



insight. MAGAZINE



Cellular rubber • Cellular polyethylene • Sponge rubber • Fluid sealants • Rubber moulded parts • Filtration technology

► Trade fairs in 2019

Our highlights

► KÖPP Filter Technology

Opening new markets

► FIP(F)G

Silicone foam - new at KÖPP

► Paralympics

Our material in competition

Sustainability at KÖPP

Hand in Hand with Nature

An environmentally friendly alternative





Dear Readers,

How was 2019 for you? What did it have to offer? For us it was exciting and varied, although it was difficult at times as well. You could say it was a challenging year. The German car industry, one of our most important markets, stagnated in 2019. There were various reasons for this: a global economic downturn, a loss of confidence due to falsified exhaust values, and not least the demand for increased climate protection.

It was particularly clear to us that climate awareness has increased noticeably over recent years from our experience at trade fairs where we participated (more on page 6). The plastics sector in particular is currently facing many questions about its sustainability. Are current rubber and plastic solutions still in keeping with the times? Are there alternatives? What can the sector do? We will be happy to answer these questions for you in this edition of insight. You can take a look at our project "Hand in Hand with Nature" on the next page. As you will see, the issue is a thread that runs through this entire magazine.

Other challenges in 2019 were concentrating our liquid applied seals locations in Aachen (see page 8) and "our own personal Brexit". While negotiations, discussions and votes continue in Great Britain, we have long since finalised our independence from the island. At the end of 2019 we ended our business relationship with our problematic British suppliers. The PE qualities that we still sourced from there have now been completely replaced by KÖPP's own products, which are faster, less expensive, and of well-known high quality.

Our "Brexit" and our sustainability campaign are just two examples that illustrate how long-term strategic planning keeps our companies future-oriented. It is important to have smart people on board. Unfortunately, we lost an important strategist, adviser, and pillar of the company last year. My father, Dipl.-Kfm. Ernest Raab, died in October at the age of 90. He became a limited partner of the Wilhelm Köpp Limited partnership, as it was then known, in 1959. Even if he was not involved in the day-to-day running of the business, he had a considerable influence on the KÖPP company until the 2000's. Until recently I would send him weekly updates about developments to keep him up to date, and I regularly discussed the direction and strategy of the company with him. I will really miss those conversations.

I hope you enjoy reading our latest edition.

Warm regards,

Achim Raab, Managing Director

If excess material cannot be brought back into the production process through mechanical or chemical recycling applications should be found to give the material a second life cycle.

„Hand in Hand with Nature“ – Pioneers of sustainability

We have set ourselves the significant goal of being pioneers of sustainability. But our motto has always been: if you do it, do it right! That is why we have brought our previous initiatives for a sustainable production chain together in an official project. This issue has been a priority at KÖPP even before Greta Thunberg's recognition. What processes and properties can we adjust to be most effective for the environment and the climate? Of course, the starting point for efficient solutions at KÖPP is the laboratory. That is where we develop and test all our qualities. Can material made from renewable raw materials meet requirements? In the area of cellular rubber, we have already been using natural rubbers for years. Tests with sustainably produced EPDM are also showing very promising results. Polyethylene based on renewable raw materials. "Of course, we still have to wait for long-term data. But I am sure that we will soon be able to show good results. Then we will have 'green' products at an attractive price that meet the KÖPP quality standards", explains Laboratory Head and Quality Development Manager, Dr Andreas Peine.

Recycling gives material a second life cycle

There are further points where sustainability can be improved at various stages of the production process. One of these is producing in a way that minimises offcuts. Another is to bring trimmings back into foam production or to use it for other purposes. "If excess material cannot be brought back into the production process through mechanical or chemical recycling, applications should be found to give the material a second life cycle", summarises Quality Management Manager, Michael Decker. Rubber waste can be granulated and then pressed to form a block with PU as an adhesive. This provides e.g. excellent impact protection as a floor covering for playgrounds or horse boxes.

Certified sustainability

Our polyethylene K/PE30 was awarded the BLUE ANGEL two years ago, showing that it is more environmentally friendly than comparable products. KÖPPCell® K/PE30 is the only PE foam in the world to have received this award, meeting the strict requirements regarding emissions and pollutants. This is an important step for us in our bid to be "pioneers". There will be more to come!





THE RIGHT QUALITY FOR EVERY NEED

„Cellular rubber all round!“

Two new sulphur-free CR qualities, an SBR blend, and two new high temperature-resistant EPDM qualities are the latest additions to the KOEPPCell® range. An NBR is currently being developed, and it will probably be ready for market in the first half of the year. Steadily the KOEPPCell® product range is adding up. Sales Director, Axel Wynands, confidently observes: “We now have the right product for all requirements when it comes to cellular rubber. The new qualities have closed the last small gaps in our previous portfolio.” The two new sulphur-free CRs have an even more fine-celled structure with corresponding hardness.



EPDM-L-HT and its heavier brother EPDM-S-HT, both high temperature-resistant up to 150°C, are two new products that KÖPP has brought to market. This is an important addition for e.g. applications in engine compartments.

Anybody who is looking for an EPDM with even better mechanical properties in terms of tensile strength would do well to choose EPDM/SBR (blend).

Compared to the other EPDM products in the KOEPPCell® range, the block is significantly harder and more tear-resistant. The same properties are also to be found in the NBR that is about to be brought to market. The NBR also has excellent values for media resistance.



New KOEPPCELL® products

- EPDM-L-HT
- EPDM-S-HT
- EPDM/SBR-S
- NBR
- EPDM-L HFFR
- CR-M
- CR-F

Left to right: Axel Wynands (Sales and Marketing Director), Achim Raab (Managing Director), Valentin Dublea (Managing Director of S.R.L. Romania), Michael Decker (Director of Operations), Dr. Andreas Peine (Head of R&D)

Quality	Properties	Density	Compression deflection	Compression set	Elongation at break	Tensile strength	Application temperature	Shore hardness	Block size
EPDM-L-HT	High temperature-resistant	130 ± 20 kg/m³	(25%) 35 ± 15 kPa (50%) 120 ± 40 kPa	23°C, 50%: ≤ 25% 40°C, 50%: ≤ 50%	≥ 150%	≥ 350 kPa	-50°C +135°C +150°C	35 ± 6 Shore 00	L: 2.000 x B: 1.000 x H: 50 mm
EPDM-S-HT		175 ± 25 kg/m³	(25%) 50 ± 15 kPa (50%) 120 ± 40 kPa	23°C, 50%: ≤ 25% 40°C, 50%: ≤ 50%	≥ 200%	≥ 400 kPa	-50°C +140°C +150°C	40 ± 8 Shore 00	L: 2.000 x B: 1.000 x H: 50 mm
EPDM-L HFFR	Self-extinguishing + halogen-free	130 ± 20 kg/m³	(25%) 35 ± 15 kPa (50%) 120 ± 40 kPa	23 °C, 50%: ≤ 20% 40 °C, 50%: ≤ 40%	≥ 100%	≥ 200 kPa	-40°C +100°C +120 °C	35 ± 6 Shore 00	L: 2.000 x B: 1.000 x H: 50 mm
EPDM/SBR-S	blend	175 ± 25 kg/m³	(25%) 70 ± 20 kPa (50%) 175 ± 45 kPa	23 °C, 50%: ≤ 20% 40 °C, 50%: ≤ 35%	≥ 80%	≥ 400 kPa	-40 °C +90 °C +110 °C	60 ± 10 Shore 00	L: 2.000 x B: 1.000 x H: 50 mm
ZK/CR-M	Sulphur-free	130 ± 20 kg/m³	(25%) 55 ± 15 kPa (50%) 140 ± 20 kPa	23°C, 50%: ≤ 25% 40°C, 50%: ≤ 55%	≥ 100%	≥ 600 kPa	-30°C +100°C +115°C	50 ± 5 Shore 00	L: 2.000 x B: 1.000 x H: 50 mm
ZK/CR-F firm		150 ± 20 kg/m³	(25%) 80 ± 20 kPa (50%) 180 ± 25 kPa	23°C, 50%: ≤ 25% 40°C, 50%: ≤ 55%	≥ 85%	≥ 600 kPa	-30°C +100°C +115°C	55 ± 5 Shore 00	L: 2.000 x B: 1.000 x H: 50 mm

Tested and approved

The often referenced KÖPP quality of our products is documented through independent tests. This opens important doors for us. Our semi-closed cell EPDM-SC-W has passed the strict GM 17408 test at General Motors. This means that all suppliers of General Motors products can use this semi-closed variant of our EPDMs, and they will be pleased to do so, thanks to its excellent watertightness and outstanding recovery, e.g. in vehicle interiors for moisture protection or

as a sound absorber. Furthermore, our EPDM-SC-W has a distinct advantage over competing products in General Motors heat aging processes. It is not just sound-proof and dust-tight, but also water-tight at only 40% compression. This is a unique selling point meaning the KÖPPCell® product can be used for further applications. As well as the EPDM-SC-W, the qualities EPDM-S, EPDM-S/perox, EPDM-L, EPDM-L/perox and EPDM-PE have also been released by GM.

Our halogen-free EPDM-L-HFFR has been tested and approved in accordance with the fire standard UL94 with classification V0. This classification means that the material is self-extinguishing. Also, our polyethylene K/PE29 HFFR same as EPDM-L HFFR does not produce any corrosive gases in case of fire or firefighting.



EMPACK 2019 in Dortmund, 8-9 May 2019



FACHPACK 2019 in Nuremberg, 24-26 September



FOAMEXPO 2019 in Stuttgart, 10-12 September



The main attraction at the stand at K'19 was a specially-made fire-breathing dragon made of our halogen-free K/PE/HFFR29. 3.5m x 4m in size, it soared over our stand – freshly sculpted by the artist Wolfgang Herbst.

KOEPPcell®



TRADE FAIRS



WHAT'S ON SHOW.

An old hand or a successful newcomer? Both, of course!

The focus for us in 2019, and other big players in the plastic industry, was on "K" – the world's largest plastic trade fair. KÖPP has been presenting itself here for decades on the "Rubberstreet" as an Expert in foam. At "K'19" we focused clearly on our new role as a manufacturer of high-quality polyethylene, while our cellular rubber has already been established for years and is used by many OEMs. The feedback from our customers, partners, potential customers and even our competitors further convinced us that we are on the right road with our developments. Top quality, a comprehensive range of products, impressive prices and fast availability - the complete package. That is popular! "The fact that as relative newcomers to the manufacturing business we have such a broad portfolio has gained a lot of respect from people who know

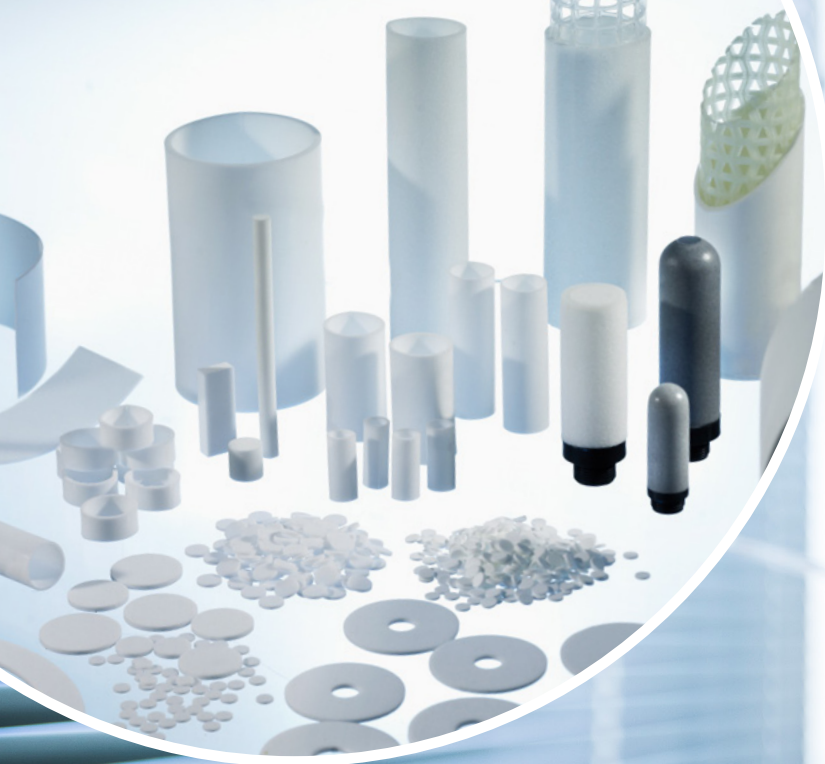
our sector", Sales Director, Axel Wynands, found in the course of many conversations at trade fairs last year.

KÖPP was not just represented at K, but also at FachPack, FoamEXPO and EMPack. One of the most important trends at these trade fairs was the issue of sustainability - and this does not just apply to packaging fairs. KÖPP's big project, "Hand in Hand with Nature", naturally attracted a lot of interest. Development of qualities made from sustainable raw materials and initiatives for resource-saving processes throughout the entire product life cycle were constant themes at the KÖPP stand.

Our 18 days at trade fairs can be summarised in a few figures: 1,642 folders were handed out, 463

bulging sample cases were distributed, and countless product samples of different qualities changed hands. At the last three trade fairs, which took place in the course of a month, our stand got through 31.5 kg of coffee beans, 51 kg of chocolate bars, and 112 kg of other snacks. Meanwhile, our nine staff members working at the stand had gained a total of 18.6 kg in weight by the end of the trade fair marathon. We are keeping further details under our hat. 😊

Still, we are fit, motivated, and in shape to present ourselves this year at the FOAMExpo, and first at the K+ in Turkey. We are looking forward to it!



KÖPP filter technology: new production methods, new functions, new markets

Filter technology from KÖPP has been a solid area of our business for decades, for filtration, soundproofing and ventilation applications. KÖPP filter technology has expanded its production methods and material expertise over the last year, providing a new dynamic and opening up further markets, such as medical equipment. For example, pipette filters are used for taking diagnostic saliva samples; filter materials with wicking are widely used for pregnancy tests and air fresheners, which absorb aromatic oils through a wick and constantly release them into the ambient air. The products are also used as media carriers, e.g. in marker pens and make-up sponges - or as beauty experts call them, make-up blenders. The possible applications seem limitless. Would you like to know more? Then contact our filter material expert, Victor Asselberghs. He has an unparalleled knowledge of sintered PE. He knows the material and the market for all applications better than anyone else.



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KÖPP Filter Team

More economical, more precise, more

We benefit from the change to new production methods in two ways. Firstly, they allow us to work more economically, as we produce less remains. Also, we can make more complicated shapes and larger volumes. This advantage is particularly useful for our large customers.

"Less waste" is also the slogan of our sustainability campaign. As you can see, "Hand in Hand with Nature" cuts across all our areas of business. But there is certainly more to be done. We are working on it. We promise.





LIQUID SEALS – Locations combined, processes concentrated

As a customer, perhaps you know this already: We have combined our two locations working with FIP(F)G services in Aachen. For business reasons, over recent months we have been progressively moving our production from our plant in Bovenden to our main facility in Aachen, combining the two production facilities to a knowledgecenter

“Having everything in one place makes work considerably more efficient for our team”, explains Key Account Manager Markus Peitz. Just having all the pre-treatment methods - plasma, corona, flame or primer - available in one place optimises the processes logistically.

Of course, combining the two plants involved some conversion work. “We

now have a dedicated area for the 1K silicone machine that is hermitically separated from the PU area”, says Head of Production, Jürgen Paul, who is pleased with the improved infrastructure. We have also added a 2K foam silicone machine to our equipment. Of course, the service is still as excellent as ever, from planning to delivery of your product with a perfect liquid seal.



Tokyo 2020 – we’re involved

Do you remember? We introduced the Paralympic canoeist, Katharina Bauernschmidt in an issue of insight just over a year ago. Alexander Paa, the Head of our Sample Department, worked meticulously to make her a bespoke back support and leg stabiliser for her kayak from KÖPP material. This helped her in her quest to qualify for the Tokyo Paralympics. And she did it! She got through the qualifiers in Szeged, Hungary. We are extremely proud of her, and we will be cheering her on!



WINTER RACE
2019/2020



PARTNERSHIP FOR EXCELLENCE



At the 57th Winter Race on 6th December 2019 featured our Managing Director Achim Raab once more, accompanied by Bart Janssen, Vice-President of our partner company, Armacell. The two passionate runners reached the finishing line in very good positions for their age groups. Unlike last year, the weather was on our side, and it was nice and sunny on the Chorusberg in Aachen. We look forward to next year, when we will be taking part again.

ANNIVERSARY 2020

AACHEN MAIN SITE

10 YEARS	DATE OF JOINING
Hickert, Stephan	01.01.2010
Klein, Armina	01.01.2010
Stiebig, André-Johannes	01.04.2010
Keuchen, Daniel	01.10.2010
25 YEARS	DATE OF JOINING
Heltzel, Lothar	01.03.1995
40 YEARS	DATE OF JOINING
Nikolaus, Christel	17.03.1980

BOVENDEN SUBSIDIARY PLANT

10 YEARS	DATE OF JOINING
Hafke, Marcel	01.03.2010
Grabowski, Gabriele	01.07.2010
Eberhardt, Dirk	01.08.2010
Agic, Marija	01.11.2010
Winkler, Hans-Peter	01.11.2010
25 YEARS	DATE OF JOINING
Woggon, Sabine	01.03.1995
Schnol, Antonina	18.04.1995
Esch, Waldemar	01.06.1995

NEW ADDITIONS

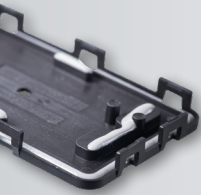


Jürgen Müller
Internal sales



Jürgen Müller started at KÖPP Aachen on 1st February 2020. Before then he gathered sales experience at Matuschek Messtechnik. He is a qualified electrical engineer, and he is 46 years old. He will be mainly responsible for CR, PE and liquid seals.

mail: j.mueller@koepp.de | phone: +49 (0) 241 16605-43 | fax: +49 241 16605-55



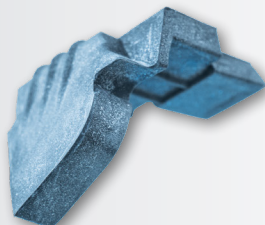
Boris Lenko

Sales Representative Slovenia, Croatia, Bosnia-Herzegovina, Serbia, North Macedonia, Montenegro and Kosovo



Boris Lenko has been working in international foam sales for many years. He has been working for us since November 2019 in the Balkan states Slovenia, Croatia, Bosnia-Herzegovina, Serbia, North Macedonia, Montenegro and Kosovo. In addition to languages from the region, he speaks German and English. In his free time, he is a gifted angler.

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Roop KOEPP Foam Technologies Pvt. Ltd.

Manesar, Gurgaon · India

solutions



in foam

