



insight.

MAGAZINE

No. 19



Cellular rubber • Cellular polyethylene • Sponge rubber • Fluid sealants • Filtration technology

► **New premises**

More space for tech and QS

► **Effective protection**

What we're doing to fight
cybercrime

► **Availability of materials**

What we're doing to secure supply

A first-class addition to the range:

2C SILICONE FOAM

precisely applied silicone with
added air





Dear Reader,

we're facing challenging times. Wherever you look, it's always the same things: diminishing resources, exploding prices, war in Ukraine, Covid-19. The list is a long one. But how can we face everything? What will come next? And what can we do? A lot! The phrase "rising to the challenge" has never quite been as relevant as over the last few years. Business as usual no longer cuts it: we now need new solutions. Where will we get our carbon black from? How do we react to price hikes? And how can we protect ourselves long-term from the increasing risk of cybercrime? All of these factors are hugely sensitive to our value-added chain, which ends in a confirmed, binding delivery to our customers.

This copy of **insight.** will provide you with more information on our everyday work, the challenges we face and the solutions we're implementing. We've continued to invest in sustainability in manufacturing,

development and testing – and therefore in the quality of our products and services. We look forward to introducing you to new machinery, new offices and even a new material in this edition.

Another highlight is our 2-component (2-C) silicone foam, which you might have spotted on our cover. Our message is this: everything is possible. What can we do for you? Please do get in touch.

We hope you enjoy reading this magazine and I wish you all the best,

Achim Raab
Managing Director

"MISSION AVAILABLE" –

Investing in our machinery



Preventing manufacturing bottlenecks and downtimes is, in time like these, top priority. One of our strategies is to further expand our machinery, including this year two additional H24A horizontal splitting machines from Fecken-Kirfel which will join our manufacturing halls in Aachen.

We were able to get these pre-owned, but still quite underused, splitting machines at an absolutely outstanding cost. The previous owner had run the machine for just 200 hours over its 3 years of ownership, but we managed to add a further 200 hours to that after just 3 weeks! We've had one of our older H24A horizontal splitting machines retrofitted, and will be sending it later on to our joint venture in India. Once there, it will provide support to the K11/2 to ensure production reliability and will be the first of its kind in the whole of India. "Thanks to these two new automatic H24A machines, we've been able to increase our capacity considerably," explains production manager Dietmar Beuel. "Demand has also increased hugely. Just last year alone we handled 85 % more blocks than in the year before".

Other new investments include a water jet system which was installed to replace the ageing one and a Keyence computer measurement system for the exact measurement of, to name one example, punched items made of different materials such as cellular rubber, cellular polyethylene or filter materials with different pore diameters. "The device provides us with quality checking options like we've never seen before," explains QS employee Daniel Szymczak.

Investments this year are around €1 m for our Aachen location and an additional €2.5 m for our Köpp facilities in Romania for new press lines to further expand our block capacity. "An extremely important investment. Having good, not just satisfactory production capabilities, are what make or break reliable delivery confirmations," explains Achim Raab.



2-C SILICONE FOAM – precisely applied silicone with added air

You'll already know all about our formed-in-place 2-component polyurethane seals and single-component silicone seals. For over 20 years, we have been producing down to the smallest geometries in our FIP(F)G process directly onto your component. Extreme adhesion and long-lasting for any application. And we can now do the same for silicone in our 2-component foam version. For all applications requiring the temperature and chemical resistance of a silicone, but also a seal which – thanks to its extra volume – offers a lower hardness and higher compressibility to compensate for component tolerances.

Lots of good reasons to use our silicone foam

The physical and chemical properties of silicone foam make it a reliable material for a number of different applications. Its resistance to high temperatures, for example, make it perfect for sealing ovens or sterilisers. Our 2-components silicone foam can resist up to 180°C for hours on end (and even up to 350°C for short periods), and also below freezing point down to -60°C. An additional bonus: its extremely low water absorption (<1 %). Thanks to its closed-cell surface,

silicone foam does not absorb any water, making it ideal in tropical conditions or wet rooms. Ideal for seals on dishwashers or washing machines, and excellent for sealing automotive lighting. Protection against ingress up to protection classes IP 69K and NEMA 4-6P is possible, making it ideal for numerous applications. Flame protection up to UL 94 HF-1 is also often not just advisable, but in some cases (such as for sealing control cabinets) even mandatory. Strict flame retardancy standards stipulating the use of self-extinguishing materials are

also found widely in the automobile, electronics or packaging industries.

Our 2-component silicone foam and its single-component equivalent both offer equally high resistance to aggressive chemicals such as brake fluids, lubricants and refrigerants (as well as commercially available cleaners). Thanks to the silicone foam's excellent anti-fogging properties, it is also an attractive sealant material in the automotive industry which needs to comply with the strictest emission standards. Flexibility with regard to



Markus Peitz

the viscosity are what permit (just like with single-component systems) the application of the most complex geometries directly onto the part and quick hardening at room temperature allowing faster subsequent processing. These are the perfect conditions, especially for car manufacturers who need this for their seals and barriers.

Precision machinery: our 6-axis articulated robot

Our decades of expertise in formed-in-place seals has the best support thanks to our high-tech machinery. We have now rebuilt one of our six-axis articulated robots to work solely applying silicone seals and moved it to an area in the manufacturing hall where only silicone is handled due to the importance of keeping PU and silicone strictly separated.

The 6-axis robot applies liquid, thixotropic sealing systems with extreme precision onto flat surfaces and into grooves – both 2-dimensionally and 3-dimensionally, and can even handle from extremely acute angles to vertical applications. Speak to your *Expert in foam* to find out what opportunities we can offer you for your applications. We look forward to your call.

Look forward to talking to you:

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2-C SILICONE FOAM – SUMMARY

- Temperature resistant from -60°C to +180°C (temp. to 350°C)
- Very low water absorption (<1 %)
- High resistance to chemicals
- Flexibility in viscosity, reactivity and colour
- Hardening at room temperature; after 20 min. to 12 hrs non-sticky and ready-to-install
- Flame resistant to UL 94 HF-1
- Excellent long-term behaviour
- Conforms to UL50
- Stable in UV light





Laboratory, Dr. Andreas Peine, Head of R&D



Developed
AND tested
in Aachen



NEW PREMISES FOR TECH / MORE SPACE FOR QS

"Developed AND tested in Aachen" is now true for all our in-house KOEPPCell® products. From this year on, both the entire technical department and the quality assurance team will be located at our main headquarters – right next to one another. Up to now, a part of the technical department was located in Bovenden, but this has been relocated to a centre of excellence in Aachen to save time and

to have all the measuring systems in one place. Clearly this is a much better situation, not just for members of the quality assurance team who will now be able to carry out production -related measurements and testing alongside the manufacturing process itself. For the entire product development process this will be an important factor in future success, as without thorough measurements of

all product properties and final release by in-house quality assurance, no quality will get the go-ahead for serial production. Density, water absorption, burning rate, cell size, compression set, Shore hardness, tensile strength, fracture strain – absolutely everything will be determined, documented and evaluated with the greatest accuracy. In addition, the testing laboratory in Bovenden

**"Cooperation between
development and
quality assurance
even more advanced."**



More space for quality assurance



how we can protect ourselves from cyber attacks



Dirk Schaaps,
cyber security, IT



André Stiebig,
IT manager

“We’re currently experiencing a five-fold increase in incoming phishing attempts, aimed directly at our employees.”

Phishing, data espionage, attacks by hackers – the headlines involving cybercrime seem to be coming more and more regular in our newspapers. The illegal business of data theft and blackmail seems to be booming. To protect ourselves as best we can, as well as setting up different security measures in terms of software and hardware, we also need to ensure long-term awareness training for everyone involved. Even the best virus scanners are useless if employees aren't careful when using the internet.

Here at KÖPP, we started providing training for our employees a few years back, working closely alongside the KnowBe4 platform, which has specialised in excellent security awareness trainings. All our employees that work with a PC receive regular tasks and tutorials which must be

completed or attended. Whereas normal training videos can tend to be a little dry and boring, KnowBe4 put a lot of effort into its content, like recording it in the style of a television series. KnowBe4's entire user interface even looks a little bit like a very well-known streaming service which is famous for its users' binge-watching tendencies. “The whole thing from the visual presentation to the fun format and even to the final assessment are all fantastically motivating to get to grips with the topic. The course contents are actually designed as part of the story which is so exciting that you're desperate to find out what's going to happen next, so you're only too happy to watch each new episode,” explains excitedly Dirk Schaaps, IT security officer at KÖPP.

KÖPP invests a five-figure sum in the teaching platform annually. “And quite rightly too,” says Schaaps, who tells us how the number of fishing attempts has jumped since the start of the war in Ukraine. “The attacks aren't getting past the firewall now like they used to over the last few years. We're currently experiencing a five-fold increase in incoming phishing attempts aimed directly at our employees.” The consequences of successful attacks have been felt by a number of companies whose networks have been completely paralysed. Restoring data can be extremely time-consuming and costly – it's a scenario that really no-one wants. So, in short: be careful and don't drop the ball! Cybercrime development is running at full speed again, so don't get caught out.





KÖPP makes the race –

IN AN ELECTRIC RACE CAR AROUND THE HOCKENHEIMRING

Our "KOEPPCell® CR-F fest" cellular rubber will soon be doing the rounds at the Hockenheimring and the Red Bull Ring in Austria. It will protect the core technology of the brand-new first ever electric race car designed by the Infinity Racing Team at Kempten University of Applied Sciences. Every year, the students build a Formula racing car which takes part in international Formula SAE competitions across the whole of Europe. This season, the 4-cylinder internal combustion engine will be replaced for the first time ever by a fully electric drive. This subject is highly topical at the

moment, not least because of the recent decisions made in Brussels. "When Elias Renner, who was in charge of the construction and assembly of the battery, came to me and asked if we would be prepared to supply just the volume needed for building one single vehicle, it didn't take us long to come to a decision," remembers sales manager Axel Wynands. "We wanted to support this very exciting project, so we supplied the material free of charge".

To protect the battery and its sensitive lithium-ion cells, KOEPPCell®

CR-F fest is the ideal material. It cushions, seals air passages and complies with standard UL94 V0 – the strictest fire classification standard which is obligatory for all materials within and around the battery.

We wish the whole Infinity Racing Team the greatest success for the upcoming races and say to the drivers: "Burn that rubber! (actually, don't!)" Hey, that could actually be a motivational quote for us too! 😊

KÖPP DOVES OF PEACE A BEACON OF HOPE

The war in Ukraine has affected all of us for months now – children as well as adults. To try and help with the children's worries and the importance of peaceful co-existence, the staff at the nearby Lindenschule school decided to hold a few project days on the topic of peace. We decided to help out in our own way by supplying large sheets of KOEPPCell® polyethylene for the children to build and create. They constructed large white and blue doves of peace which now decorate the school's fences and offer a very special welcome to visitors. What's more, the days turned out to be a huge success as just a few days later some Ukrainian citizens were housed temporarily in the neighbouring sports hall. "Not only do these doves of peace represent a lovely boundary to our school yard, but also sets a beacon of hope for peaceful coexistence after the end of this awful war," explains deputy head Kathrin Claßen.



A very successful campaign we were proud to be part of.

WHAT WE'RE DOING TO MEET AGREED DELIVERIES

The delivery bottlenecks we started to see at the end of last year have now started to get even worse, not least because of the Ukraine crisis and the resulting boycotts against imports from Russia. We particularly notice this when trying to obtain carbon black used during our manufacturing process, as a third of global supply comes from Russia. Even though we no longer use Russian carbon black, the shortages are acutely noticeable in our supply chain. "You really need to have good contacts," tells us Jan-Niklas Klein, head of procurement.

The production of PE blocks is another issue right now, as they require LD-PE, which is a product of "cracking" the residues from petrol and diesel production. These residues also come from the refineries processing the crude oil coming from Russia. One of the facilities which supplied us with LD-PE has already been shut down, and that has resulted in considerable shortages and therefore prices going through the roof. We can't do anything other than just buy what's available – if we don't do it, somebody else will. "It's tough, but there's no alternative," explains Achim Raab. "We intend to stick to our word and deliver all our confirmed orders. We've managed to so far, and we want to continue doing so".

Unfortunately, even we here at KÖPP we couldn't avoid a moderate price increase in March. "We still hope we've managed to achieve a price level that our customers can secure the planning reliability they need."

That's not going to be the only challenge, though, according to Raab, who predicts issues with the availability of empty containers. All you need to do it take a quick look over to Shanghai which appears to be in constant lockdown to see an endless chain of issues. More and more ships are stuck outside Shanghai and/or Europe and the problem isn't being solved. Getting empty containers is either almost impossible, or at the best prohibitively expensive. "We've never needed so much perseverance and creativity in procurement as now. Good that we've got the right experts on our side, concludes Raab optimistically.



Procurement team:
Ibrahim Bah (links), Ute Beqiri, Jan-Niklas Klein (head of procurement)

ANNIVERSARIES 2022

AACHEN HEADQUARTERS

10 YEARS	START DATE
Masek, Vaclav	01.05.2012
Kals, Maik	25.06.2012
25 YEARS	START DATE
Haas, Nadine	02.01.1997
Liquori, Sandro	17.02.1997
Rosenfeld, Alexander	22.09.1997

BOVENDEN PLANT

10 YEARS	START DATE
Börstinger, Christoph	01.04.2012

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Roop KOEPP Foam Technologies Pvt. Ltd.

Manesar, Gurgaon · India

solutions



in foam