



insight. MAGAZINE

Cellular rubber Cellular polyethylene Sponge rubber Fluid sealants Solid rubber Filter technology Special products

special

► **Cellular rubber**

All of our quality products are available from stock

► **Foam rubber**

High-performance seals

► **Fluid sealants**

directly on your component

► **PU moulded parts**

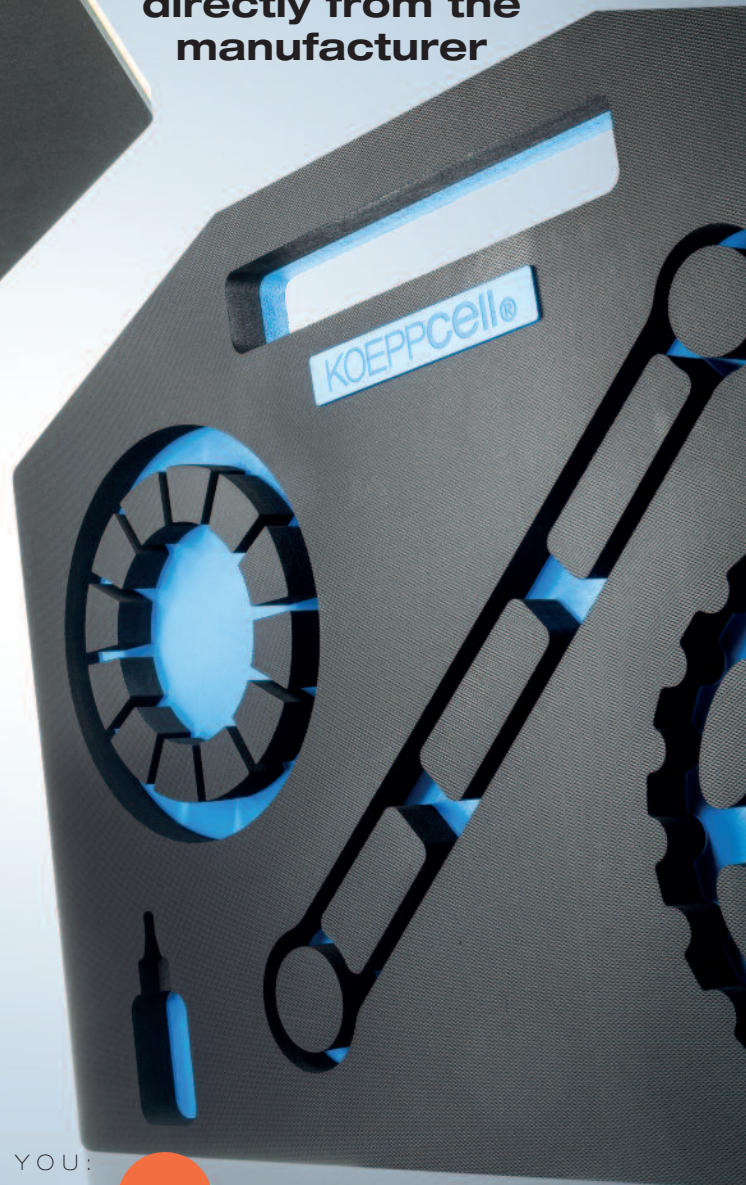
New to the portfolio

► **Filtering technology**

Keeping things clean

**Faster! Better!
Cheaper! Cellular
polyethylenes**

**Blocks and
packaging solutions
directly from the
manufacturer**



WE'LL SEE YOU:

FachPack

Nuremberg, Germany: 25.-27.09.2018 **Hall 9/Stand 326**

FOAM EXPO
Europe

Hanover, Germany: 16.-18.10.2018
Hall 2/Stand 124



“The production of our PE grades is completely in our hands, enabling us to operate totally independently of sub-suppliers. Our customers can thus reap double the benefits.”

Achim Raab, CEO

Dear Readers,

We are **KÖPP – Experts in Foam.**

We may bump into each other at this year's FachPack trade fair in Nuremberg or the FOAM EXPO Europe trade fair in Hanover. At both of these trade fairs, we will be presenting ourselves as a manufacturer of project-specific packaging solutions for the first time. A brief look at this special edition of our company magazine **insight.** will quickly provide you with an overview of our wide range of products for the **packaging, sealing, damping, insulating and filtration** sectors. However, the main focus of this issue is our high-quality cellular polyethylene products that are perfect for packaging solutions.

As a manufacturer of project-specific solutions for the packaging industry, our portfolio now consists of a total of fifteen PE grades available in a variety of different characteristics, volumetric weights and colours. Our customers have always benefitted from our extensive expertise along the entire value added chain. We thus continually develop new grades required by the market, ensure cost-effective production, implement simple punching through to complex milling, and supply goods promptly and directly from our warehouse.

Our “principle of providing everything from a single source” benefits our customers in several ways: Thanks to decades of specialist development and production knowledge, we provide tailor-made and high-quality products that we can also supply cost-effectively and quickly. Our products are purchased directly from the manufacturer.

As Experts in Foam we know the ins and outs of the market. Our aim is to not only meet the necessary requirements but also to anticipate future developments. This is why our development skills, in which we are continuously investing high-tech solutions and expertise, are so important to us. This ensures that we are continuously developing new, tailored solutions for challenging applications. Currently we have also got some interesting materials in the pipeline. We would be happy to keep you up-to-date via our Newsletter, our homepage, our **insight.** magazine or preferably in person. Please do get in touch.

Warm regards,

Achim Raab, Managing Director





Fully equipped for the packaging sector – including suitable PE for your application



KOEPPCell®

K/PE 30 is the first KOEPPCell® PE grade to be awarded the "Blue Angel" – the eco label of the federal government of Germany.

No limits to your ideas – wide range of colours and characteristics

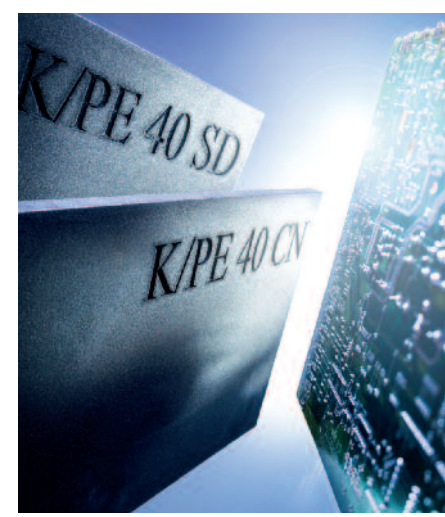
This means that we sustainably put a lot of energy into developing and producing a variety of special grades to be able to serve as many applications and industries as possible. The standard black and white designs did not meet the requirements of many customers. The demand for conductive and static dissipative material was primarily voiced by the electronics industry, while the automotive, aviation and aerospace sectors wanted flame-retardant grades and halogen-free flame protection systems, the sports and leisure sector on the other hand wanted an EVA system that was preferably available in different volumetric weights.

When it comes to the colour, there are virtually no limits to the creativity of our customers: In addition to black and white, we now also offer blue, green, yellow, red and silver/grey based on our white K/PE 35, K/PE 45 and K/PE 70 grades.

Tested and approved by independent institutions

To be able to ensure that our products really can meet customer requirements, we have had many tests performed by independent parties. We particularly wanted to be certified in accordance with the guidelines of the "Blue Angel" – the eco label of the federal government of Germany. With our block foam polyethylene K/PE30, we are producing the first and only PE foam in the world that can carry "The Blue Angel" seal of quality.

15 finely structured PE grades in different colours, volumetric weights and designs: That is the current state of our polyethylene range that we produce in-house and which we particularly supply to customers in the packaging industry. Polyethylene has excellent characteristics. It has virtually no smell and low emission values, is heat malleable and can effortlessly be cut, split, punched or lasered. Moreover, our PE appeals with an attractive price and the usual KÖPP quality.



Standard grades are predominantly used for packaging solutions. It is not just the colour of these grades that vary, the volumetric weights can range from 20-70 kg, which ultimately affects the rigidity of the material

and thus plays a decisive factor when it comes to product protection. Special grades used to protect electronic components, for example, are also being requested more frequently.

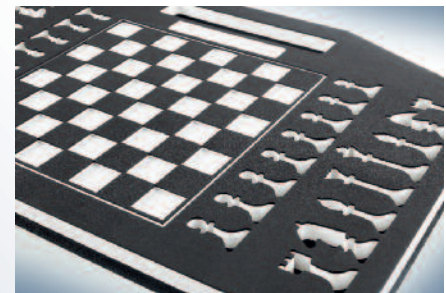
Special grades of our PE range

Quality (trade name)	Properties				
	Temperature resistance	Temperature deformation	Electric conductivity	Electric dissipation	Fire behaviour in accordance with UL94 HBF
K/PE30A	up to 100°C	X			
K/PE35A	up to 100°C	X			
K/PE35AT	up to 115°C	X			
K/PE35FR	up to 100°C				X
K/PE40CN	up to 100°C		X		
K/PE40SD	up to 100°C			X	
K/PE45FR	up to 100°C				X

TESTED AND APPROVED

- The Blue Angel
- Odour test as per VDA 270
- VOCs according to VDA 278 → 643 µg/g
- TÜV test for harmful substances
- Thermal conductivity value 0,032 W / m. K.
- Fire behaviour in accordance with CS-JAR-FAR 25.853 and DIN 4102-1 (UL94 HBF)
- Conformity in accordance with (EG) Nr. 1907/2006 (REACH)
- Conformity in accordance with guideline 2011/65/EG (RoHS)

PROCESSING



Manufacturer and processor: from semi-finished to finished parts

We supply PE in a block size of 1200x2100x110 mm, although this can be split, cut, laminated and coated. A variety of processing methods can be implemented. We can mill moulded parts accurately in accordance with your specifications, such as different case inserts, and can laser-engrave your company logo if you like.

Cellular polyethylene

AVAILABLE
FROM STOCK

**We are faster!
We are better!
We are competitive!**
That's a promise!



The production of our PE grades is completely in our hands, enabling us to operate totally independently of sub-suppliers. Our customers can thus reap double the benefits. Unlike our competitors, we have the invaluable

advantage of being able to supply directly from our warehouse. Additionally, when it comes to setting our prices they are not based on standard market prices but only on the actual production costs that we incur.

Our personal guarantee

We guarantee that we will provide the same grade PE for your packaging **faster and more competitively priced** than any other trader/processor. This is because you are buying directly from the manufacturer. Compare and see for yourself – KÖPP only saves on costs not the service.

**Guaranteed
best
price!**



Cellular rubber

KÖPP 



A solution
for many markets

AVAILABLE
FROM STOCK

Quality (trade name)	Chemical properties/ resistance						Mechanical properties		Physical properties	
	Ozone/Elements	Alkalis	Acids	Mineral oil - Petrol Diesel - Biodiesel	Water (at 100°C)	Light	Good tensile strength and good elongation at break	good DVR values	Temperature- resistance	Flame- resistance
EPDM sulfur free	EPDM-L	+	+	+	-	+	+	+	+	+
	EPDM-S	+	+	+	-	+	+	+	+	+
	EPDM-W	+	+	+	-	+	-	+	+	-
	EPDM-SUW	+	+	+	-	+	-	+	+	-
	EPDM-L/Perox	+	+	+	-	+	+	+	+	+
	EPDM-S/Perox	+	+	+	-	+	+	+	+	+
	EPDM-W/Perox	+	+	+	-	+	-	+	+	-
	EPDM-SUW/Perox	+	+	+	-	+	-	+	+	-
NR	EPDM-PE-Blend	+	+	+	-	+	-	-	+	-
	EPDM-CR-L	+	+	+	-	+	+	+	+	+
	EPDM-CR-S	+	+	+	-	+	+	+	+	+
CR	ZK/NR-L medium	+	+	+	-	+	+	+	+	-
	ZK/NR-S firm	+	+	+	-	+	+	+	+	-
	ZK/NR-S extra firm	+	+	+	-	+	+	+	+	-
CR	ZK/CR-L medium	+	+	+	+	+	+	+	+	+
	ZK/CR-S firm	+	+	+	+	+	+	+	+	+

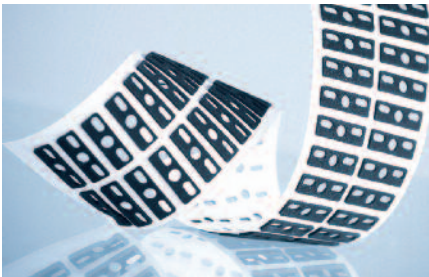
excellent: + very good: + good: + not suitable: -

For further detailed material specifications please visit our homepage www.koepp.de.

Cellular rubber has been associated with KÖPP for 80 years. As a manufacturer, trader and processor of the material, KÖPP has effectively influenced the quality of this all-round product for seal and damping applications and continuously developed it further and optimised it in accordance with the high requirements of its customers.

The closed-cell structure of cellular rubber makes it the perfect material for a variety of applications meeting the highest requirements relating to the sealing function, damping, compressibility and processing options. Due to its high level of reliability, KÖPP cellular rubber is now used in virtually every area of life. Regardless of the industrial sector – structural engineering,

mechanical engineering and/or the textile industry – other applications have been added over the past decades particularly those encompassing aspects of environmental awareness and energy efficiency.



UNIQUE AND ONLY AVAILABLE
FROM KÖPP
EPDM-SC-W

- Lightweight semi-closed cell structure, pure EPDM with 100 kg/m³
- Perfect for acoustic applications
 - Sound absorption
 - High damping measure when used as a seal
- Unique pore structure
- Watertight during U-profile test when compressed by more than 40%
- Excellent „Touch and Feel“

Customers are our main focus. From development through to processing

Currently, KÖPP uses the registered trade name KOEPPCell® to supply its customers with a total of 17 grades in different volumetric weights from the EPDM, NR and CR elastomer groups. The latest developments include peroxide-linked EPDM foams, a high-quality EPDM-PE blend and the

semi-closed cellular grade EPDM-SC-W that gives the foam unique characteristics.

With its extensive portfolio, KÖPP focuses closely on the requirements of its customers and therefore also offers special grades. Tailor-made solutions have always been part of the company's philosophy. This is also reflected in the processing. As a processor of our own block material, KÖPP is always able to prepare materials for our downstream customers in such a way that they can be directly integrated into their production processes – as sheets or endless roll products, precisely split from a thickness of 0.8 mm, with adhesives applied upon request, cut, punched or milled.

**CELLULAR RUBBER
AND ITS QUALITIES
PROPERTIES
TO MEET EVERY NEED**

- EPDM:** Universal application, sulphur and peroxide-cured
- NR:** Extremely elastic
- CR:** Excellent resistance to chemicals
- EPDM-PE:** High-quality blend; unbeatable price, heat malleable
- EPDM-CR-Blend:** Excellent chemical resistance, perfect price



Our high-performance seals

KÖPP is the only European manufacturer to produce high-quality sponge rubber solutions for the global market in Germany. Some moulded parts, profiles and round cords are manufactured by hand. Quality rather than mass production always applies! And that is certainly necessary, as sponge rubber seals are primarily used for challenging applications. Due to diverse technical properties, the widest range of formulas and production variations, sponge rubber offers customised solutions like hardly any other material is capable of doing – suitable for use as a precision seal, sound insulating element or elastic vibration damper to protect easily damaged goods.

Its success is down to its properties

In contrast to cellular rubber, sponge rubber has a mixed open and closed cell structure, which in addition to high compression elasticity also has good resilience properties. Even under light pressure, sponge rubber shapes itself closely to all surrounding surfaces making a perfect seal with a waterproof external layer. By using relevant mixtures and changing the density, we can accurately determine the softness of the sponge rubber profiles, its resistance to different external influences and media.

Progress through development competence

The success of the sponge rubber line is largely down to the development work – a major focus in the company. KÖPP specifically invests in the latest lab technology and particularly in outstanding expertise. The team of qualified chemists is always working on mixtures that the market demands. Sealing power, softness, resistance to the widest range of external influences such as oil, sulfur, heat, ageing or urea – everything is just a question of the right mixture.



TECHNICAL PROPERTIES AT A GLANCE

- Excellent sealing properties
- High compressibility
- Good insulation properties
- Easy to work
- Mixture-dependent high temperature and ageing resistance (EPDM)
- High flame retardancy rating and high resistance to oils (CR/NBR)

KÖPP uses high-quality casting machines to accurately produce made-to-measure elastomer, silicone and hot PU moulded parts for a variety of applications, including for the automotive sector as an insulation element, to guide energy lines, for acoustic uncoupling or as a seal in the electrical, medical or food production industries.

The variability of moulded parts makes them particularly special.

THE MOST IMPORTANT BENEFITS AT A GLANCE

- Highly complex structures with undercuts possible
- The processing of different materials
- Formulas can be freely set
- Any volumetric weight
- The widest range of properties in terms of surface structure and functionality are possible
- Vacuum casting and large-scale casting up to 10,000 cm³ possible

Moulded parts made of silicone: Nothing is impossible!

LSR silicone injection moulding

High-quality and industry-suitable injection moulding products made of liquid silicone (LSR = liquid silicone rubber) in different hardnesses, colours, surface structures or

Moulded parts using a low-pressure process

In the low-pressure process, a 3D mould is initially milled from aluminium or steel, silicone or PU is then poured into it and is hardened using heat. Structures with



shapes are permanently elastic, highly temperature-resistant to 250°C, mechanically stressable, anti-torsion, media-resistant as well as cold-resistant to -40°C. Hot PU can also be shaped using certain processes.

complex undercuts are also possible. Vacuum casting can also be used, if required.

Customers from the construction or sports industry cast components of up to 10,000 cm³. We rely on a large variety of materials during this process. PU, hot PU and silicone give the components different properties. Thus, hot PU provides particularly reliable protection against abrasion, is resistant to physical effects and is highly elastic.



Accurately and securely connected to your work-piece, precisely dimensioned, extremely durable and cost-effective seals: Supplied by KÖPP for more than 20 years!

With its unique fleet of dosing machines, KÖPP produces foam seals and single component solutions at both of its sites in Germany. Your requirements and technical specifications for your application play a key factor when selecting the materials. We work with you to agree upon the specific density, hardness and component material to meet your requirements. The option of moulding components (e.g. moulding of electronics) is becoming increasingly popular.

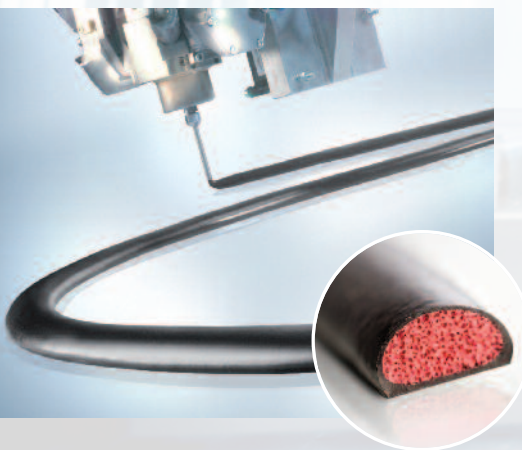
Our technology

The possibilities our technology has to offer are as extensive as the requirements for seals stipulated by our customers. This means that providing technical advice on site is essential. Thanks to our experience and technical expertise, we always find the perfect solution by working with our customers.

1K liquid sealing system, adhesive technology and moulding

2K polyurethane foam sealing systems

4K sealing systems (elastomer-covered PU foam seals)



Outsourcing flexibility

An increasing number of customers rely on outsourcing to remain flexible. Thanks to our extensive range of storage and logistic capacities at two sites in Germany, an increasing number of series manufacturers are outsourcing their process responsibilities and entrust us with their workpieces – often several 100,000s of components a year. Efficiency that pays off.



FIP(F)G

Sealing, gluing, moulding

Perfect liquid seals -
directly on your component

Filter equipment



Keeping things clean

KÖPP has supplied individual solutions for liquid filtration, ventilation and aeration, sound insulation and dust filtration since 1961. Our company appeals both in terms of quality and price. A big advantage is that we stock everything – filter equipment, filter cartridges, spare parts and filter materials.

To ensure we can always offer our customers the best solution, we have deliberately established a wide range of high-quality water filters, protective filters for heating water, magnetic filters and special filters. With our own range of filter bowls and filter heads, customers always receive the expected high KÖPP quality

at an attractive price. As the only manufacturer of filter cartridges for depth filtration, we have many years experience in producing and processing filter equipment and materials. You too can also benefit from our expert knowledge throughout the entire filtration process. We will be happy to help you.



Our filter materials are suitable for a variety of applications

KÖPP has always relied on the tried and test VYON® filter material – an open-pored, low-pressure polyethylene with thoroughly positive features. Different pore diameters enable accurate filtration at different filtration ratings. Combined with our broad processing range, our customers benefit from perfect solutions for a wide range of different applications. We also produce moulded parts in accordance with customer specifications under our registered trademark GURON®.

Filter materials

OUR MATERIAL CHARACTERISTICS

- **Physiologically safe:** perfect for the food and drink sector, standard-compliant
- **Chemical-resistant against most acids, bases and organic chemicals**
- **Porous, versatile applications**
- **Solid, lightweight, pliable (moulded part)**
- **Available with a variety of surfaces: hydrophobic, hydrophilic and self-sealing**

APPLICATIONS SOME EXAMPLES

- **Medical equipment,** e.g. in analytical equipment used to filter liquids
- **Food industry,** e.g. in coffee machines, water filters
- **Automotive,** e.g. fire proofing in vehicle battery
- **Sensor and measuring technology,** e.g. as silencer in diaphragm pumps or compressed air applications
- **Vacuum technology,** e.g. in vacuum switches, VAC sheets, flow control valves

Company profile

Solutions in Foam

Founded in 1938, KÖPP is now one of the leading manufacturers and processors of cellular rubber, cellular polyethylene and sponge rubber. The broad range of the all-round company also includes liquid seals, PU moulded parts and filtering technology.

The unique and broad range of products provided by the specialist for the **sealing, damping, insulating and filtration** sectors, ensures that KÖPP has an extensive network and employees that are recognised experts in foam.



Philosophy

Independent, dynamic, needs-based. As experts in foam, we are able to supply our customers with the perfect, high-quality and cost-effective solution for their application quickly and flexibly.

As a manufacturer, we operate completely independently, have extensive storage facilities, develop materials based on market requirements and deliver many variations of our products based on

customer specifications. We do not just supply polyethylene and cellular rubber as a semi-finished product but you can also order finished parts thanks to a wide range of processing options.



Locations

Aachen

Since the company was founded, the headquarters, including its unique European storage facility and modern fleet of machines used to process various grades of polyethylene and cellular rubber, have been based in Aachen. Liquid seals (FIP(F)G) and the extensive range of KÖPP filtration technology products are also available.

Romania

KÖPP has been running an extremely successful production site in Romania through its wholly owned subsidiary SC KOEPP ROMANIA S.R.L. since 2012. The KOEPPCell® polyethylene and cellular rubber grades, which were developed in Germany, are currently being produced at the site under excellent technical conditions. A specially developed laboratory for quality assurance purposes is also available.

Bovenden

The German subsidiary based on Bovenden, near Göttingen, produces sponge rubber. All of the material grades (cellular rubber, polyethylene and sponge rubber) produced by the company are developed, tested and inspected at the fully equipped laboratory. Bovenden is also the main site for the application of liquid seals (FIP(F)G).

India

Since 2011, all of the well-established EPDM grades are also manufactured in New Delhi as part of the 50:50 joint venture ROOP KOEPP FOAM TECHNOLOGIES. The Asian market is supplied from this site and the supply security throughout Europe is guaranteed.



Our team of experts is here to help



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