friendliness of packaging. Consequently, these must be considered as a matter of principle and independent of the packaging type or material.

Avoid

- ✗ Use of unnecessary multi-packs or outer packaging

Reduce

- ✗ Increase of packaging weight, unless
 - *the packaging material is a substitute that makes the packaging more eco-friendly despite higher weight*
 - *the packaging is switched from a single-use to reusable packaging*

Improve

- ✗ Use of composites or composite materials, in particular:
 - *packaging made of different materials that are firmly bonded together, e.g. aluminium paper or plastic composites used as butter wrappers*
 - *coating that makes up more than five per cent of the main material*
- ✗ Use of packaging with components made of different materials which are not necessarily separated by the consumers and cannot be separated in the recycling process (i.e. bonded blister cards)
- ✗ Use of large sleeves and/or labels (more than 50 per cent of the surface) with metallisations or dark prints with carbon black colour pigments covering the entire surface
- ✗ Use of large prints and varnishing
- ✗ Use of coatings which impede recycling
- ✗ Use of problematic adhesives (i.e. such which impede recycling)
- ✗ Use of problematic printing inks (pursuant to the EuPIA Exclusion List⁵)

⁵ European Printing Ink Association (EuPIA) – Verband der deutschen Lack- und Druckfarbenindustrie e.V.: Exclusion Policy for printing inks and related products

Further material-specific “dos”



Material	Criterion	Do
Paper, cardboard (PPK)	Use of material	✔ Use of corrugated cardboard instead of solid cardboard
	Secondary raw materials	✔ Use of recycled paper instead of fresh fibre paper
	Alternative materials	✔ Rating of the ecological advantages compared to conventional packaging material
	Certified raw materials	✔ Use of paper certified in accordance with FSC-Recycled, PEFC-Recycled, FSC 100%, FSC-Mix or PEFC
Plastics	Use of material	✔ Reduction of plastic packaging size (e.g. reduction of the height of stand-up pouches or the size of polybags or flowpacks) ✔ Reduction of foil thickness ✔ Use of banderols instead of flowpacks or trays (for fruit and vegetables)
	Recycling	✔ Use of mono-plastics (PP, PE, PET) ✔ Use of transparent or light coloured plastics ✔ Use of transparent (undyed) as well as green-transparent or blue-transparent PET for bottles ✔ Use of stickers and labels for PP and PE made of the same material as the main material
	Secondary raw materials	✔ Use of recycled plastics (recyclate) instead of primary material (e.g. rPET instead of PET), preferably from recycling bags or a closed-loop system
Glass	Use of material	✔ Use of light glass instead of regular glass
	Recycling	✔ Use of glass in standard colours white, green and brown
	Secondary raw materials	✔ Use of recycled glass
Aluminium	Secondary raw materials	✔ Use of recycled aluminium
Ferrous metals (tinplate)	Secondary raw materials	✔ Use of recycled metal (tinplate)
Composite	Secondary raw materials	✔ Use of recycled materials (e.g. aluminium, paper or plastics)
	Recycling	✔ Use of liquid beverage carton board with standard structure
	Certified raw materials	✔ Use of paper certified in accordance with FSC-Recycled, PEFC Recycled, FSC 100%, FSC-Mix or PEFC in paper composites

Further material-specific “don’ts”



Material	Criterion	Don't
Paper, cardboard (PPK)	Recycling	✘ Use of coatings which make up more than five per cent of the packaging weight
		✘ Use of impregnated papers
Plastics	Recycling	✘ Use of multilayers (compound of different plastics)
		✘ Use of coatings made of aluminium or other metallisations
		✘ Use of carbon black plastics and black as well as very dark plastics
		✘ Use of foamed non-polyolefinic packaging components such as EPS, foamed PET and PUR
		✘ Use of PVC or PVDC
		✘ Use of oxo-degradable plastics and additives
		✘ Use of PETG, in particular PETG labels or sleeves on PET bottles
Composites	Recycling	✘ Direct printing on PET bottles
		✘ Use of water-insoluble adhesives for labels on PET bottles
Composites	Recycling	✘ Use of coatings made of aluminium or other metallisations (except liquid packaging board with standard structure)
Glass	Recycling	✘ Use of recycling-incompatible components such as metal nets, ceramic closures or swing stoppers made from non-magnetic metals

Use of bioplastics

REWE Group has scrutinised the possible use of bioplastics as an alternative packaging material together with various stakeholders. Today, the use of bioplastics does not yet offer any clear environmental advantages and is the subject of controversial debate among politicians and non-governmental organisations. For example, the recycling of conventional plastics is partly impeded by bioplastics. In addition, life cycle assessments today show no clear overall ecological advantages, and there may be competition in land use: cultivation areas that are increasingly used for the production of bioplastics may be lost to food production. Furthermore, there is no clear definition of bioplastics. REWE Group is therefore currently not forcing any conversion to bioplastic packaging or single-use products made of bioplastics.

Under certain circumstances, however, the use of bioplastics as a renewable alternative to conventional plastics may be recommended. From REWE Group's point of view, bioplastics offer particular advantages if

- their life cycle assessment results are superior or at least on par with conventional plastics;
- home composting or recycling is possible;
- no competition occurs between production and food cultivation.

The use of genetically modified plants should also be avoided. REWE Group advocates the use of certificates (e.g. ISCC, RSB, FSC or PEFC). If the use of bioplastics results in a longer shelf life for food, their use will be assessed positively if the above mentioned requirements are met. REWE Group participates in the discourse and, together with scientists and experts, is constantly driving forward further development in order to identify future potentials.

EXCURSUS: Involvement in avoidance of plastics

In addition to its involvement in eco-friendly packaging, REWE Group implements a number of other measures to avoid plastic, for example by phasing out classic single-use plastic products or avoiding microplastics in cosmetic products.

An important first step in avoiding plastics was REWE's and PENNY's discontinuation of single-use plastic bags as one of the first companies in the food retail sector long before their legal ban in Germany. Since then, numerous other measures have been implemented, including the discontinuation of single-use plastic drinking straws and single-use plastic tableware. Nevertheless, remaining stocks of disposable plates, cups, bowls and cutlery made of plastic are sold instead of being destroyed in order to conserve resources.

REWE Group is also committed to reducing plastic in its range of drugstore items. For example, since the end of 2019, private label cotton swabs have only been available with paper shafts. In addition, REWE Group has accomplished its goal to abandon the use of microplastics in the formulation of all private label cosmetic products of REWE and PENNY in Germany by the end of 2020. More information can be found in chapter [Water](#) of REWE Group's current sustainability report.

REWE Group's multifaceted involvement in more eco-friendly packaging is reflected in numerous activities, from unpackaged bananas and natural branding for sweet potatoes to the use of recyclates. More detailed information on the activities and current examples of REWE Group's measures on the way to 100 per cent more eco-friendly packaging are available at:

<https://www.rewe-group.com/en/sustainability/commitments-and-projects/avoiding-reducing-and-improving-packaging/>

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The dialogue on the topic of packaging is of great importance to us. Please contact us with suggestions and questions at: nachhaltigkeit@rewe-group.com

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