

unique packpaper

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upp

The magazine for professionals

Plastics
Packaging
Technology
Barriers
Decoration
Trends
Lifestyle

#readyfortomorrow

Focus:

INTERPACK 2017



greiner
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Editorial



Manfred Stanek
CEO

Dear reader!

Are you keeping current with the latest trends in the packaging industry? As a leading packaging manufacturer, Greiner Packaging works hard year-round on new developments, challenges and opportunities. We are therefore happy to present our findings and responses to you in this special focus issue of upp – as well as at the interpack in Dusseldorf. The packaging industry is currently facing a wide range of challenges: The trend toward lighter packaging is putting pressure on materials such as metal and glass, creating new opportunities for plastics manufacturers such as Greiner Packaging. At the same time, we are being required to increase recycling ratios, combine plastics with other materials such as cardboard or in general to increasingly rely on organic resources. For us, the subject of food wastage also plays a significant role in exploring new packaging options; so with our solutions, we want to contribute toward countering this, in order to take into account the fast-growing sentiments of consumers with regard to sustainability.

At the same time, we must prepare ourselves for the rising demand for packaging: More and more people around the world are moving into large metropolitan areas. This urbanization is increasing the demand for packaged products that can be bought from the supermarket or wholesale – completely outside of the traditional rural direct marketing structures.

Our presence at interpack is an ideal opportunity for us to present our responses to these trends – from further developments in the field of barriers for longer shelf life to innovative and creative designs to meet the rising demands for convenience, all the way to packaging solutions that help to preserve the environment. Please turn to page 3 to see our responses to the questions of tomorrow – and how you and your products can best profit from these. And on pages 18 and 19, we also introduce selected new products that likewise clearly emphasize our approach to trends.

Enjoy reading this special focus issue of unique packpaper for interpack 2017!

It's not just packaging for today, it is technology for tomorrow.

interpack 2017

interpack is one of the most important international packaging events for the food, drink, confectionary, bakery product, pharmaceutical, cosmetics, non-food and industrial goods industries. The packaging industry will meet in Dusseldorf from May 4 to 10, 2017. Greiner Packaging will also be presenting its diverse range of innovative products for the first time in nine years.

More than 2,700 exhibitors from some 60 countries, occupying 262,499 square meters in 19 halls will present the latest trends and current developments of the packaging industry at the Dusseldorf exhibition grounds. In terms of scope and international reach, interpack is a unique platform for companies and their products and solutions. Greiner Packaging recognizes this as well and will use the opportunity to inform existing and potential customers, partners and interested exhibition visitors about its product and technology offerings. Greiner Packaging's key focus areas are diverse and range from solutions in the field of barriers to sustainable products, innovative technologies and strategic approaches in the area of globalization.

"We would like to use the exhibition to talk with the visitors. We want to show that we are currently already well prepared for changes in the future, that we know in which direction trends are developing and how we as packaging specialists can handle these in the best possible manner. Following the slogan 'Ask us!', we are ready to answer the questions of our guests – whether they be about longer food shelf life, creative design ideas or our new sites in Turkey, India or Russia" says Manfred Stanek, CEO of Greiner Packaging. The exhibition booth also has a special extra – a virtual reality room, in which existing and potential customers, on the basis of a selected production process, can be convinced of the efficient, fast and clean production at Greiner Packaging "We stand for top quality as well as innovative processes and, using the virtual application, succeed in demonstrating to our customers. We would like to show that we are using technologies that play an important role today, but above all, also in the future," says Manfred Stanek.

Visitors and interested parties can find complete information and useful tools on interpack as well as on how to efficiently plan your day at the exhibition at www.interpack.de. These include the exhibitor database, with the option of creating personalized hall plans, a matchmaking function for initiating contact with exhibitors such as Greiner Packaging and information on what is new with all the participating companies. There are also iPhone and Android apps for visitors.

Key points at the exhibition reflect social trends

With its key points at the exhibition, Greiner Packaging is responding to current social trends and is showing how packaging changes as a result and what added value these can offer in the future:

- » **Reduction of food waste:**
Barrier packaging
- » **Rising demand for light and practical packaging:**
Plastic replaces metal and glass
- » **Increasing ecological awareness:**
Cardboard-plastic combinations, recycling, bio-plastics, CO₂ footprint
- » **Increasing urbanization:**
Diverse product lines
- » **Desire for versatile convenience products:**
Innovative packaging solutions
- » **Aging population:**
High-quality healthcare packaging
- » **Increased globalization of companies:**
Commitment to foreign markets

“

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Manfred Stanek,
CEO Greiner Packaging





#readyfor

Focus:

INTERPACK 2017



tomorrow

As a leading packaging specialist, Greiner Packaging concentrates on the trends and developments of the future. The following stories highlight just how these trends influence the plastics experts and their innovative products and solutions in response to these challenges.

I feel guilty when I have to throw food away because it turned bad so quickly. But I don't want to buy products with preservatives. Are there other solutions here?

I like stocking up on food and drink. But transporting the food in fragile and heavy glass and metal packaging is challenging for me – aren't there any more practical options?

Consumer needs have changed. With innovative barrier solutions, foods have longer shelf life – and can be easily transported in plastic packaging.



Reduction of **food waste**



Rising demand for **light and practical packaging**

Requirements for food and its packaging have changed significantly in the past few years. Consumers want fresh, high-quality food without preservatives that also has extraordinarily long shelf life. At the same time, packaging should not only protect the product as much as possible, but also be easy to transport and handle. Two challenging trends that Greiner Packaging has a simple answer to: barrier.

All over the world, 1.3 billion tons of food wind up in the trash every year. "The subject of food waste is one of the biggest problems of our time. Households are getting smaller and the portions consumed are also becoming smaller, but consumption is becoming more frequent. With smaller packaging units and different barrier technologies, we as packaging manufacturers can thus contribute to counteracting food wastage," says Kenneth Boldog, Sales Director for Central & Western Europe at Greiner Packaging. Bettina Schrenk, Head of Research & Development GP-AT, confirms this as well: "Consumers want longer and longer shelf life but without having preservatives added. Food should be as natural as possible. So our approach is as follows: The packaging protects the contents, the food itself is not affected."

Effective product protection times two

At Greiner Packaging, two different barrier priorities are used: IBT and MBT. While with inert barrier technology (IBT), a chemically inert silicon oxide layer is applied onto the plastic packaging and this then protects the filling not only from the effects of the packaging but also from external influences, multi barrier technology (MBT) achieves a higher oxygen barrier by embedding a special barrier layer within a standard plastic, such as EVOH or PA. Precisely in the area of cup packaging, the use of IBT is an absolute novelty, for which Greiner Packaging has already won distinction many times – including two World Star Awards.

Customized solutions

In order to meet all customer needs the best way possible – from large to small sizes, from small quantities to large batch sizes – Greiner Packaging also offers its complete array of technologies in combination with barrier. Together with the customer, the right solutions for every product are found, with the coordination being completely customized: "The right technology depends on the one hand on the desired packaging form, the produced quantity and the decoration; but on the other hand, knowing what product will be packaged is critical as well – is it food, does it need to be sterilized, does it contain essential oils, does it need special aroma protection? The parameters with which a barrier packaging needs to be aligned are exceedingly diverse



and complex, making getting comprehensive advice at the outset a must,” says barrier specialist and Key Account Manager Rüdiger Grings. Not every product needs one hundred percent barrier protection against every conceivable parameter – such as oxygen, light or chemical compounds – and ultimately the choice of appropriate technology also depends on the price expectations of the customer. Uwe Bauer, Director of Research & Development GPI, explains: “Many customers themselves often do not know exactly how much of a barrier a product actually needs. Given that we do not have the formulas for the individual products, new packaging solutions have to be tested in collaboration with the customers, and we cannot appropriately adapt and adjust the packaging until we have the findings from storage tests. A lot of research is being done here on this at the moment, and a lot of development is under way.” Greiner Packaging considers it important to be able to offer customized solutions for all customers – barrier technologies should enhance the packaging production process in the best way possible, rather than change it completely.

Strong demand for barrier solutions

There are many reasons why demand for barrier packaging continues to grow in the market: On the one hand, there is urbanization, as a result of which more and more people in metropolitan areas must be supplied centrally with products with longer shelf lives. The subject of shelf life, however, also plays an important role within the framework of the aging po-

pulation – more and more, older people require smaller portions that are not bought fresh every day. The trend toward convenience, such as ready-to-eat meals that must also have a long shelf life, is booming in the cities. Worldwide, the demand for coffee and tea capsule systems is also growing, giving special importance to aroma protection – which means protection from oxygen. On the other hand, globalization must also not be forgotten: More and more European companies are exporting their products worldwide, placing a demand for extending shelf life due to the length of the transportation time involved. “For all these reasons, the development of barrier technologies is groundbreaking, especially for the pet food, ketchup and sauce, baby food, ready-made meals and coffee capsule sectors,” says Uwe Bauer.

Plastic combines the advantage of glass and metal and offers more

Glass and metal packaging offer one hundred percent barrier protection against gases, but are more and more often being replaced by plastic solutions, because these combine the advantages of both materials while also offering many other features: Compared to glass, plastic is lighter and shatter-proof; plastic packaging is often stackable and therefore easier to transport. The low weight also saves CO₂ during transport. At the same time, with regard to recycling, plastic is more energy-efficient than glass, for which the preparation requires greater use of energy. The icing on the cake: Plastic lends itself to nicer decoration; especially in comparison to glass packaging, the possibilities with plastic are nearly limitless. Aluminum packaging, on the other hand, has the disadvantage of being frequently damaged during transport; and products that look obviously damaged – for example, dented bottles or bowls – are rejected and destroyed by stores. Tin cans are also very often coated on the inside, which theoretically can have a negative impact on the filling and thus affect taste and health. “Metal cans can already be replaced at a 1:1 ratio by plastic solutions. The only important thing here is that the plastic shapes match the shape of the can, since the filling equipment of the customers is calibrated for that and will not normally be changed,” says Grings.



#lightweightpackaging
#nofoodwaste

Many customers also want transparent packaging that can be hot-filled – something already possible with barrier technologies. Thus, classic glass or metal products such as pickles can profit from the advantages of plastic packaging. The replacement of metal packaging is booming not just in the traditional food sector, though, but also in pet food packaging. “Aluminum bowls are seen as somewhat environmentally unfriendly; transparent plastic packaging can also show pet owners at a glance how good the food for their darling pet is. This has been a trend in the US for some time and, slowly but surely, is also coming to Europe – even if the higher price is still an issue here,” says Grings.

Many advantages, but a few challenges as well

Aroma protection, longer shelf life, and the replacement of metal and glass – current barrier packaging offers many advantages, but there are also challenges that Greiner Packaging – as well as the plastic industry

in general – is working hard on. For example, classic barrier materials such as EVOH often have problems when the humidity and temperature are high: The barrier layer can be temporarily destroyed, for example, during the sterilization of a product, and it improves only after a few days. IBT packaging could provide a remedy, because the layer is chemically inert and does not react to steam and temperature; the processing under such conditions is still very complex, however. “In this area, there is a great deal of potential for development for both MBT and IBT,” says Bauer. This also involves the subject of recycling in general: Multi-layer materials are currently still considered difficult to use, and monomaterials (such as IBT products) are the trend. “Here, above all, the raw material suppliers are working on new solutions,” says Bauer. “The entire plastic industry will be strongly focusing on this subject in the coming years.”



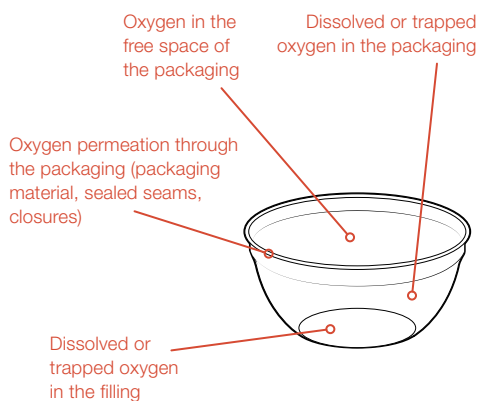
The entire plastic industry will be strongly focusing on the subject of recycling in the coming years.”

Uwe Bauer,
Director Research &
Development GPI

Did you know that there are many different barrier options?

1

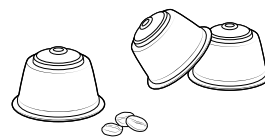
Barriers against oxygen migration or migration in general (from inside and outside)



Oxygen damage to the product does not just come from outside. Even the oxygen trapped during packaging can greatly affect the product. Products are often packaged under a nitrogen atmosphere to prevent this effect.

2

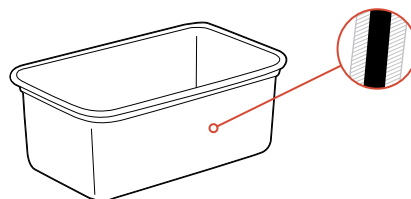
Barriers against loss of aroma



3

Barriers against light

Dark materials are injected in the form of layers, such as for butter tubs (butter is broken down by UV rays, so a normal “light-colored” tub does not offer enough protection).



Diverse technology spectrum

With plastic packaging, Greiner Packaging places great value on offering a wide range of options to the target group – barrier technologies can thus be combined with various production technologies and offer many advantages, depending on the product and requirements.

inert barrier technology (IBT)

This barrier layer made of silicon oxide (SiOX) is applied to the outer or inner side of the cup via a plasma procedure. It is chemically inert and, aside from the barrier effect against gases, also offers a chemical migration blocker – an ideal combination. The coating has no impact on the weight or transparency of the packaging; IBT packages are declared as monomaterial. While the SiOX coating for bottles has already been in the market for a long time, Greiner Packaging is the absolute leader in the cup packaging sector.

multi barrier technology (MBT)

This barrier technology for food and non-food plastic packaging is used in the area of film extrusion with subsequent thermoforming for cups and bowls as well as for injection stretch blow molding and extrusion blow molding for bottles and containers. A special barrier layer, such as EVOH or PA, is embedded within a standard plastic. This is a classic gas barrier.

» MBT + extrusion blow molding

Bottles and containers that are manufactured using extrusion blow molding are provided with barrier properties during the process. The six-layer PP/EVOH/PP packaging has an increased oxygen barrier and is used to protect sensitive products in the food and non-food sector.

» MBT + thermoforming

This technology provides thermoformed cups and bowls with barrier properties. Seven layers serve to increase the oxygen barrier of the packaging and, consequently, the shelf life of sensitive products; this technology is primarily used for large volumes.

» MBT + IML

Shaping and decoration in injection molding is done with in-mold-labeling in just one work step. Combined with MBT, labels can also be enhanced with barrier properties. The barrier label is composed of the three layers PP/EVOH/PP and can be adjusted individually, based on the requirements of the customer. No special investment is necessary for this packaging technology; it can be implemented quickly and simply.

» MBT + injection molding / co-injection process

Injection-molded packaging is enhanced with a barrier layer. A special barrier layer, such as EVOH, is embedded within a standard plastic.

Innovation

MBT + Kavoblow

Injection stretch blow molding

Kavoblow is the name of Greiner Packaging's innovative advanced injection stretch blow molding. With the help of production technology, more production pieces than previously possible can be made within a shorter period; the best quality, free from impact marks, can be produced economically. In combination with MBT, the packaging has a higher oxygen barrier; injection blow molding and barrier solution are done in one plant, thus guaranteeing efficient production. "Greiner Packaging is among the pioneers in this field. The Kavoblow technology promises a closed EVOH layer in the thread seam area; this makes us unique in the market. In particular, for products that require hot-filling and transparency, such as ketchup or sauce bottles, MBT + Kavoblow is ideal, as production is easy and efficient and many design variations are possible. What to look out for: If the barrier effect is very high, the transparency might be lower. The same applies vice-versa as well," says Bettina Schrenk.



Plastic packaging is very practical in everyday life – but the effects on nature worry me. What might a conscientious approach to this issue look like?

The plastic part in packaging is increasingly being reduced, production processes and transportation are being optimized and preference is being given to the use of renewable biological plastics, where possible. We are trying to increase the recycling ratios and to improve the CO₂ footprint, but also to curb food wastage in general in order to take sustainability issues into account.



Increasing ecological awareness

Sustainability is the order of the day. Once scoffed at by many companies, environmental protection measures, socially responsible production conditions and responsible handling of resources are being increasingly demanded by more and more consumers today. Anyone wishing to operate successfully in the market must take this trend into consideration – ever stricter food regulations and conditions are contributing to the growing importance of sustainable materials, products, and production processes in the packaging industry.

“I cannot imagine a society without plastic packaging. Ultimately, these help to protect the product, giving it a longer shelf life and making it taste as it should for a longer period. We must consider, however, how we can use plastic most efficiently, where there is potential for improvement, and the conditions under which we can best protect people and the environment.” Bettina Schrenk knows exactly what she is talking about. As Head of Research & Development GP-AT, she deals with the latest trends and developments that challenge and drive the plastic and packaging industry every day. In recent years, the concept of sustainability has moved more and more toward the center of activity, with

consumers as well as customers paying more attention to their shopping, wanting to know what packaging is made of and how it is being produced. Greiner Packaging’s approach is therefore a broad-based one; in it, all stages of the product life cycle are examined and checked to optimize potential, from material selection to production process to recycling.

From the cardboard-plastic combination ...

Combining cardboard and plastic to make packaging lighter and designing it more sustainable is one successful approach. K3® is the form of packaging at Greiner Packaging that helps to cut down on plastic and impress consumers at the very first glance with a natural look. Whenever possible, recycled cardboard is used for the cardboard wrap; this can be print-decorated on the front and back and offers a variety of options for communicating with consumers. The packaging is therefore not only environmentally friendly but also a win-win situation from a marketing standpoint.

... to recycled materials and bio-plastics ...

“We not only have to make packaging lighter but also keep plastics generally longer in circulation. This is what I see as the big challenge for the coming year,” says Schrenk. While in Europe the waste sorting sys-

tems function well, if somewhat imperfectly, many countries are still very far from having organized waste separation. But it is precisely food packaging that requires one hundred percent pure recycled materials – nothing from the packaging can be allowed to migrate into the food. “One single shampoo packaging that is disposed of together with food packaging makes the processing of residues extremely complex and difficult. Recycled plastics are currently being used primarily in the non-food sector; for the food sector, a new sorting system and a totally new approach are essentially what is needed,” says Kenneth Boldog, Sales Director for Central & Western Europe at Greiner Packaging. Moreover, it is not yet clear what percentage of recycling material certain products can tolerate, how machines will respond to the new raw materials or exactly how they impact the properties of the packaging. When using recycled material, it must be possible to guarantee the chemical safety of the packaged food, but this requires long-term studies and intensive research. “It is for this reason that Greiner Packaging has been a member of the Ellen MacArthur Foundation since 2016. As part of the ‘New Plastics Economy’, we delve into the entire supply chain behind a packaging type together with other companies worldwide – from raw material to manufacture to the retail market and to collection and preparation. Our goal is to complete the packaging cycle and develop systems together in order to achieve the maximum recycling ratio. If the entire life cycle assessment of a packaging type is considered, recycled materials are the best fit – but it is still very difficult to ensure common worldwide standards,”

says Boldog. There is also still a long way to go where bio-plastics are concerned: Many are very sensitive in their processing and can therefore not be used for all applications; it is also not clear what significance the materials themselves have for the process and the equipment. Therefore, in order to have access to all the information at any time and to be able to quickly respond to customer requests, Greiner Packaging has set up its own materials database: Tests on new materials are stored here and relevant data can be accessed worldwide.

... to an ecological footprint

What requires a great deal of cooperation and persistence worldwide can already be done within the company in many areas. Greiner Packaging is paying close attention to reducing its CO₂ footprint. Here, greater efficiency in handling resources and in production are designed to contribute to reducing energy consumption. “We take this issue into account in our entire infrastructure, for example, when we install new cooling or compressed air systems, but in production as well, where our goal is to produce greater quantities using less energy,” says Boldog. In the packaging sector, in particular, one should never lose sight of the big picture. Under the heading of ‘Life Cycle Assessment’, we deal with the entire life cycle of a product, that is, with the entire ecological footprint – for example, water and land consumption, air pollution, use of resources, working conditions and much more. Here, we need to decide which advantages prevail; with the keyword being bio-plastics, it is not always the CO₂ consumption alone that is the main determining factor.” Sustainability is even broader in scope at Greiner Packaging: Projects on the subject of corporate social responsibility take into account work safety, employee development, uniform worldwide site standards and participation in society.



“

We not only have to make packaging lighter but also keep plastics generally longer in circulation.”

Bettina Schrenk,
Head of Research & Development GP-AT

I moved to the city for my job. Since then, I have been traveling a lot and hardly have any time to cook. How can I still manage to eat a balanced diet?

Practical packaging for to-go meals that offers space for several ingredients and cutlery guarantees the best flavor even on the go, while also saving as much time as possible. In the urban environment, handy and innovative packaging solutions take the hectic pace out of everyday life by extending food shelf life and protecting aroma.



Increasing urbanization



Desire for versatile convenience products

For the first time in history, more than half of the population now lives in cities, with the dynamics of migration to cities being particularly high in emerging and developing countries. This development means that there is an increasing demand for packaging producers, since most products in cities are sold in the supermarket as packaged products while only a minority are sold through rural direct marketing. Along with the urban lifestyle also comes the growing desire for convenience products that take diverse forms: Convenience, on the one hand, means products that are quickly and easily prepared and eaten on the go, but on the other hand, convenience also means that the products have a longer shelf life – there is no need to shop daily and the fullest aroma is still guaranteed even after several days.

These trends have resulted in new challenges for the packaging industry – for example, with regard to aroma protection, heat resistance and practicability. Cup packaging has proven effective primarily for yoghurt, muesli, sausages and soups; Greiner Packaging has the largest assortment of cups in Europe and therefore offers the optimal convenience solution for every packaging need – in the city as well as in the countryside.

Long shelf life: Muesli and cereals must have the perfect “crunch” – this is why on-the-go muesli is often offered in PP cups, optimally protected against external influences. To enjoy muesli on the go, the consumer

simply needs to pour milk over the cereal, after which the muesli can then be eaten directly from the cup. When combined with barrier technologies or the K3® technology, shelf life and marketing requirements are also met.

Heat resistance: Practical, with optimal product protection and heat-resistant – packages for soups, sausages or potato snacks that are eaten between meals must satisfy many requirements, since they are often heated in the microwave or by adding hot water. Greiner Packaging's K3® cups, combined with barrier technology, offer the perfect solution: Thus, for example, the material combination of PP/EVOH provides a barrier effect that protects the product; thick-walled cups can be heated (with the cardboard wrap removed) directly in the microwave. If hot water is poured into the cup, the cardboard wrap reduces the contact heat of the product, allowing the cup to be handled without any problem.

Space for different ingredients: Whether it's yogurt with marmalade or crispy muesli, salad with cheese and dressing or pudding with chocolate sprinkles – more and more products are now “mix and match” and allow consumers to indulge in their very own personal taste with various ingredients. For this, however, the individual ingredients must be kept separate and yet be uniformly packaged; cups and containers must be easy to transport and easy to open. Greiner Packaging thus offers multi-chambered cups that present a visually attractive whole, while at the same



#inneed
#co

time guaranteeing optimal product protection. The cup consists of one main chamber and one or two additional chambers that are located on the cup or can fold out. The entire cup can be manufactured with a single tool in one production step, with production being done using the thermoforming as well as injection molding processes. The volume of the chambers can be variably and individually adapted to the requirements of the customer using a tool attachment set. The main chamber also offers versatile options for decoration, whether K3®, sleeve, label or IML; everything is possible. The main product, such as yogurt, is filled into the main chamber; the additional chambers can be loaded with various other items. The cups guarantee not just unique enjoyment on the go, but also first and foremost make it distinctive at the point of sale.

Practical extras

Greiner Packaging produces not just practical cup packaging, but also ensures that the on-the-go products can be easily eaten – by including a spoon or fork right in the packaging. Both are Greiner Packaging's own innovations.

» Sliding spoon

From the design to selection of materials to the production process, every implementation stage of the project was carried out directly at Greiner Packaging. The sliding spoon is available in different designs, for yogurt or ice cream, as well as in various handle lengths and colors. The shape, as well as its excellent stability in handling, also clearly distinguishes the sliding spoon from other products on the market. It can be inserted automatically into the lid and packed hygienically.

» Sliding fork

The fork is 102 mm long when extended (63.5 mm when retracted) and can be incorporated into various lids. The challenge, in contrast with the spoon, was that forks are comparatively taller and longer by nature. Furthermore, the tines of the fork make the separation at the insertion machine significantly harder to implement than for oval-shaped spoons. The fork can be placed on a normal Ø75-cup as well as on a Ø95-cup. As an innovation, the fork can also be integrated into a rectangular tub measuring 116 x 89 millimeters. The lid with integrated fork is available with transparent and printed labeling.



Innovation

Premium cup

Cup with crown

For the past ten years, the Design & Prototyping department of Greiner Packaging has been realizing tailored, creative ideas for customers around the globe. The best example of one of DesPro's current innovations in the field of convenience is a premium cup that practically turns the desire to "be king for a day" into reality.

Well, the packaging solution may not bestow a faithful following or grant you special powers, but it does provide ... a little crown. Because the new design idea is a particularly impressive premium cup that resembles a crown. The regal shape stems from the combination of an asymmetrically formed cup and lid. The inner seal of the cup and the inner seat of the lid provide the packaging with a continuous form that yet again emphasizes its royal character. The packa-

ging is suitable for yogurts; and to make it particularly convenient, a sliding spoon can be inserted into the injection-molded lid. But the packaging also offers an ideal solution for drinks, with the asymmetric cup – similar to a spout – facilitating easy drinking. Older consumers also benefit from the generous gripping surface of the lid, which makes it very easy to remove. The packaging also offers sufficient space for unusual designs – the entire surface of the cup can be decorated using IML, the reflective surface of the metallic-colored lid can be decorated with a peelable label and embossing – such as a company logo – can be integrated even into the outer ring of the lid.

Technology: Injection molding
Decoration: Cup: IML / Lid: Label

for packaging
nvenience

At 72, I still feel in top form. I work at it, though, and seriously take care of my health. Does product packaging play any role at all here?

It is precisely in the area of health where packaging is needed that can guarantee with absolute certainty the purity or consistency of a sensitive product. We have established a center of competence at our site in Rastatt, Germany, that has cleanroom technology and can match developments individually to particular customers.



An aging population is causing an increase in demand for health and wellness products

Life expectancy is on the rise – people are living longer. This demographic change is having significant effects on society: By 2050, more than nine billion people will be living on earth. According to OECD, life expectancy in the European Union in 2060 will be 89.1 years for women and 84.6 years for men. But people are not just living longer, they are also aging later. Older people are stronger, more active and more mobile than before – and are making sure, even in their younger years, that things stay that way: Health care products are enjoying a boom and are becoming more and more in demand. This is a trend that Greiner Packaging is also facing with its own center of competence.

The extensive process of modernization that has been under way at the Rastatt site in Germany since May 2016 has been completed. The plant was converted into a center of competence for the health care industry; the high demands of the market segment can now be optimally met through personnel, organizational and technological changes. The technology continues to emphasize extrusion blow molding, multi-barrier and, in the future, also PET bottle production in combination with the innovative Kavoblow technology. The site consequently offers a wide range of customer-specific packaging solutions that are geared toward the following market segments:

- » **Prescription drugs:** Liquid or powdered drugs such as infusions and eye care or products for diagnostic or dental applications
- » **OTC (“over-the-counter”) products:** Non-prescription drugs such as hygiene and personal care products
- » **Food/nutritional supplements:** Liquid and non-liquid products for health care
- » **Veterinary medicine:** Liquid and non-liquid medical products for veterinary medicine
- » **Cosmoceuticals:** Medical cosmetics such as sprays and lotions for skin and hair

“As extrusion blow molding producers of bottles, we specialize in the co-ex sector, i.e., bottles with multiple barriers or multiple layers. This is of interest primarily to customers who must fill non-liquid substances that are very migration-sensitive in both directions,” says Rastatt General Manager, Stefan Rohr. “Using tested technologies, we can guarantee the purity and the consistency of the filled contents – thus, for example, outside influences must be avoided at all costs for contact lens solutions or dental cement for dentists; at the same time, the contents of such products must not migrate outwards, for example, for fillers with oil or alcohol content.” Aside from using proven technologies, there is also considerable investment in powerful new technologies at the site.



Using tested technologies, we can guarantee the purity and the consistency of the filled contents.”

Stefan Rohr,
General Manager Greiner Packaging Rastatt



About the Rastatt site

- » **The site is ISO 9001- and ISO 50001-certified, with a hygiene certification currently underway**
- » **Cleanroom Class 8, upgrade to 7 is possible**
- » **Health care standard program for infusion bottles**



The Rastatt site in Germany is Greiner Packaging's new health care competence center.

Cleanroom technology is also used in Rastatt; currently, several EBM machines are attached to the cleanroom and can produce directly into the cleanroom under laminar flow encapsulation. A purified airflow and curtains ensure that the particle concentrations in the air, and therefore the particle buildup on the product, are reduced. The bottles are packaged in the cleanroom itself, documented for full traceability and prepared for transport.

"We recently equipped ourselves for production of RTU ('ready to use') bottles. For one customer, we installed a special packaging line in the cleanroom, in which, after the production, the bottles are checked and capped with lids 'inline' and subsequently routed to final packaging and placed on pallets. Here as well, production takes place seamlessly under laminar flow and the use of our cleanroom," Rohr explains.

At the competence center, further emphasis is being placed on project development: Together with domestic and international customers, the requirements for packaging are being individually analyzed and the complete development is subsequently implemented under the competent leadership of specialists – from design and conceptual development to tool design and sampling as part of pilot projects to optimization of the manufacturing processes and packaging, quality specifications and tests and validations/certifications for serial production. Comprehensive and customized support for customers is ensured through an experienced project management team, highly qualified quality management employees, development engineers and efficient suppliers.

#healthcare



More and more companies are pursuing an active expansion strategy. How can I, as a customer, profit from this? Does this internationalization impact consumers?

We see globalization as a win-win situation for companies and customers. If they operate abroad, we can develop the market together and are available as an established partner. If they do not operate internationally, we can contribute our experience, point out trends and provide advice. Customers worldwide profit from the diversity of offerings and a consistently high level of quality.



Increased globalization of companies

Diversity of offerings, worldwide availability, higher growth and sales figures: Globalization promises many advantages from which more and more industries would like to profit. Digitalization and the increasing mobility of people and products are giving rise to new challenges for companies but also previously unrivalled opportunities. A good example is Greiner Packaging's latest joint venture in Russia.

The trend toward increased worldwide involvement does not stop with Greiner Packaging either – on the one hand, it is expected to boost the growth of the company, but, on the other hand, the company's own customers that are expanding must also be able to count on getting the support they need. In recent years, therefore, Greiner Packaging has laid emphasis on expansion beyond Europe. The latest has been a joint venture in Russia undertaken in March 2017.

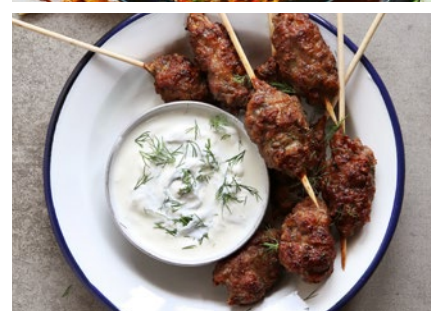
Expand the product portfolio, strengthen the market position

The new company is being established under the name oooGreiner Packaging System and is a joint venture with the Russian plastic packaging manufacturer Souzpromplast in Noginsk, 40 kilometers east of

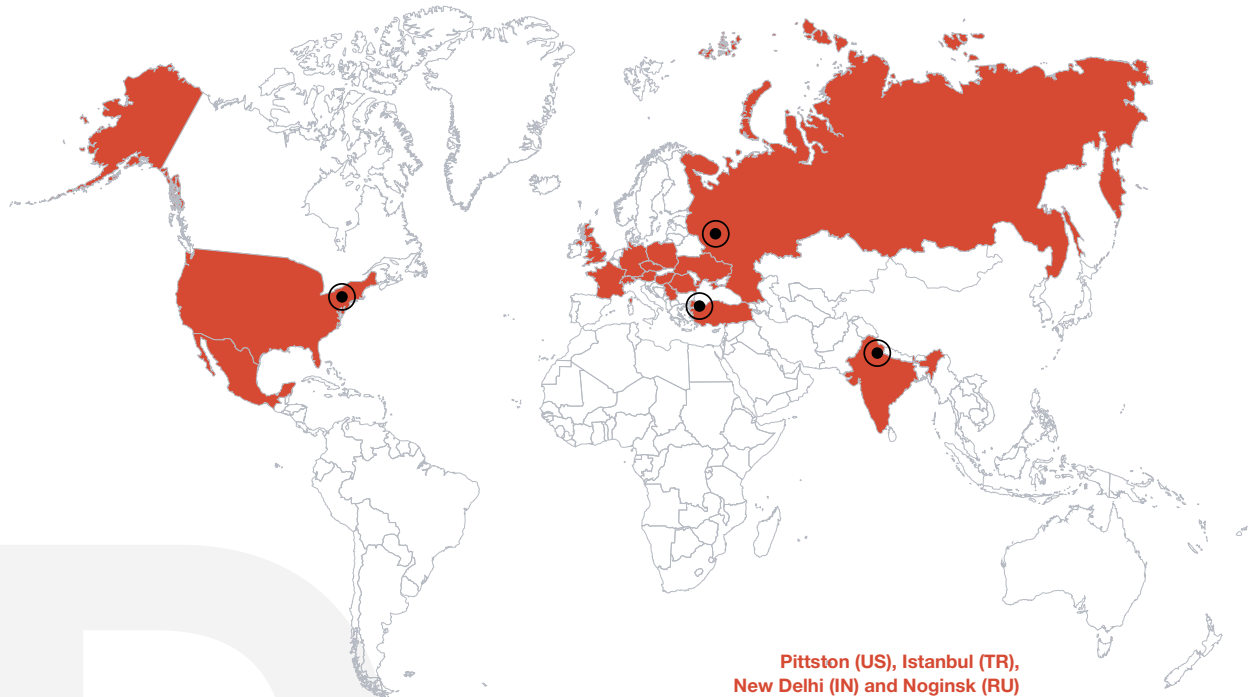
Moscow. Greiner Packaging holds the majority of the shares. Greiner Packaging has already been successfully represented in the Russian market with a site in Vladimir since 2005, with the key technologies so far being thermoforming in conjunction with the K3® cardboard-plastic combination. The goal of the joint venture is now to expand the market and to reinforce the activities in Russia. For this, the technology portfolio of Greiner Packaging is being supplemented by IML or printing directly on packages/buckets, in container sizes of 0.8 to 25 liters. More than 230 workers are employed at Souzpromplast, which supplies multinational customers, among them Henkel, Heinz and Knauf, in accordance with modern European standards. The portfolio of the company includes packaging for the food and non-food sector. It is a key player in the industry, primarily in the field of buckets for paints and chemicals.

Synergies and advantages on the customer side

Frequently, existing customers that operate globally also want a familiar – and therefore trusted and reliable – supplier in foreign markets. Greiner Packaging saw the opportunity to become active in Mexico in such a request from a well-known toy manufacturer and so the first big step outside of Europe was made in 2010. The



#packagingaroundtheglobe



Pittston (US), Istanbul (TR),
New Delhi (IN) and Noginsk (RU)
are Greiner Packaging's most
recent sites.

Whether it is Russian borschtsch, ...

fact that many large customers of Greiner Packaging operate not only in Europe but also in the USA led, four years later, to the opening of a production site in Pittston, Pennsylvania. In 2015, with an acquisition in Turkey, the initial step was taken towards the markets in the Middle East and Asia. This strategy was continued in 2016 with a joint venture in India and now, in 2017, with the acquisition in Russia.

many international customers are happy when they receive the quality and service they have become used to from anywhere in the world. Having a single contact person for global requirements makes it easier to develop projects and guarantees consistent standards. The international Greiner Packaging site network is relevant on yet another level: Projects can be started in Europe and then – if all the parameters are right – rolled out worldwide. The local proximity also makes Greiner Packaging's globalization strategy of interest for customers: There are no long distances, the logistics remain streamlined and transport risks are reduced.

... Indian curry or ...

Deployment abroad is worth it, not just for Greiner Packaging itself – but also, above all, for its customers, who profit from the expansion strategy of the company. In this way, the subject of supply reliability plays a decisive role for many partners. With a global production network, Greiner Packaging can ensure that production is guaranteed, even under extreme circumstances. With activities in various regions, the power and speed of innovation of a company also grow, because know-how, experience and new trends can be exchanged between the individual sites. Even customers that do not operate in foreign markets or do so only in a limited way can profit from this. Also,

Greiner Packaging will continue to pursue its globalization strategy in the future – for the good of the company but also primarily for the good of its customers worldwide.

... Turkish kofta – yogurt and
dairy products are found in
cuisines worldwide.

Better than ever

Yoplait / Yogurt

Packaging facts

Content:	150 g / 5.3 OZ
Material:	PP
Technology:	Thermoforming
Decoration:	Cardboard wrap
Flavors:	Vanilla, strawberry, lemon, blueberry, banana, caramel



The wait has been worth it: After an absence of almost ten years, the popular custard style yogurt from Yoplait is back on the US market. And it is turning heads with a new formulation and new packaging, while keeping the delicious taste and the exceptionally creamy consistency of the product. Fans had been persistently asking for the yogurt, which has been available once again in six flavors since January 2017. The new packaging is from Greiner Packaging and ensures that special wow-factor even at first glance. The cup is shorter and wider than a conventional yogurt cup and is reminiscent of a bowl, thus adding a visual aspect that also picks up on the tasty formulation of the product. The wide cup opening also makes it easy to add toppings and extra ingredients. The label of the cup is made of cardboard, making recycling easy for sustainability-conscious consumers. Even in the fridge at home, the innovative cup design offers advantages, since the yogurt is easier to stack and store. The new cup form was tested extensively and meets all quali-

ty and commercial requirements. "We have long been looking for a package that can convey the features of our product visually in the refrigerated foods section," explains CJ Kidd of Yoplait. "In Greiner Packaging, we have found a partner that is able to deliver a design that not only ensures visual differentiation, but also takes into account our sustainability requirements with its cardboard-plastic combination."



Enjoying exotic taste

MMM's Gourmet Ice Cream / Ice cream

Packaging facts

Content:	75 ml
Material:	PS
Technology:	Thermoforming
Decoration:	Dry offset printing
Lid:	
Material:	PS
Technology:	Vacuum forming
Flavors:	Mango kulfi, pista kulfi (pistachio), mawa malai kulfi (butter cream), chickoo (sapodilla) kulfi



Nuts, spices or fresh fruits added to ice cream are among the absolute classic desserts in India. Kulfi is the name of the traditional variation, where the aromatic milk-sugar mixture is cooked. But unlike in conventional ice cream production in Europe, the frozen delight is not stirred when freezing, giving it a particularly thick and creamy consistency. The exotic Indian flavor combinations enjoy great popularity even in the US. With its many ice cream and kulfi variations, MMM's Gourmet Ice Cream is among the pioneers in the industry in the Chicago area. The individual flavors are available in a range of sizes and their practical 75-milliliters-to-go packaging is produced by Greiner Packaging. Even at first glance, it is easy to see from the cone-shaped cup that this is not your usual ice cream. It is the typical shape for Indian kulfis and sets it apart in the frozen section of stores. Once the cup and lid, likewise produced by Greiner Packaging, are removed, consumers can enjoy the ice cream just like a lollipop. The cup and lid are produced at the Indian location of Greiner Packaging, after which they are transported to the US where they are filled and sold.

"In Greiner Packaging, we've found a partner that feels at home in India as well as in America. Having the experience and the right feel for both markets is very important to us, since we certainly would like to familiarize the US population with a taste of India," says Hatim Dossaji, founder and president of MMM's Gourmet Ice Cream.



Creamy vegetable yogurt

Lactalis / Yogurt

Yogurt with vegetable flavor? What seems unimaginable to many people is already a reality in Turkey. Gourmet yogurt products in eggplant, red paprika and tomato flavors have been on the market since March 2017 under the *ıçim* brand – part of the Lactalis Group – and provide variety in the fridge as healthy between-meal snacks for families and yogurt fans. It is not just the taste of the yogurt that is impressive, however; the cup packaging, designed by Greiner Packaging and created in close collaboration with the customer, is also eye-catching. The elaborately designed sleeve decoration whets the appetite for the individual flavors and emphasizes the gourmet appeal of the products. “Greiner Packaging took very good care of us during the entire development process. The design of the new cups stands out while the implementation is quite efficient,” say employees of the Lactalis purchasing department.



Packaging facts

Content:	250 g
Material:	PP
Technology:	Thermoforming
Decoration:	Sleeve
Flavors:	Eggplant, red paprika, tomato



Made in Austria

Steuber GmbH / Drinking bottle



The highly transparent Tritan® bottle with the flip-top seal made by Steuber, the German household utensils company, is among the most popular to-go drinking bottles in Europe. Effective immediately, the bottle and seal will no longer be produced in China but rather produced and further developed by Greiner Packaging in Austria. The seal function has been reworked, particularly with respect to functionality and impermeability. Whereas the previous seal was inserted manually, a 2-component solution with injected TPE seal has been chosen for the new version. The transparency and brilliance of the bottle were also improved. The company also profits from Greiner Packaging's broad technology range and, thus, from a complete solution from a single source. The bottle, now “made in Austria”, is sold worldwide through retail chains.

Packaging facts

Content:	700 ml
Material:	Tritan™
Technology:	Injection stretch blow molding (1-step)
Decoration:	Shrink foil + two labels
Available in eight colors	
Lid:	Flip top
Material:	PP, TPE
Technology:	2-component injection molding

Resealable



Plastic instead of glass

SPAK / Sauce bottle

Light, shatterproof and squeezable – the new plastic bottles that Greiner Packaging produces for the Austrian company SPAK amaze sauce enthusiasts, both large and small. In contrast to the glass bottles in which the sauces were previously packaged, the new plastic bottles are practical for handling – they are easy to open and the contents can be “squeezed out” to the last drop. “The customer asked us to replace the glass bottles with plastic bottles. Greiner Packaging's suggestion appealed to us with its design and functionality and the high quality in the process execution was crucial for us,” says Harald Gahleitner, general manager of SPAK. The sauces are being filled for the Merkur private brand “Immer gut” (“Always good”); the nine different flavors in the innovative packaging have been available in Austria since November 2016.



Packaging facts

Content:	250 ml
Material:	PET
Technology:	Injection stretch blow molding
Decoration:	Label
Flavors:	

Sour cream & onion, curry, steak pepper, mexican jalapeño, cocktail sauce sweet paprika, sweet chili, barbecue honey, tartar sauce, garlic



upp Fairs & events calendar 2017

Date		Fair / Event
Jun.	20–23	RosUpack RU, Moscow
Oct.	24–26	CPhI DE, Frankfurt
Oct.	25–28	Eurasia Packaging TR, Istanbul
Nov.	08–11	Pack Expo RO, Bucharest



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