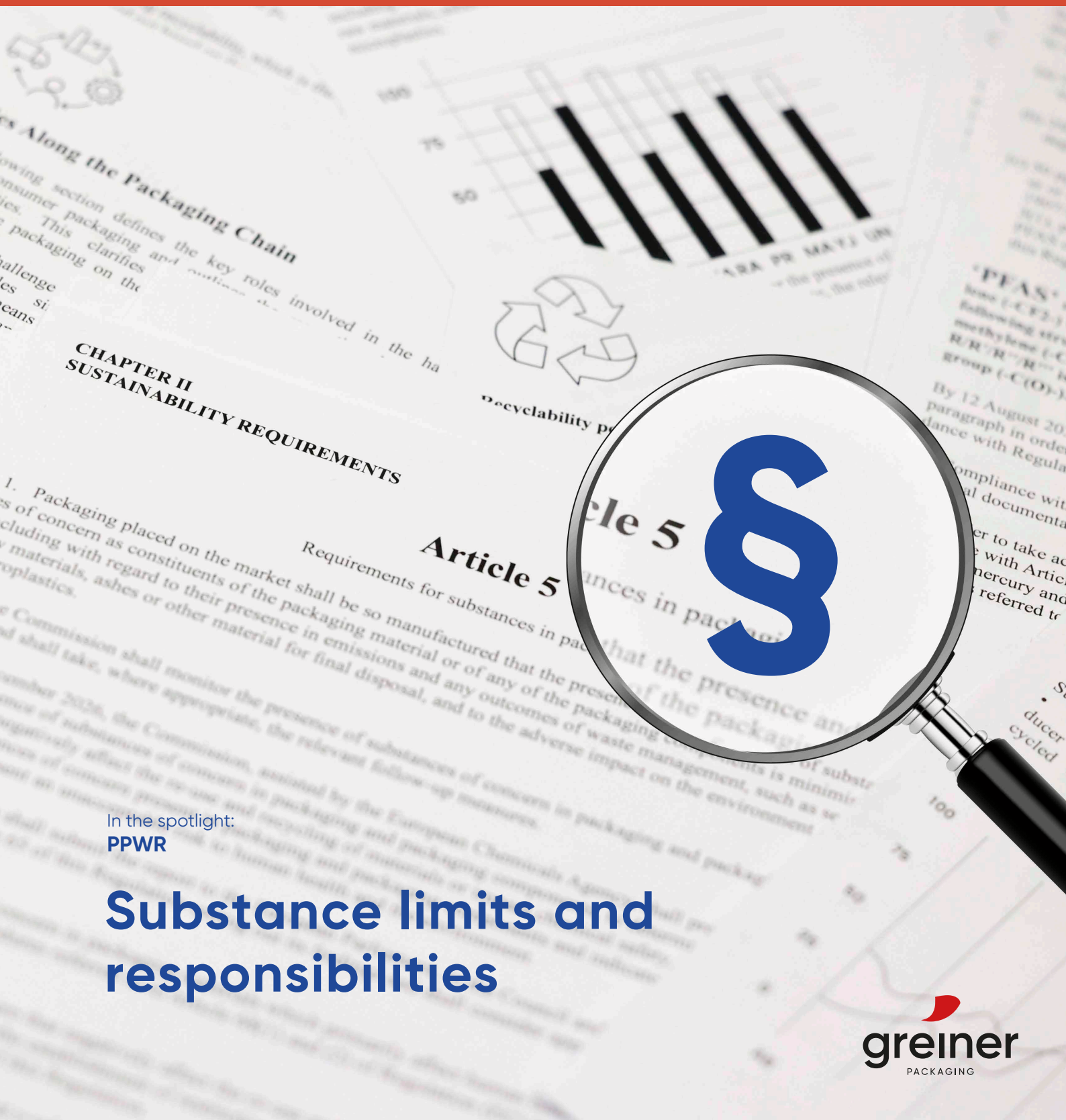


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The magazine for professionals



**CHAPTER II**  
**SUSTAINABILITY REQUIREMENTS**

**Article 5**



In the spotlight:  
**PPWR**

## Substance limits and responsibilities

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## Editorial UPP



**Harald Steiner,**  
Vice President Global  
Technology & Excellence

Dear Reader,

Responsibility in the packaging world begins with knowledge and action. As of August 12, Article 5 will be one of the articles of the Packaging and Packaging Waste Regulation entering into effect. It governs the use of certain substances of concern in packaging in order to protect the environment, recycling, and consumers. In our spotlight article, we provide guidance to help you understand, classify, and implement the new requirements in practice. At the same time, we address the most important stakeholders within the framework of the PPWR to clarify the responsibilities involved.

This issue's market focus is on Health. Packaging must protect sensitive ingredients, be user-friendly, and meet the highest standards of quality, safety, and sustainability. Greiner Packaging supports manufacturers with practical solutions, proven standard products, and tailored developments that are functional and compliant with regulations.

We also set new standards in sustainability: the self-separating K3® r100 cup is the first cardboard-plastic combination in Europe to receive a RecyClass family certificate. This means that the majority of the portfolio is now officially certified as recyclable, providing guidance for the traceability that will be mandatory from 2030 onward.

Our logistics-optimized CUBO is now available as a sample with IML decoration following the concept presentation: space-saving, resource-efficient, and a real eye-catcher.

Another example of successful collaboration is shown by SampApp. After a year of cooperation, we are taking stock of the progress achieved. Customer success stories about Van Beekum spice mills, Ennstal drinking cups, Henkel toilet fresheners, or the K3® in the USA demonstrate what is possible when innovation and partnership come together.

With this issue, we offer insights into how legislation, sustainability, and market requirements are brought together in concrete solutions. In the end, it's not just about packaging but about shaping responsibility together.

We hope you enjoy reading the new unique packpaper.

**Yours,**  
**Harald Steiner**

## Greiner Packaging wins twice at the WorldStar 2026 Awards

**Greiner Packaging has once again impressed on the international stage: at the WorldStar 2026 Awards, two packaging solutions were honored: the Click In sealing lid and the square CUBO cup.**

The Click In is a reclosable lid with an intuitive click mechanism. It keeps products securely sealed against leaks and gives consumers immediate feedback that the lid is properly closed. Combined with matching containers, it creates an elegant mono-material solution that eliminates the need for an additional component such as an aluminum foil seal, significantly improving recyclability.

The square CUBO cup optimizes logistics and retail. Thanks to its optimized shape, cups can be stacked more densely, increasing pallet density and reducing truck journeys as well as CO<sub>2</sub>e emissions. Retailers benefit from more efficient storage and improved shelf organization.

*"These solutions demonstrate the innovative spirit and commitment of our team," says CEO Beatrix Praeceptor. "We are driving the industry forward on the path toward greater circularity and creating packaging that benefits both customers and the environment."*



The WorldStar Awards are considered one of the most prestigious honors in the packaging industry, celebrating innovative, sustainable solutions. With this double success, Greiner Packaging strengthens its position as a leading provider of future-oriented and sustainable packaging solutions. These two product innovations had already been recognized with the Green Packaging Star Award in September 2025.

## K3<sup>®</sup> cups with r-PS in Switzerland

Starting in 2026, Greiner Packaging will produce K3<sup>®</sup> multipack cups containing a share of mechanically recycled polystyrene (r-PS) for the Swiss market for the first time. A portion of each cup will be made from recycled material, reducing the need for virgin polystyrene and lowering the CO<sub>2</sub>e footprint by around 10 percent compared with previous K3<sup>®</sup> multipack cups.

The launch is being carried out in partnership with Swiss dairy processors. Greiner provides the technological basis for producing an ABA film using a multi-layer extrusion system, while the partners contribute their product expertise. The project is supported by the experienced team from the consulting company realcycle, an expert in sustainable circular economy solutions. The result sends a strong message: sustainability only works together.

At the heart of the innovation is the ABA structure of the cup. The wall consists of three layers: the outer and inner layers of virgin material ensure product safety, while the middle layer consists of recycled PS. This allows a significant share of recycled material to be used without compromising quality

or food safety. For consumers, this means more sustainable consumption without compromise. The K3<sup>®</sup> multipack cup is also wrapped in a cardboard sleeve, which reduces plastic use. The cup and sleeve, typically made from recycled cardboard, can be disposed of and recycled separately, further improving the overall environmental footprint.

This creates a pioneering Swiss solution that combines technological innovation, targeted use of recyclates, and collaborative partnership and serves as a flagship project for more sustainable packaging.



## **In the spotlight:** PPWR

### **New EU packaging rules:** Substance limits and responsibilities along the supply chain

The PPWR, Packaging and Packaging Waste Regulation, is the new EU regulation aimed at making packaging in the European Union more environmentally friendly and sustainable, reducing packaging waste, and supporting the development of a functioning circular economy. It establishes a common legal framework for requirements regarding packaging and packaging waste across all EU member states.



**Article 5** of this regulation holds a central position by defining specific requirements for the chemical composition of packaging. It sets out which substance groups and limits are relevant and clarifies who is responsible for ensuring compliance with these requirements.

Which questions does Article 5 raise? What impact do these requirements have on companies? And what role do market players in the packaging market play? **Let us now take a closer look at Article 5 and the responsibilities associated with it.**



# Article 5 of the PPWR: Restrictions on certain substances of concern



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Starting in August 2026, new EU rules will come into effect. They specify which substances may be present in packaging, particularly when it comes into contact with food. These requirements are part of Article 5 of the new EU Packaging Regulation PPWR. The goal is clear: **greater safety for consumers and the environment, and better conditions for clean recycling. Two substance groups are at the center of attention: heavy metals and PFAS.**

## Established rules remain: heavy metals

Regulation of heavy metals such as lead, cadmium, mercury, or chromium VI has existed for many years. The EU sets a common limit for these substances, which remains unchanged under the PPWR.

This means the industry will see very few changes. Testing methods are established, laboratories know the requirements, and suppliers are prepared.

In short: this part of the new regulation is predictable and largely unsurprising.



**For these substances, a total limit of max. 100 mg/kg continues to apply.** Even the EU Packaging Directive from 1994 included the same total limit, and the associated testing methods are considered established and fully applicable.

## New and challenging: PFAS ("Forever Chemicals")

PFAS (per- and polyfluoroalkyl substances) are a different story. This group of substances has been widely used in the past because of their water-, grease-, and dirt-repellent properties. These properties are practical but problematic. PFAS degrade very slowly, can accumulate in the environment, and are partly difficult to detect.

The PPWR therefore introduces binding limits for PFAS in food-contact packaging for the first time. Companies must ensure that their packaging complies with these requirements starting in August 2026.



## The PPWR (EU 2025/40) establishes binding PFAS limits starting August 12, 2026 (Article 5, Paragraph 5).

Packaging intended for food contact may only be placed on the market if it complies with the following limits:

- » 25 ppb (parts per billion) for individual PFAS compounds
- » 250 ppb for the sum of all PFAS compounds
- » 50 ppm (parts per million) for total PFAS if the total fluorine content exceeds 50 mg/kg

These values are not merely recommendations, but are legally anchored in Article 5 of the PPWR and are therefore mandatory for manufacturers of food-contact packaging under the PPWR.

This poses significant challenges for many businesses because:

- » PFAS includes several thousand individual substances
- » Analytics are complex
- » Laboratory results can vary
- » Supply chains must be fully scrutinized

Handling PFAS is becoming an important future topic for the entire industry.

## EU Guidance to provide orientation

Because PFAS are difficult to detect, the EU has issued a guidance document describing how testing could be carried out in practice. This guidance was published at the end of March 2026 and provides pragmatic orientation until harmonized testing methods are available across Europe. It is, however, not legally binding.

The model suggests first measuring the total fluorine content of a packaging item. If it is below a certain threshold, no further testing is required. If it exceeds that threshold, additional investigations follow step by step.



It is crucial to note that this approach has no legal effect. From a technical perspective, it does not provide absolute certainty, because a total fluorine content below 50 ppm does not rule out that individual PFAS compounds might still exceed the specific limit of 25 ppb. Thus, this approach can help to prioritize testing efficiently, since not all thousands of PFAS compounds are reliably detectable individually at present. However, it does not replace a complete assessment of all relevant substance limits.

It is important to note, however, that the guidance facilitates practical implementation but does not replace legal assessment. Only the limits specified in the PPWR are legally binding.

Regardless of this technical guidance, the question of testing responsibility arises. Article 5 of the PPWR sets limits but does not define mandatory test steps or responsibilities within the supply chain. There is no formal testing obligation. Responsibility for compliance with substance limits remains with the respective producer as defined by the PPWR, regardless of whether testing is carried out.

### What does this mean for manufacturers?

Companies will need to:

- » Collect more detailed data on their materials
- » Obtain information from the entire supply chain
- » Provide evidence for PFAS limits
- » Review processes, materials, and suppliers

Failure to comply with the limits may result in sales bans, product recalls, or fines.

### How Greiner Packaging prepares

Greiner Packaging is already working intensively to ensure that these new requirements are implemented safely.

This includes:

- » Regular inquiries to all upstream suppliers
- » Building a data structure that provides transparent and traceable information
- » Collaboration with external experts and laboratories
- » Internal training for a common understanding
- » Strict alignment with EU requirements and recommendations

Our goal: safety, transparency, and reliability for our customers.

### Outlook

By August 2026, much will continue to evolve: testing methods, legal interpretations, and supply chain requirements will become increasingly precise. The direction, however, is clear:

- » Fewer harmful substances in packaging
- » Stronger control
- » Greater transparency

Greiner Packaging actively shapes this change and supports customers in implementing the new requirements reliably and predictably.

Article 5 places responsibility for compliance with substance limits on the manufacturer. But what other obligations does this entail? Which other economic operators are defined in the regulation, what tasks do they perform, and how do they collaborate? Let us take a closer look.



# Allocation of roles under the PPWR: Who bears which responsibility?

**Anyone working with packaging quickly realizes that clear responsibilities along the value chain are increasingly important. The Packaging and Packaging Waste Regulation not only introduces new sustainability requirements for packaging but also establishes for the first time a uniform EU-wide definition of which economic operators carry which obligations throughout the packaging lifecycle.**

At the core is a simple yet crucial idea: to verify whether packaging complies with PPWR requirements, companies must know what role they play and which obligations come with it.

This allocation of roles is not merely a classification scheme; it is the foundation for clearly assigning duties, requirements, and responsibilities. Only those who know their role can ensure that packaging not only meets legal requirements but also generates the necessary compliance documentation that may be requested by market surveillance authorities.

**In short:** the PPWR role allocation precisely defines who assumes responsibility in the system and what requirements are associated. This provides a practical starting point for companies preparing for upcoming obligations.

## Roles in the packaging market

The following defines the key roles in handling sales packaging and highlights the respective duties and responsibilities. This makes it clear which requirements companies must meet to place packaging on the market in compliance with the law.

A particular challenge is that companies often simultaneously occupy multiple roles within the packaging supply chain. This means they must fulfill the obligations of each role they hold and clearly document and organize responsibilities to reliably comply with PPWR requirements.



## 1. Supplier Article 3, Paragraph 1, No. 16

### Duties Regarding Material and Information

Supplies packaging or packaging materials to a manufacturer. Under the PPWR, a supplier does not include those delivering packaging or materials to other customers, such as distributors, or recipients outside the EU.

Supplier obligations include, among others:

- » Providing all information and documentation the manufacturer needs for conformity assessment (including data on materials, recycled content, design requirements, and chemical specifications)
- » Supplying technical information in paper or electronic form
- » Ensuring that delivered materials comply with Articles 5-12 (recycled content, design for recycling, material labeling, etc.)
- » Traceability of delivered material batches

Suppliers are crucial for transparency and traceability along the chain. Without them, manufacturers cannot fulfill their obligations.

## 2. Manufacturer

### Article 3, Paragraph 1, No. 13



#### Duties Regarding Assembly

Performs the final processing steps on packaging supplied by the packaging supplier and fills it with their product to place the packaging or packaged product on the EU market.

Manufacturer obligations include, among others:

- » Compliance with all requirements from Articles 5-12 (material requirements, recycled content, recyclability, labeling)
- » Performing or commissioning conformity assessment (Article 38)
- » Creating technical documentation (Annex VII)
- » Ensuring unambiguous identification (type, batch, or serial number)
- » Labeling the packaging or providing information via a data carrier (QR code, etc.)
- » Preparing and maintaining the EU declaration of conformity

Manufacturers act as the interface between supplier information and producer responsibility and play a key role in ensuring packaging is compliant. Exceptions apply for contract manufacturing and micro-enterprises.

There can be only one manufacturer per EU member state. Manufacturer obligations may be transferred to an importer or distributor/retailer.



## 3. Producer

### Article 3, Paragraph 1, No. 15

#### Duties Regarding Placing on the Market

Any manufacturer, importer, or distributor who places packaged products on the market for the first time in the same member state or directly to end consumers in another member state is considered a producer. The producer is responsible for packaging in the EU member state where it becomes waste and bears the obligation of extended producer responsibility for packaging waste. Therefore, there is one producer per EU member state.

Producer obligations include, among others:

- » Registration in the producer register
- » Payment of EPR fees

## Case Study: Role Allocation Using K3® r100

To illustrate how PPWR role allocation works in practice, let's look at a concrete product. The innovative, self-separating K3® r100 cup from Greiner Packaging demonstrates how various economic operators interact and what obligations each bears.

The following shows which actor in the packaging chain assumes which role when yogurt is marketed in a K3® r100 cup.

### Greiner Packaging:

For the K3® r100, multiple companies act as suppliers. Greiner Packaging (assumed for this example: a Czech site) supplies the empty cup including the cardboard sleeve (packaging component), while other suppliers produce the lid.

### Customer of Greiner Packaging (Manufacturer):

In our example, a company in Germany fills the yogurt into the K3® r100 cup and seals it with the lid insert. Only through this step does the final, ready-to-use packaging emerge. In practice, the manufacturer role is primarily assumed by companies producing food products. Exceptions exist for micro-enterprises or contract manufacturing.

### Producer of the Packaging:

Who qualifies as a producer depends on where the packaging eventually becomes waste:

- » **Germany:** If the yogurt cup is placed on the German retail market and is therefore consumed and disposed of there, the manufacturer (the customer of Greiner Packaging) is also the producer.
- » **Export to another EU member state:** If the cup is supplied to a retailer in another EU member state, e.g., Austria, that retailer is considered the producer.
- » **Direct sales to end consumers in another EU member state, e.g., Belgium:** If direct sales occur in other EU countries without intermediaries, e.g., via the manufacturer's online shop, the producer role remains with the manufacturer.

This differentiated approach is necessary because the producer role is always tied to the location where the waste arises.

## Conclusion

Article 5 of the PPWR sets the framework for safe and controlled packaging and specifies which substance requirements companies must observe. The regulation also makes it clear that clear roles and responsibilities along the supply chain are crucial for reliable implementation. Suppliers, manufacturers, producers, distributors, and importers must know and fulfill their obligations.

A clear understanding of role allocation allows risks to be targeted, processes to be made transparent, and ensures that packaging is placed on the market in compliance with the law. Those who understand the tasks of each actor and organize collaboration effectively create transparency, legal certainty, and a solid foundation for PPWR compliance.

# Health Packaging: Packaging for health and well-being



Whether it's pharmaceuticals, dietary supplements, or functional foods, products in the health sector carry a special responsibility. They stand for trust, efficacy, and safety, often accompanying people in sensitive life situations or on the path to a healthy lifestyle. Packaging plays a key role here: it not only protects highly complex ingredients but also provides guidance, credibility, and a sense of quality. Greiner Packaging has been developing high-quality solutions in health packaging for many years. From this extensive expertise, we take a closer look at this exciting market.

## Health products: trends and requirements

The health products market is undergoing a phase of intense transformation. Demographic shifts are creating an older society, while awareness of health and prevention is rising among younger generations. Physical and mental fitness are in vogue, and an active lifestyle is increasingly valued. As a result, more and more people are regularly turning to health products.

At the same time, new regulatory requirements are reshaping the industry. Growing sustainability awareness, demand for higher functionality, and increasing standards for quality and product safety are driving this transformation at a rapid pace.

Health products are diverse and cover a wide range of applications. These include **medical products** used for treatment, relief, or prevention of

diseases – typically pharmaceuticals. In addition, there are **health-promoting products** that support daily health and long-term well-being, such as dietary supplements. Each category follows its own regulatory framework and consumer habits, but both are united by the same demand for reliability, transparency, and high-quality standards.

Packaging in this market does far more than simply protect. It preserves the quality of sensitive ingredients, ensures hygiene and purity, and enables stable storage and usage. At the same time, packaging connects brands with consumers and must be both functional and compliant with the highest regulatory standards. Packaging thus shapes not only product safety but also user experience and market positioning.

This dynamic environment warrants a closer look: which trends will shape the coming years, which technologies are gaining importance, and what role do modern packaging solutions play?



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## Market and technology trends

### Circular economy and recyclability

Sustainability is increasingly important for both primary packaging and secondary packaging, which is not in direct contact with the product. Monomaterial concepts improve recyclability, while advances in production reduce material usage. Recyclable designs now shape many development processes and contribute to resource conservation and CO<sub>2</sub>e reduction.

### User-friendly packaging

Ergonomic containers, easy-to-open closures, and secure dosing solutions make products easier to use, especially for older adults and patients. One-handed operation enhances convenience, usability on the go, and therapy adherence.

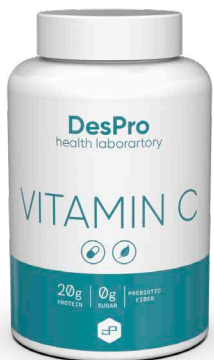
### Advanced barrier technologies

Protecting sensitive products is paramount. Oxygen, moisture, and UV barriers maintain ingredient stability and extend shelf life. Depending on the product, different barrier levels and technologies, such as co-extrusion or multilayer structures, are used. Since many ingredients are highly sensitive, product quality must be uncompromisingly ensured.



### Branding through packaging

Packaging plays a central role in differentiation and brand perception. It signals quality, safety, and trust – often more important than price in this segment. High-quality design can enhance perceived product value, build trust, and strengthen customer loyalty. In some areas, however, packaging is intentionally standardized. Familiar formats streamline production and logistics while providing a consistent user experience. Here, brand strength is conveyed through reliability, functionality, and recognizability.



### Supply chain resilience

Reliable supply chains are essential, as disruptions directly impact product availability. Key foundations include geographically diversified production and sourcing structures, validated processes, clear quality standards, and robust, transport-optimized packaging designs. Together, these elements create a system that buffers fluctuations and ensures long-term supply reliability.

### Plastics and CO<sub>2</sub>e efficiency

In health products, protection, trust, and precision are crucial. Every vial, jar, or bottle must reliably safeguard its contents from production to use. Material choice is therefore critical. Plastic has proven particularly flexible, reliable, and versatile, meeting the high demands of this market without compromising everyday usability.

### Key advantages of plastic:

- » **Product safety:** Plastic protects much better against breakage than many other materials and ensures safe handling and transport. At the same time, plastic provides effective barriers against moisture, oxygen, and UV light, preserving sensitive ingredients throughout shelf life.
- » **Ease of handling:** The low weight compared to glass makes it easier to use for both consumers and medical professionals. At the same time, it reduces transport costs and the CO<sub>2</sub>e footprint, making logistics processes more efficient.
- » **Design flexibility:** Plastic can be flexibly molded into a wide variety of shapes, ranging from ergonomic bottles and dosing aids to specialized closures. This diversity enables user-friendly solutions for various target groups, such as lifestyle consumers, the elderly, and patients.

In a market where safety, quality, and usability are top priorities, plastic remains a central packaging material.



## Greiner Packaging: expert in health packaging

### Development strength from standard to custom

Greiner Packaging offers proven packaging solutions ready for immediate use, enabling manufacturers to implement products quickly, safely, and cost-effectively. These standardized solutions excel in efficiency, availability, and consistent quality.

Additionally, Greiner Packaging provides tailor-made solutions. The in-house Design & Prototyping Team DesPro guides clients from concept to prototype, ensuring every package is functional, brand-aligned, and regulation-compliant. Specialized competence centers in Austria and Poland consolidate technological expertise to efficiently bring complex developments to market. Clients benefit from combined experience, short coordination paths, and strong international development capabilities.

Material usage and CO<sub>2</sub>e footprint are considered from the start. For example, material-reduced solutions protect the environment without compromising safety or regulatory compliance. This is especially important in pharma, where the use of recyclates is often limited. Material-optimized solutions provide a powerful way to reduce CO<sub>2</sub>e and meet sustainability goals.

Beyond development, Greiner Packaging supports clients in production. Every process, from selecting suitable technologies to optimizing parameters, ensures efficient, safe, and precise manufacturing. This close integration between design, prototyping, and series production enables individual solutions, as demonstrated with Orthomol.



### Case study Orthomol: High-tech solution from r-PET

For Orthomol, switching to r-PET posed higher demands on material processing, process stability, and hygiene. Greiner Packaging developed a custom production line tailored to recycled PET. Optimized temperature management, stable process parameters, and clearly defined quality checks ensure consistently high processing quality. The result was a solution combining product

protection, sustainability, and efficiency. Orthomol benefits from a stable, hygienically flawless packaging process and r-PET bottles that reinforce the brand's premium positioning.

### Production technologies for maximum variety

Health packaging must handle a wide range of products, from powders and liquids to sensitive medical formulations. Modern technologies and deep material and process knowledge are essential.

Greiner Packaging offers a broad spectrum of production technologies, most notably ISBM for precise, complex packaging. Additional methods like extrusion blow molding, injection molding, and thermoforming reliably implement complex designs. Barrier solutions against oxygen, moisture, and UV-light extend shelf life and protect sensitive products.

Packaging design is flexible, with finishing and decoration adapted to brand messaging without compromising functionality. As a global partner, Greiner Packaging combines technology, standardized processes, and flexible development capacities to ensure quality and predictability in all markets.

Existing packaging is also continuously optimized, reducing material use and CO<sub>2</sub>e footprint without compromising function or safety. This creates packaging that is both technically robust and sustainable throughout its lifecycle.



**Case study: material reduction and CO<sub>2</sub>e savings**

Reducing material is a key optimization lever for a variety of packaging types. Many jars and bottles can save 10–20% of their weight. This not only lowers material costs but also reduces the CO<sub>2</sub>e footprint across the supply chain. Greiner Packaging's development team uses its technical expertise to save material while maintaining full product functionality. This way, they create solutions that convincingly combine sustainability and performance.

**Highest hygiene standards in production (ISO 15378)**

Especially in the pharmaceutical sector, hygiene, product safety, and regulatory compliance are central requirements for every packaging solution. Greiner Packaging addresses this with validated processes that protect sensitive products from the very first production step and make safety measurable.

A particularly important role is played by ISO 15378, the certification of which Greiner Packaging is currently preparing at its Austrian sites. This standard is internationally recognized as the leading standard for primary packaging in the pharmaceutical sector. It combines quality management according to ISO 9001 with GMP (Good Manufacturing Practice) requirements and ensures that:

- » Risks are systematically assessed and minimized
- » Manufacturing processes are strictly controlled
- » Quality requirements are fully documented
- » Traceability is guaranteed at every step

Supported by cleanroom-optimized production lines, established hygiene concepts, and certifications such as ISO 9001, BRC, or HACCP, Greiner Packaging provides a multi-layered safety net for microbiological purity as well as technical and functional reliability. For customers, this means maximum regulatory security: every package is produced under clearly documented, auditable, and reproducible conditions. Greiner Packaging thus combines uncompromising hygiene, full traceability, and process reliability, creating the basis for stable quality and sustainable compliance in the sensitive pharmaceutical sector.



**Outlook**

**All-in-One: Sterilization and decontamination via Greiner Mediscan**

Collaboration with Greiner Mediscan, a division of the Greiner Group, allows customers to obtain sterile or decontaminated packaging directly, ensuring product safety and hygiene standards from the start.

Since products are delivered directly from Greiner Packaging to Greiner Mediscan, intermediate transport and additional coordination with external sterilization service providers are eliminated. Customers benefit from faster processes, less logistical effort, reduced risks, and reliable delivery times, even for particularly sensitive products. Sterilization and decontamination can be seamlessly integrated into workflows. Contact us to learn more.

# RecyClass family certification for K3® r100 made of PP & PET

**For food manufacturers in Europe, one aspect is becoming increasingly important: reliable assurance that their packaging will continue to meet all legal requirements in the future. The PPWR stipulates that, starting January 1, 2030, all packaging placed on the EU market must be demonstrably designed to be recyclable.**



However, a uniform Europe-wide definition of "recyclable" is still missing. The guidelines expected from the European standardization institute CEN are intended to provide clarity on consistent assessment criteria. Until then, realistic and reliable testing procedures are essential, also because some countries, such as Denmark, already require concrete proof as part of their Extended Producer Responsibility (EPR) systems.

RecyClass is currently considered the most recognized testing institute in Europe and already offers guidance on future legislation.

## RecyClass Family Certification of the K3® Portfolio in PP & PET

In previous RecyClass tests, the K3® r100 cup made of PP, with a diameter of 95 mm and a filling volume of 500 ml demonstrated an exceptionally high separation rate of over 90%. During the recycling process, the cardboard wrap detaches from the plastic cup automatically and reliably. This high separation rate is crucial, as it allows the plastic cup to be classified as a mono-material within the recycling stream, achieving the highest recyclability class (A) according to RecyClass.

The next major milestone followed earlier this year: Greiner Packaging became the first company in Europe to receive a RecyClass family certificate\* for

K3® r100 made of polypropylene (PP). Moreover, at the end of March, Greiner Packaging was awarded the family certificate for its K3® r100 packaging solution made from PET. This means that a large part of the K3® product portfolio has now been officially certified as recyclable by RecyClass. In close collaboration with Circpack Veolia, Greiner's partner in all recycling certification processes, representative product sizes were defined and tested according to the RecyClass methodology.

The key factor behind the top rating: the cups contain no adhesive whatsoever between the cardboard and plastic components and separate automatically during the waste disposal process. This outstanding self separability resulted in the plastic component being rated RecyClass Class A, clear proof that K3® r100 in various sizes can be optimally integrated into the plastics recycling loop.

## Cardboard Wrap Also Achieves Top Scores

The cardboard wrap was also tested using the CEPI method and was found to be highly recyclable, suitable for recycling in conventional paper mills. This confirms that the wrap offers excellent recycling performance and perfectly complements the plastic cup.



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Click here to view the certificate:



\*\* The **CEPI Recyclability Test Method** is a testing procedure developed by the European paper industry to assess how well paper-based packaging and materials can be recovered in existing recycling processes.

In a laboratory setting, it simulates how a material behaves during paper recycling – for example, how effectively fibers can be recovered, whether contaminants are generated, or whether the material could negatively affect paper-machine operations. The method provides manufacturers and packaging developers with clear criteria and measurable results to improve the recyclability of their products and document it consistently across the industry.



\* The family certificate represents a well-founded pre-evaluation of recyclability; any changes to the packaging design, print layout, used materials and the effect of product content or residues might change the outcome of the recyclability of a final packaging. The class result also provides an assessment of recyclability in Europe that does not take into account the specific collection systems of individual countries.

# CUBO:

## Stack efficiently, maximize brand impact, embrace sustainability

**Not round, but square: with CUBO from Greiner Packaging, you are deliberately choosing a packaging concept that not only delivers sustainability benefits but also stands out at the point of sale. Its square design helps you streamline processes, save resources, and position your brand more effectively on the shelf.**

**We first introduced this innovative concept in the last issue of this customer magazine. Since then, significant progress has been made: CUBO has been honored with the WorldStar Packaging Award 2026 and is now also available as a sample in the in-mold-label version.**

### Optimize your value chain with CUBO

Space is a critical factor in logistics and CUBO makes the most of it. Thanks to its square geometry, it can be stacked far more efficiently than round containers. Which means that up to 30% more units per pallet\* are possible. For you, this means fewer transports, lower storage costs, and a measurable reduction in CO<sub>2</sub>e emissions.

This efficiency also pays off in retail. More units per pallet simplify goods receipt, reduce handling and ensure smoother warehouse operations. On the shelf, the clear shape creates structure, improves visibility, and maximizes space utilization, benefiting both retailers and consumers alike.

### Put your brand up front at the POS

In shelves, first impressions matter. Round containers tend to rotate, causing brand messages to disappear from the consumers view. CUBO stays in place. Its square shape ensures that your branding is always perfectly aligned towards the consumer.

In addition, the generous decoration surfaces provide ample space for branding, product information, and creative design, without compromise. CUBO becomes a stage for your brand, helping you clearly stand out from competitors on the shelf.

### Two innovations combined: CUBO & Click In sealing lid

Pair CUBO with the Click In sealing lid to create a resealable, leak-proof packaging solution for your product. At the same time, you reduce material usage, especially if you previously relied on aluminum foil seals, which are no longer needed with this combination.

In its PP version, this combination results in a mono-material packaging solution that facilitates recycling and supports your sustainability goals. The Click In sealing lid has also been recognized with the WorldStar Packaging Award this year.



### Packaging as unique as your product

Your brand has unique requirements and CUBO is designed to meet them. Whether PP, PET, or r-PET, you choose the material that best fits your product, positioning, and sustainability strategy.

Combined with a wide range of decoration options such as high-quality in-mold-labelling, K3® cardboard-plastic combinations, or sleeves, your packaging can be tailored exactly to your brand's needs.

This gives you maximum flexibility in design, functionality, and sustainability, allowing you to target your audience precisely.

We are now happy to provide first CUBO samples in the IML version. Let's work together to develop your optimal packaging solution and showcase your brand effectively.



Scannen & Muster  
bestellen:



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\*Compared to a standard IML cup with 400 ml filling volume and a diameter of 95 mm

## Looking back: One year of advancing waste education with SampApp

It has been one year since Greiner Packaging began its partnership with SampApp, Indonesia's first gamified waste education app, developed by the non-profit Veritas Edukasi Lingkungan (VEL). Over the past year, this collaboration has focused on raising awareness about plastic pollution, promoting sustainable waste management practices, and empowering communities across Indonesia to take concrete action.

### What is SampApp?

SampApp is an innovative educational platform that transforms environmental knowledge into an interactive learning experience. The app combines animated infotainment videos, quizzes, gamified challenges, and real-world missions to teach users about the life cycle of plastics, responsible consumption, and recycling. By completing modules, users earn rewards, level up, and take part in competitions, creating motivation to apply sustainable practices in their daily lives.

A central initiative within SampApp is the SampAssador School Challenge, a nationwide program that turns junior and senior high schools into hubs of sustainability. Students, acting as "SampAssadors", complete learning modules on plastic waste prevention, participate in school-wide competitions, and implement eco-friendly actions such as waste sorting, using refillable containers, and creating awareness campaigns. Schools are recognized for their achievements with eco-friendly gifts, sustainability curricula, and special visits from the SampApp team, amplifying their successes on social media.

### Impact after one year

Over 20,000 individuals have downloaded the app, with more than 5,000 schoolchildren actively participating in the SampAssador School Challenge. The team behind SampApp has successfully measured real behavioral change among app users, and the results are striking. Using a combination of pre- and post-surveys and interviews, a representative portion of the user base has been assessed, revealing significant improvements:

- » Waste sorting improved by 28%
- » Use of official waste collection services increased by 13%
- » Littering and open waste burning declined by 12% and 5% respectively



These insights indicate that the impact of SampApp extends well beyond the classroom. Students are bringing their learning into homes and communities, influencing family habits and local practices. The evidence demonstrates that digital education, when combined with gamified engagement and hands-on challenges, can lead to meaningful, measurable environmental improvements.

### A shared vision for a greener future

The cooperation with SampApp is part of Greiner Packaging's broader commitment to sustainability. By supporting initiatives that combine education, innovation, and responsible consumption, the company helps foster long-term environmental awareness and action.

Through this partnership, Greiner Packaging and SampApp are not only providing knowledge about waste management. They are inspiring communities to take concrete steps, building engagement at both school and household levels, and creating measurable impact on plastic pollution in Indonesia.

After one year, the collaboration stands as a testament to the power of education and corporate responsibility in driving a circular economy.

## Van Beekum: Sustainable spice jars made of PET

### Packaging facts

Technology:	ISBM
Decoration:	Label
Material:	PET, r-PET



With the new PET spice jars Greiner Packaging has developed with the Dutch spice specialist Van Beekum, even more convenience and freshness comes into the kitchen. The newly developed spice jars are made entirely from PET, including the grinder, and offer a mono-material solution that combines sustainability and performance. This marks Van Beekum's first foray into spice jar packaging. Currently available for salt and pepper, additional variants are already in development.

### Mono-material for maximum recyclability

The jar and grinder are made entirely of PET, resulting in a 100 % mono-material solution that simplifies recycling and supports Van Beekum's sustainability strategy. Plans are in place to integrate up to 30 % r-PET (recycled PET) in future production, which significantly reduces CO<sub>2</sub>e emissions compared with glass containers.

A 115 ml PET container weighs around 80 % less than a comparable glass container, making the jar not only easier to handle but also lowering the environmental footprint in transport.

### Safety and efficiency in use

PET spice jars also offer increased product safety: unlike glass, they do not shatter when dropped, reducing the risk of injury for consumers and improving safety in production environments. The lighter, shatter-resistant material supports a cleaner and more efficient workflow.

Van Beekum's PET spice jars demonstrate that sustainability and functional design can go hand in hand, combining ease of use, material savings, and recyclability.

## To-go drinking cups for Ennstal Milch combine sustainability and convenience



### Packaging facts

Technology:	Thermoforming
Decoration:	K3® r100
Material:	PP

The partnership between Greiner Packaging and the Austrian milk producer Ennstal Milch stands for sustainable packaging solutions with high functionality. At the heart of this collaboration is the K3® r100 cup, an innovative cardboard-plastic combination used by Ennstal Milch as a to-go cup for coffee and other beverages.

### Sustainability and function in one cup

The K3® r100 cup is known for its versatility and sustainability. Ennstal Milch recognized the potential of this cardboard-plastic solution early on and has successfully used the K3® r100 as a to-go coffee or drinking cup for over ten years. Thanks to the integrated EVOH barrier (A-B-EVOH-B-A), the cup, in combination with Ennstal Milch's filling process, achieves an extended shelf life without

refrigeration, allowing distribution not only in Austria but also in countries such as Spain, Belgium, and the United Arab Emirates.

During sorting, the cup body and cardboard wrap separate automatically, ensuring high recyclability and correct allocation of materials to the appropriate recycling streams. The thermoformed drinking lid, also made of PP and manufactured by Greiner Packaging, completes the cup to form a solution with maximum recyclability and optimal convenience for on-the-go consumption.

The combination of well-designed materials and barrier technology provides optimum convenience, preventing spills and offering easy handling, while enabling reliable distribution and longer shelf life.

## Henkel's cage for toilet rim blocks even more sustainable

Henkel has further developed its well-known cages for solid toilet rim blocks together with Greiner Packaging and made them even more sustainable. The transparent plastic cages now consist of a higher proportion of post-consumer recycled material (PCR) and renewable raw materials, another step toward circular economy packaging solutions.

### More recycling and renewable materials

Since 2021, Greiner Packaging has been using PCR polypropylene in the transparent cages for Henkel's solid toilet rim blocks. Originally, the PCR content was 10 %, and this has now increased to 30 % PCR content. The remaining 70 % of the plastic is allocated to polypropylene from renewable sources via the ISCC PLUS mass balance approach, meaning that an equal amount of fossil feedstock is substituted with renewable raw materials upstream in the supply chain without requiring changes to industrial infrastructure.

The cage consists entirely of polypropylene and is therefore a mono-material packaging solution that enhances recyclability. The increased use of PCR and renewable materials reduces the demand for fossil feedstock.

### Sustainability practically implemented

Using an ISCC PLUS certified mass balance approach ensures transparency about the use of sustainable raw materials. The functionality of the packaging remains unchanged, the cages are physically indistinguishable from conventional solutions. This product evolution represents a pragmatic approach to integrating sustainability within existing production processes and resource-efficient packaging solutions.



#### Packaging facts

Technology:	Injection molding
Decoration:	-
Material:	r-PP

## K3® on a successful path in the USA

Across the United States, more dairy and dairy-alternative brands are rethinking packaging to stand out on the shelf and support sustainability. One solution leading the way is Greiner Packaging's K3® cardboard-plastic cup.

The packaging combines a polypropylene cup with a fully printable cardboard wrap. An intuitive tear-tab system allows the cardboard and plastic to be easily separated and recycled when required, while the cardboard wrap lets brands use less plastic and achieve a thinner cup wall.

### Customers Rely on Design and Sustainability

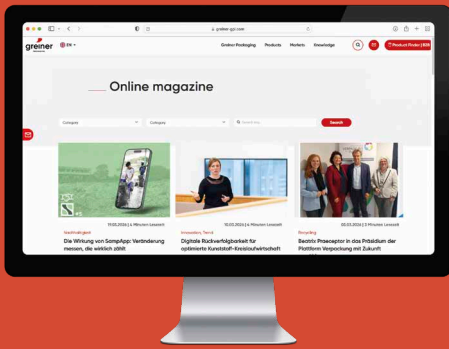
Brands like Tezza Foods choose the K3® cup for its bold, full-surface printability and striking shelf presence. For Sourmilk, sustainability driven by recyclability and a natural paper feel were deciding factors. Norr Organic uses the cup to reduce plastic use while maintaining a premium, natural appearance.

Across these success stories, the reasons behind K3®'s U.S. momentum are clear: reduced plastic use with a strong recyclability profile, powerful shelf impact enabled by full-surface printability, and support for early-stage and scaling brands through responsive service and collaboration.



#### Packaging facts

Technology:	Thermoforming
Decoration:	K3®
Material:	PP



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## Fairs Calendar 2025/2026

May 7–13

**Interpack**  
GER, Dusseldorf

October 18–21

**PACK EXPO**  
USA, Chicago

You can also find our current trade fairs and events on our website:



<https://www.greiner-gpi.com/en/Greiner-Packaging/Fair-Events>



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