

Europe Needs to Catch up

How Film Packaging Will Have to Develop

There is little doubt where we are heading: multilayer packaging will have to become easier to recycle – but what does that mean for the technology? And what solutions will the market need and accept? Manufacturers of branded goods are not the only ones who will have to rethink their specifications.

On taking up his position in summer 2019, Alexander Baumgartner, as the newly appointed Chairman of Flexible Packaging Europe (FPE) announced that, “in such a turbulent time for the packaging industry” he wants to energetically pursue the key issues of recyclability, resource efficiency and sustainability. Constantia Flexibles, the company he heads attracted attention a little later by starting production of a monomaterial film, especially since the plant is not localized in supposedly so progressive Europe, but in India. There is plenty of material, then, to discuss the changes in the requirements for plastic packaging material.

Kunststoffe: Mr. Baumgartner, you are not only CEO of a large manufacturer of flexible packaging, but since mid-year, you have been Chairman of the Flexible Packaging Europe association. Which materials does this involve?

Mag. Alexander Baumgartner: The association consists of the companies manufacturing flexible packaging for industries and manufacturers of branded goods. In about 80 percent of cases, we are talking about plastics. Individual companies also additionally offer paper or aluminum packaging, like my company, Constantia Flexibles. But a lot of the materials that used to have an aluminum component can now be packaged entirely in plastics.

Kunststoffe: Is this development turning around because plastics have become the subject of criticism?

Baumgartner: The media debate on this matter is partially not very rational. As an industry, we want to produce something that

can be reused in a circular economy. That is all the easier to achieve the purer the material is. In the case of plastics, that basically means monomaterials. Everything that is based on multilayer materials faces difficulties nowadays.

Kunststoffe: What does monomaterial mean in practice? We are not talking about 100 percent of a single polymer.

Baumgartner: The limit for other substances is about five percent. There are two fundamentals for this: on one hand, legal regulations, on the other, technical requirements for recycling, i.e. how many contaminants we can manage when sorting and separating the material streams.

Kunststoffe: For years, the trend was towards even more layers, and combinations of different polymers. Now, we face the challenge of achieving similar properties with monomaterials.

Baumgartner: Absolutely. As an industry, we are all very proud of a dozen extremely thin film layers, which bond to one another, thereby providing a flexible packaging with perfect barrier properties against UV, oxygen, water vapor, et cetera, et cetera. That is an amazing feat of engineering. I have to grant that. But today, we have to consider as an industry whether such packaging is still state of the art, if it is only intended for single use and then has to be thermally recycled. The multilayer structure is not a problem, but as a whole, you have to restrict yourself to one family of polymers in order to obtain recyclable packaging.

Kunststoffe: Can your company already offer your customers packaging solutions that meet all the requirements in this respect?

Baumgartner: Everyone in the industry has been working for years on monomaterial solutions with improved barrier properties. For example, we have developed a solution with Hosokawa Alpine and rolled it out in India, where we have been producing a three- or five-layer monomaterial based on PE since September 2019. Here, we achieve barrier properties significantly above those that were apparent for monomaterials, against water vapor, oxygen and UV.

Kunststoffe: How do you achieve that?

Baumgartner: It's a company secret, of course. We have also not reached the level that we had achieved with 12 or 15-layer packaging. But that is where we are heading.

Sales of Flexible Packaging

According to a market analysis by Wood Mackenzie Chemicals, the consumption of flexible packaging in Europe rose 2% to almost EUR 14.5 billion in 2018. West Europe showed a modest growth of 1.8%, while demand in Eastern Europe rose at an above-average rate of 3%. In 2018, however, growth was slightly below the prior year's level.

Overall annual production in Europe was accompanied by a revenue of EUR 15.6 billion in 2018, of which 78% went to Western Europe and 22% to Eastern Europe. According to the forecasts, growth will continue. Revenue in Europe will grow to about EUR 16 billion by 2023, while global consumption in this time will rise to almost USD 113 billion (EUR 100 billion).

Kunststoffe: *What restrictions still exist?*

Baumgartner: The most significant deviation is still with the water-vapor barrier. But the branded goods manufacturers still have to pose the question of whether the packaging specification is really contemporary, or whether it is no longer in line with consumer habits. One of our customers has already found out that cocoa powder purchased in a refill pack is usually transferred within the first 14 days after purchase. The shelf life specification can thus be readily reduced from its present twelve months to six months. With such reductions in oxygen and water vapor barrier requirements, materials now come into consideration that would have been considered impossible before.

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The basic problem today is that plastic does not have a value.”

Alexander Baumgartner

So we have to approach the issue from both directions: as an industry, develop monomaterials with higher barrier properties but also the branded product manufacturers must adapt the packaging materials, which generally have excessively high specifications in our Western world, to suit the actual needs.

Kunststoffe: *Are over-specifications widespread?*

Baumgartner: Certainly. In recent years, branded goods manufacturers have all been trying to achieve scale effects on their production lines. A cookie from one company is therefore no longer produced at 20 sites around the world, but at perhaps only one or two sites, though in much larger amounts. The packaging that is suitable for one country must then also be suitable for use in a country with an entirely different climate. They therefore like to set packaging specifications that can meet the requirements in all climate zones. Rethinking is needed here.

Kunststoffe: *Are the customers of the packaging material ready for this?*

Baumgartner: Certainly not yet on a broad scale. But these are discussions we are conducting now, but have hardly been held in the last 20 years. The specifications have become more and more complicated. Now we are seeing for the first time that it can be relaxed somewhat here and there.

Kunststoffe: *Why has your company built this factory for monomaterial PE film, a flagship project for the circular economy, in Asia, not here in Europe, for example?*

Baumgartner: You will probably be amazed by the answer: because the politics in India are more advanced than here.

Kunststoffe: *You will have to explain that for us.*

Baumgartner: I was surprised, too. We like to think that we are leaders in recycling here. But in reality, Prime Minister Narendra Modi issued the slogan “Clean India” shortly after he came to office in 2014 and is also pushing through this mission. India is now much cleaner than in the past. Such programs offer clarity for in-



About the Interviewee

Mag. Alexander Baumgartner (52) has been CEO of Constantia Flexibles Group GmbH, Vienna, Austria, since 2015. An Austrian by birth, he studied commerce at the Vienna University of Business Administration, and also studied at Luigi Bocconi University in Milan, as well as at the Scuola Europea Varese in Italy. He began his professional career in 1990 in the OMV Group as Head of Marketing for PCD Polymere GmbH.

Since mid-2019, Baumgartner has also been Chairman of Flexible Packaging Europe (FPE), Düsseldorf, Germany. The approximately 80 member companies of the association produce the entire range of flexible packaging, and account for over 85% of European revenue in flexible packaging. Six national flexible packaging associations are also members of the FPE.

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vestments. When we wanted to scale up our monomaterial solution from the lab to industrial production, we saw India as the country with the strongest market security, since the legislature had issued very clear guidelines. The EU is now following, but in India, for example, there is already a law that, at the year end, manufacturers of plastic products must prove to the local authorities that they have collected as much as they have produced.

Kunststoffe: *Are the manufacturers responsible for this themselves?*

Baumgartner: They can also outsource it. For six months, recycling operations have been popping up out of the ground like mushrooms, since they offer young entrepreneurially mind- »

ed people an incredible opportunity to start their own business. Today, we use a number of subcontractors in India, who collect and recycle plastic film and return it to the market, and receive certificates from the authorities for this, which they pass on to us so that we can document that we have met our obligations at the end of the year. This doesn't exist in Europe. Anyone processing thousands of tons of plastic in Europe does not have to demonstrate that recycling at the same scale has been performed – but they do in India, otherwise they will have to pay a fine.

Kunststoffe: *Would you like to see such a system in Europe?*

Baumgartner: Yes. Since the basic problem today is that plastic does not have a value. If you drove through the streets in India five years ago, you saw a lot of plastics in the roadside ditches – but no paper, glass or aluminum cans. Why? Because the poor people collected these materials, since they had a value. But no one stops to pick up plastic film, if it has no value. And that is wrong.

Kunststoffe: *It has acquired its value due to legal regulations.*

Baumgartner: Yes. We need the politicians, particularly in the EU, to help us to generate a value from used plastic products and ultimately return it to the supply chain. For example: deposits – we need an EU-wide system for this.

Kunststoffe: *This often involves food packaging, which also plays an important role in your company. But it is precisely here that use of recycled material is not a trivial matter.*

Baumgartner: In fact, we make about 60 percent revenue with food packaging, 30 percent with pharmaceutical packaging and ten percent with packaging material for personal hygiene and the like. And, indeed, we cannot use recycle in food packaging today because of the risk of migration. Of course, in principle, you can pack the recycled plastic in an interlayer so that it does not come into contact with the foods, but then the question arises of which plastic we are talking about, how barrier-resistant the virgin material in the outer layers is. There is no general answer.

Kunststoffe: *Where – if not in such packaging – can post-consumer recycle be used even more extensively?*

Baumgartner: For foods, there is often a secondary packaging, where you can work to entirely different standards. However, a candy bag is now categorized as food packaging, even if all the candies in it are individually packaged. For good reason – you want to be on the safe side and not run the risk of the products being contaminated. But we have to think about these things.

Kunststoffe: *Should the authorities loosen up these rules, then?*

Baumgartner: They should open the door to considering how far you can go in this direction without compromising food safety. On the other hand, there is a trend toward dispensing with secondary packaging altogether. Avoidance is the best solution if the product is still to arrive at the consumer with the necessary quality.

Kunststoffe: *What do these uncertainties and challenges that we have discussed actually mean for you economically? Are there only regional dips or will growth collapse globally?*

Baumgartner: The few developed countries still have growth rates that are above ten percent per year, because they have a

big need to catch up. But because of the current discussion in all Western countries, with the exception of the USA, customers are already being sensitized, which is also changing their consumption behavior. Young people in particular look out for ecological products, often local brands, which do not spend anything on advertising, but have a cool social media presence. That is bringing about huge changes. And we also notice that in our figures. Business in Europe is stagnating and that will also hit the USA sooner or later. We cannot compensate for the development in such large markets with growth in India, China, Indonesia and similar countries.

Kunststoffe: *How is the packaging industry responding to this?*

Baumgartner: Everyone has to have a sustainability story; without it, there is no point in dispatching their sales people. That is on the agenda at every appointment, with every customer. In the long run, however, a good story is not enough; at some stage you need something concrete and tangible. In the world of the plastics processors, flexible packaging separates the wheat from the chaff. Anyone who cannot offer the branded product manufacturers solutions for supporting the circular economy will face economic difficulties. On the other hand, even with such disruptive developments – and I believe we are experiencing such a phase now – one also must not rush into things. You need the right timing to change over from traditional business, which is not good for the planet. Not everyone can do that overnight.

Kunststoffe: *Young people in particular will not want to hear that. Have you already experienced any problems attracting new recruits to the companies?*

Baumgartner: Yes. We have. Nobody leaves university and says: I want to work in the plastics packaging industry because it's the coolest industry in the world. If we want to recruit young people today, we are not their first choice. Previously, it was enough to be an economically well positioned international company. That no longer interests young people, because they move around so much. They don't wait for their first business trip. But young people consider what a company does important, so that tomorrow's world will be better. You can explain to applicants that packaging meets many necessary and practical functions, such as protecting the product or providing information about it. Then you may be able to motivate them to make a contribution to turning it into a recyclable packaging. ■

The interview was conducted by Dr. Karlhorst Klotz, Editor.

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