

PLASTICS FOR THE CIRCULAR ECONOMY AND CLIMATE PROTECTION



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The German plastics industry is committed to the circular economy and climate protection. The transition to a circular economy means major changes in the way we manufacture, use and recycle plastic products in the future. At the same time, it offers great opportunities for sustainable growth in our industry. In order for this transition to succeed, we need a clear commitment at German and European levels towards openness to technology and innovation, as well as a legal environment where investments can take place swiftly and securely. This is a change we need to shape right now.

We are convinced that this is the only way to secure livelihoods and prosperity in our society in the long term. Whether this concerns energy-efficient construction, e-mobility, renewable energies, or the protection of food – recycled plastics provide materials our society needs, both today and in the future. They are essential for meeting major challenges such as the energy transition, digitalisation and modern medical technology. Plastic products make an important contribution to carbon reduction through lightweight construction in mobility, by preserving food through packaging, by insulating buildings, and through the use of recyclates.

We refer to the current efforts of the European Commission (e.g. Clean Industrial Deal) to strengthen competitiveness and offer a contribution from the plastics industry to achieve this. It requires a suitable political framework that removes existing barriers to a more circular economy.

In order to transform the plastics industry from a linear to circular economy, the following conditions must be met:

1 EU-wide recycling-friendly product design – a basic requirement

The basic prerequisite for the European circular economy is circular product design. Only products that have already been designed with circularity in mind can be part of the circular economy in the future. Product design requirements must be standardised across Europe. This also includes avoiding the unnecessary use of materials (waste prevention), enabling reuse as well as repairable and recyclable products. The EU requires all plastic packaging within the European market to be recyclable from 2030. In addition to targets in terms of use of recyclates, reuse targets are also in the pipeline. From 2035, all packaging must be collected effectively and efficiently. The German packaging industry has already made considerable investments in product design and is aiming for 90 percent of household packaging to be recyclable or reusable by 2025. Significant innovations are also currently being developed within the field of mobility, electrical appliances and construction in order to make used plastics accessible for high-quality recycling.

2 Improving separate collection and sorting – tapping into the potential of digitalisation

In addition to product design, the separate collection of plastic waste is the most important prerequisite for economical and high-quality recycling. We are therefore committed to further improving the separate collection of household and commercial plastic waste in Germany and Europe, enforcing it consistently. The comparability of the specifications of output fractions from sorting has an efficiency-enhancing effect.

The mechanical sorting of plastic waste according to different plastic fractions is also an important prerequisite for high-quality, mono-fraction recyclates. On the one hand, existing technical sorting solutions need to be further developed, and research and development promoted, while on the other, digital possibilities, such as the digital product pass, should be exploited to a greater extent. In addition, the potential of AI should be utilised for applications in new and existing plants.

3 Further expansion of the domestic market for plastics recycling

Exports of plastic waste to non-EU and non-OECD have already been significantly restricted. At the same time, intra-European shipments should be organised more efficiently, in particular without excessive bureaucratic requirements, so that waste streams within Europe can be expanded for economic recycling, in order to guarantee the sale of recyclates within the internal market. The EU home market must also be protected from falsely declared imports. In addition, measures must be taken to ensure that imported recyclates have been produced in accordance with European sustainability standards and supply-chain due diligence.

4 EU-wide end to the disposal of used plastics

The disposal of used plastics will be terminated in all EU Member States in accordance with the objectives of the EU Landfill Directive. However, this directive must be enforced consistently throughout the EU. Currently, around 7 million tonnes of plastics from municipal waste are landfilled in Europe every year. This material is necessary however to secure the flow of raw materials for plastic products in the future.

5 Complementary recycling promotes the circular economy

The circular economy utilises a variety of different recycling processes that complement each other. In addition to the returnable cycle and established mechanical recycling, solvent-based and chemical recycling also play an important role in the circular economy.

Mechanical recycling processes are based on the preparation and remelting of plastic waste into new plastic granulate. Solvent-based processes dissolve the plastic. The polymer structure is retained in both processes. Chemical recycling processes break down plastic waste into its basic chemical building blocks, which are further processed as secondary raw materials, such as synthetic oil or gas. All processes are preceded by a preparation phase. Chemical recycling processes and already established recycling options complement each other, with the former developing solutions primarily for specific problems of individual material flows, for example for mixed plastic waste, composite materials and heavily contaminated plastics.

The variety of new and existing recycling processes will also create the conditions for bringing additional recyclates onto the market in virgin material quality that can also be used in sensitive applications such as the food or medical technology sectors. All plastic waste that can be mechanically recycled in a technologically, ecologically and economically sensible manner must definitely be utilised accordingly in the future. Plastic waste that cannot be recycled in this way should be kept in the cycle using chemical recycling processes that are open to all technologies. This will reduce both the volume of recyclable plastic waste, which is still utilised for energy recovery, and greenhouse gas emissions.

Cross-technology investments in recycling are important drivers of efficient recycling management. This requires a framework that promotes innovation with appropriate regulation. In the area of packaging, the existing recycling quota for plastic packaging in accordance with Section 16

(2) of the German Packaging Act should be further developed to such a degree that mechanical recycling in particular, but also solvent-based and chemical recycling are incentivised.

6 Possible ways to use more recyclates in plastic products

The use of recyclates in the manufacture of new plastic products closes the material cycle. Currently, the average use of recyclates in plastic products in Germany is 15 percent. In order to increase this share, it is important that recyclates have equal or better requirements than virgin plastics. There are various measures that can be taken to increase the proportion of recycle in plastic products, either individually or in combination, such as:

a) Product-related recycle utilisation rate

Principle: A statutory minimum quota of recyclates applies to certain products. Quotas for disposable PET beverage bottles will apply as early as 2025, and quotas for all plastic packaging have been set from 2030. The minimum quotas give recycle suppliers security of demand, thereby contributing to investment security in the waste disposal and recycling industry (pull effect). Quotas are also being prepared in the ELV-R (end of life vehicle regulation, WEEE (waste electrical and electronic equipment) and, in future, the Construction Materials Ordinance.

b) Economic incentives for products containing circular raw materials

Principle: A financial promotion of products with recycled content or content of other non-fossil raw materials such as biomass and CO₂ can be implemented in various ways. In the packaging sector, licence fees can be used for this purpose. Modulating licence fees would make non-recyclable products more expensive and create a market incentive for the use of recyclates. Corresponding approaches are already provided for in the EU Packaging Regulation.

We advocate a private-sector model for recycling-friendly packaging design and increased use of recycled materials. This should be implemented with a reform of Section 21 of the Packaging Act. This will promote a circular economy across all materials.

European state aid law must be reviewed with a view to the options of optimising incentives for the use of secondary raw materials and circular products.

Further measures, such as polymer-specific substitution quotas, are being discussed in politics.

7 Necessary framework conditions for the use of recycle

a) Product-related usage quotas must not lead to product bans

The introduction of product-related recycle usage quotas can lead to supply bottlenecks. As long as the recyclates required by the market are not yet available in sufficient quantity and quality, there is a risk of unjustified marketing bans for the regulated plastic products. The continuation of production and marketing must be ensured (safety net) for those companies that can prove that they have taken all appropriate measures to procure recyclates.

b) Expediting standardisation for the quality development of plastic recyclates

The initiated European standardisation (standardisation mandate M/584) on plastic recyclates is a welcome measure and contributes to a market supply of plastic recyclates of consistent quality.

c) Removing legal barriers to recycle use

There are contradictions at present regarding the objectives of various control systems. On the one hand, the use of recyclates is to be significantly increased, while on the other, regulations and laws or public tenders prevent or slow down the use of recyclates. Examples of this are the

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restrictions on the use of recyclates in food contact materials, waste bins and wastewater pipes. EFSA and similar organisations need to work much faster and obtain approvals so that material usage specifications are not measured exclusively against primary qualities. It must also be ensured that the regulation of substance law supports the circular economy and does not create any fundamental obstacles to recycling options.

d) EU-wide validity

In order to maintain a uniform EU internal market, standardised requirements for the use of recyclates must apply throughout the EU, and a stronger focus must be placed on their consistent enforcement. The end of waste should also be harmonised at European and national levels.

8 Significantly accelerating the transformation to a circular economy

a) Comprehensive modernisation of planning laws and expansion of renewable energies

In order to achieve the ambitious climate and circular economy policy goals within the set timeframe, approval procedures, particularly for circular economy projects, must be reviewed more quickly, approved with legal certainty, and the projects must be subsidised with tax incentives. In addition, renewable energies for the transformation must be significantly and rapidly expanded. The energy requirements of the plastics industry, including recycling, must be met reliably and affordably with renewable energies. In order to efficiently implement the investments required for the transformation, authorisation procedures must be accelerated. The projects need to be legally categorised as being in the overriding public interest.

b) Setting financial incentives

The transition to a circular economy for plastics requires companies to make significant investments in the recycling-friendly design of and the use of recycled materi-

als in plastic products, new materials and machinery. For example, many distributors of packaging have set themselves ambitious circular targets – not least through voluntary commitment – to achieve fully recyclable packaging made from recycled plastics.

c) Strengthening European market supervision for products from third countries

European market supervision bodies have the task of ensuring the safety of workers and consumers as well as the competitiveness of European companies. It must therefore take measures if products are not legally compliant, whether within the EU or imported from third countries. In view of the increasing density of regulation in Europe, effective market supervision of imports from third countries is merely inadequate. This in turn leads to competition distortion because imported products, such as machinery, plastic products and plastic recyclates, fulfil lower standards than those of local suppliers in the single market. As a result, European products are more expensive than comparable imported products. European market supervision must therefore become more tightly enmeshed and be taken into consideration with every new regulation.

9 Taking measures to protect the environment from plastic waste

a) Protecting the world's oceans

The world's oceans are a sensitive ecosystem, and simultaneously one of the most important suppliers of our natural resources, which thereby renders them absolutely worth protecting. Plastic waste must therefore not be allowed to enter the sea. The plastics industry is committed to this objective, and fundamentally supports the global agreement currently being negotiated to end the discharge of plastic waste into the environment. The causes of marine littering are uncontrolled landfill sites and a lack of disposal systems on a global scale. The problem is not the use of plastic products per se, but their improper handling after their service life. Consequently, suitable disposal in-

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frastructures must be set up and used consistently to prevent plastic waste from entering the environment and to recycle it instead. This not only includes waste collection facilities, but also the waste management industry. The ban on landfilling, the export of waste to third countries without adequate collection and recycling infrastructures, and the introduction and further development of deposit systems play an important role in this field.

b) Avoiding microplastics as a matter of urgency

The deliberate addition of microplastics must be stopped. A corresponding European legal act already regulates the gradual ban on intentionally added microplastics by 2035. Unavoidable inputs of microplastics such as tyre and textile abrasion must be reduced to a minimum through technical innovations. This must be distinguished from unintentional inputs of microplastics, for example through the loss of pellets and similar substances. This is where industry measures such as Operation Clean Sweep® or the practice-based Responsible Care „Zero Pellet Loss“ project by raw material manufacturers and „Zero Granulate Loss“ by processors come into play.

The plastics and recycling industries join forces

The plastics industry associations, GKV German Association of Plastics Converters and its supporting associations, Plastics Europe Germany and VDMA Fachverband Kunststoff- und Gummimaschinen (German association for plastics and rubber machinery) as well as the waste management and recycling industry organisations BDE and bvse jointly position themselves for a more circular economy and climate protection. They represent the key players in closing the plastics cycle.

With their joint position in favour of the circular economy and climate protection, the associations of plastics manufacturers, the plastics processing industry and plastics machinery construction, the waste disposal industry and plastics recycling are strengthening their cooperation in order to pool their expertise. Together, the associations want to promote an open exchange and dialogue on innovations and sustainable developments in the plastics industry towards a circular economy. With an annual turnover of over 100 billion euros, a high export share and its innovative strength, the plastics industry is one of the world leaders with its increasingly sustainable orientation, and not just in high-tech applications.



The GKV is the umbrella organisation of the German plastics processing industry with an annual turnover of around 70 billion euros. As an umbrella organisation, it bundles the common interests of its member associations AVK (reinforced plastics), FSK (foam plastics and polyurethanes), IK (plastic packaging), pro-K (long-lasting plastic products and reuse systems).



The trade association within the VDMA represents the interests of more than 200 European manufacturers of plastics and rubber machinery.



PlasticsEurope Deutschland e.V. is the association of plastics manufacturers in Germany, with offices in Frankfurt and Berlin. It is closely related to the German Chemical Industry Association (VCI) and is part of the European network Plastics Europe, with representations in Brussels and several European economic centres and capitals.



The BDE Bundesverband der Deutschen Entsorgungs-, Wasser und Kreislaufwirtschaft is Europe's largest association of private waste management companies.



The bvse-Bundesverband Sekundärrohstoffe und Entsorgung e.V. represents more than 1100 medium-sized companies in the secondary raw materials, recycling and disposal industry and, at the European level, is part of the European Recycling Industries' Confederation (EuRIC).



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