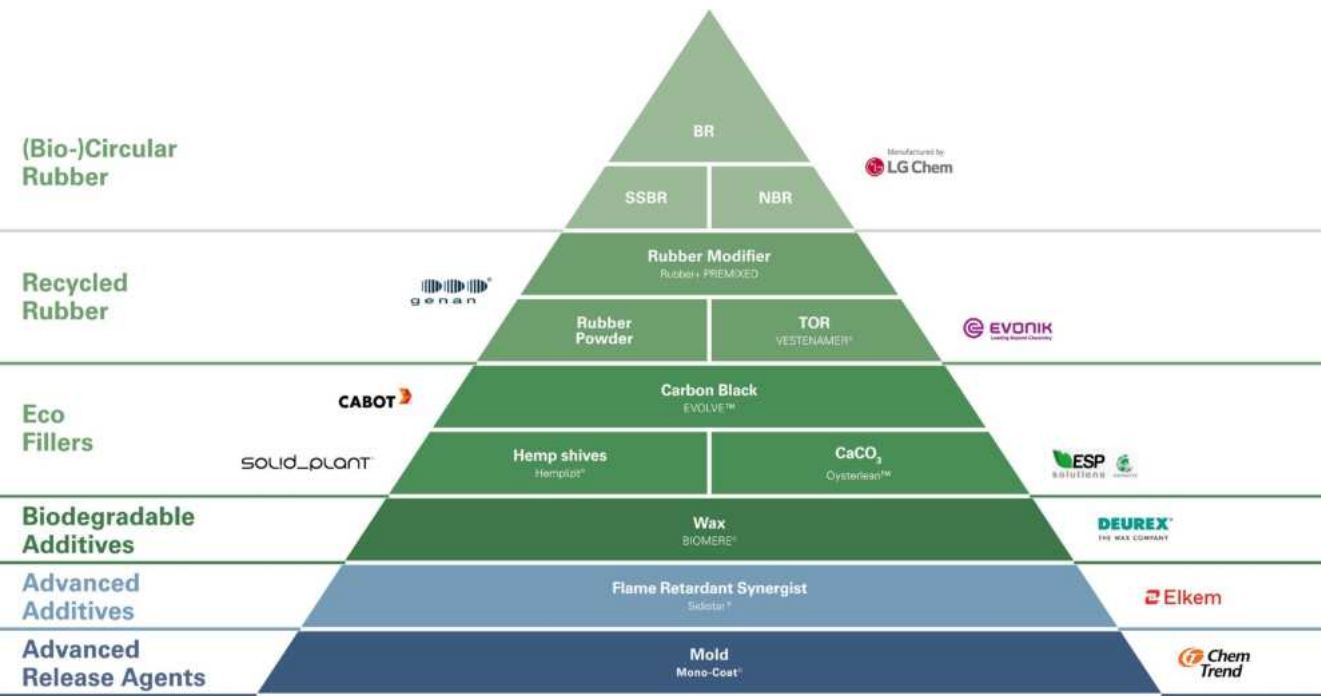


Smart.
Sustainable.
Solutions.



Portfolio and Handbook 
Rubber

Our more sustainable product solutions



Discover our full range of rubber solutions



Content

Your sustainability experts	3
Our sustainability vision	4
On the path towards a circular economy and de-fossilisation	5
Our more sustainable rubber solutions	6
Our suppliers – More sustainable solutions at a glance	7
Sustainability at Biesterfeld	12
Our commitment in the rubber industry	13

Introduction

Sustainability is becoming increasingly important in all areas of industry, and the rubber sector is no exception. While rubber is an essential material in many applications, its production and use present significant environmental challenges. High energy consumption leads to considerable CO₂ emissions, and the use of fossil-based raw materials further impacts the carbon footprint.

Natural rubber, as a biobased and renewable resource, plays a vital role in the rubber industry. However, in the past years, the industry has taken a more critical look at this natural source, as its cultivation must be managed responsibly to prevent deforestation and protect ecosystems.

At the same time, stricter regulations pose additional challenges for customers and suppliers in meeting sustainability requirements. In addition, rubber recycling is complex, but ongoing developments are gradually improving recycling rates and enabling new opportunities for a circular economy.

Despite these challenges, the industry is constantly evolving. Innovative solutions and technological progress are driving sustainable change. By investing in research, development, and responsible sourcing, we can reduce environmental impacts and create a more sustainable future for rubber products.

This handbook is designed to provide the knowledge and tools needed to navigate these challenges and implement sustainable practices.

Let us take this step together and drive the rubber industry towards a more sustainable future.

The Biesterfeld Sustainability Team

Your sustainability expert



Franziska Tödter

**Product Manager & Sustainability
Specialist for more sustainable
rubber solutions**

f.toedter@biesterfeld.com

Our sustainability vision

Our endeavour to make every application more sustainable.

WHY

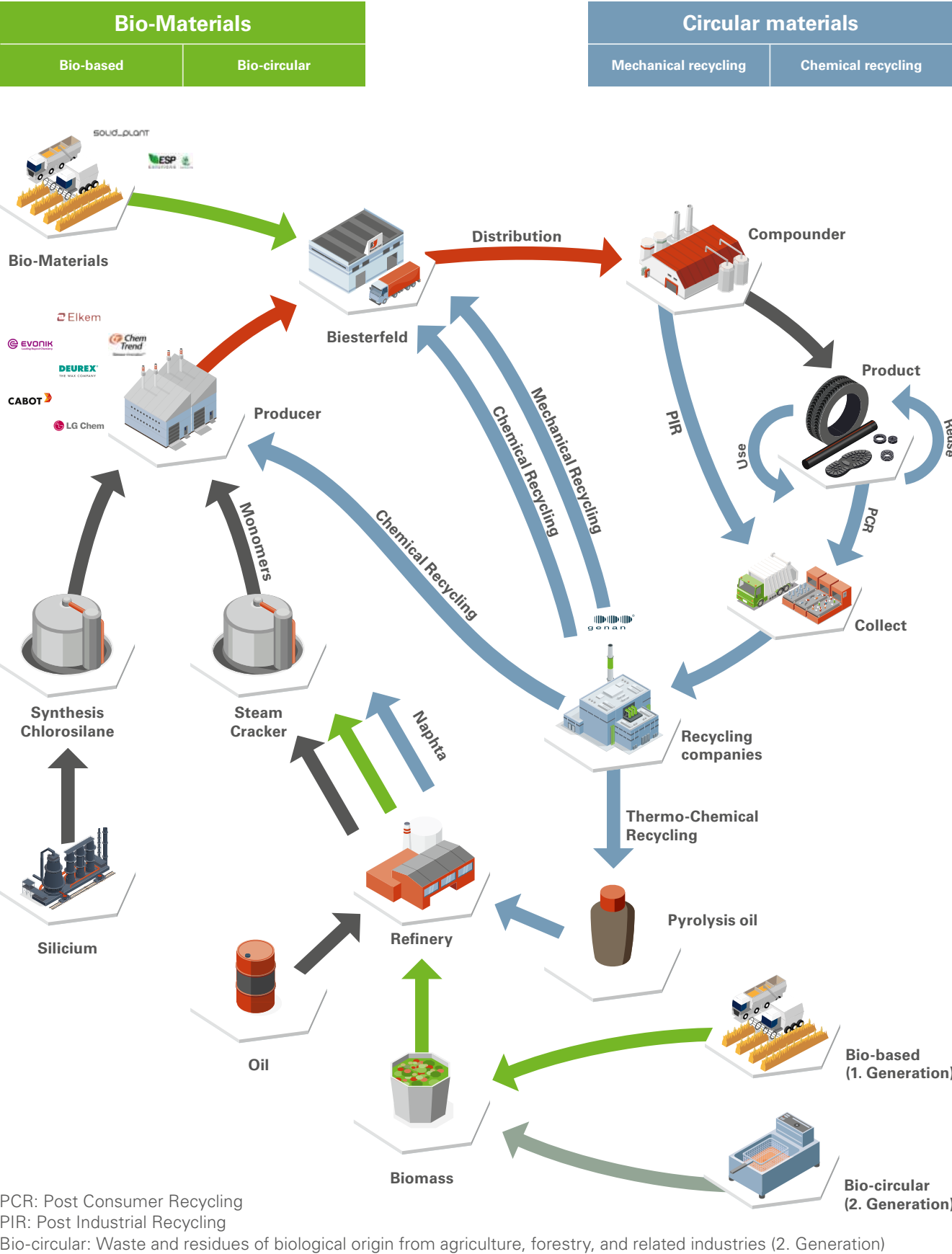
Proactively leading and inspiring our partners in relation to sustainability.

HOW

WHAT

A unique opportunity to play an active role in sustainable transformation.

On the path towards a circular economy and de-fossilisation



Our more sustainable rubber solutions

Product name	Material	Circular Materials		Bio-Materials	
		mechanical	chemical	bio-based	bio-circular
Rubber Powder	End-of-Life Tires	100%			
Rubber Modifier	End-of-Life Tires + TOR (trans-polyoctenamer)	95,5%			
BIOMERE®	Wax			≤ 100%	
Hemplizit®	Hemp shives			100%	
BR	(Bio-)Circular Balanced BR		100%		100%
NBR	(Bio-)Circular Balanced NBR		64-70%		64-70%
SSBR	(Bio-)Circular Balanced SSBR		45-95%		45-95%
VULCAN® 7H-C	Circular Reinforcing Carbon		100%		
Oysterlean™	CaCO ₃ (Oyster shells)				100%

Sidistar®	Amorphous (non-crystalline) spherical silicon dioxide	Produced with 100% Hydro power
Mono-Coat®	Semi-permanent release agent	Reduces waste, energy and emissions
VESTENAMER®	TOR (trans-polyoctenamer)	Low-melting thermoplastic rubber which is a valuable processing aid and problem-solver for recycled rubber

„We see great innovation potential for the rubber industry in the area of sustainability. Together with our partners, we are constantly expanding our portfolio and are examining which materials can be used to promote recycling and bio-degradability in the rubber industry based on specific criteria. We are always on hand to provide technical advice on applications and would like to work with our customers to create applications that form a good basis for connecting both industry and the environment in the future“

Sascha Hennig

Our suppliers – More sustainable solutions at a glance

Sustainability is a journey we take together. On the next pages, we proudly present our suppliers and their more sustainable innovations for rubber – highlighting their company, their products and their contribution to a greener future.



Genan

There is no other company like Genan. While aiming for sustainability and a greener planet, Genan is an innovative, high-end recycler of end-of-life tyres. Genan’s recycling technology was originally developed in 1990 and has undergone continuous development ever since.

Products

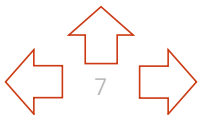
Ambient Powder	GENAN SUPER FINE		
Micronized Powder	40 MESH	80 MESH	120 MESH
Rubber Modifier	GENAN RUBBER+ PREMIXED		



Sustainability aspect

- Rubber powders originate from End-of-Life Tires
- Valuable secondary raw material – turn ELT waste into new products
- Substitution of virgin Rubber or Carbon Black – up to 20%
- Reduce CO₂ Emission due to lowered Product Carbon Footprint
- Sustainability and cost savings can go hand in hand

Please contact us for country availability.





Solid Plant

Solid Plant GmbH is an innovative GreenTech company from North Rhine-Westphalia, specializing in the development and scaling of biobased fillers from industrial hemp. These sustainable alternatives to fossil fillers like carbon black and silica serve the rubber, plastics, and construction industries. The solution combines high technical performance with measurable CO₂ reduction, helping industrial clients decarbonize their products. From cultivation to application, Solid Plant ensures a circular, resource-efficient and regionally integrated process. Together with partners from industry, research, and the energy sector, the company is establishing a new plant-based value chain – driving climate-friendly industrial innovation made in Germany.

Products

Hemp shives

Hemplizit® HPE

Hemplizit® SPE



Sustainability aspect

- 100 % biobased material
- Replaces carbon black and silica up to 50 %
- Reduces CO₂ as PCF is significantly lower compared to fuel based carbon black
- Can reduce abrasion → increases resistance and prevents microplastic
- Benefits of industrial hemp include soil remineralization, CO₂ binding, and the absorption of toxins like lead



Evonik

Evonik High Performance Polymers is a business unit of Evonik Industries that specialises in the production and sale of high-performance polymers. Evonik places a strong emphasis on sustainability and uses sustainable energy sources for the production of many of their high-performance polymers. EVONIK is one of the world's leading specialty chemicals companies with a long expertise in developing epoxy- and polyurethane raw materials for composite applications. Evonik support their clients with tailor-made solutions from laboratory scale to serial production

Products

TOR (trans-polyoctenamer)

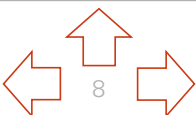
VESTENAMER® 8012



Sustainability aspect

- Used for coating of rubber powder
- Improves processing by optimizing viscosity and limiting scorch problems
- Keeps good surface finish
- Counterbalances loss of mechanical properties by increasing recycling content
- More reliable and consistent results
- Enables long lasting products from recylates

Please contact us for country availability.





DEUREX®
THE WAX COMPANY

DEUREX

DEUREX AG is a medium-sized family business, which was founded in 1989 and has since established itself as one of the leading suppliers of synthetic and natural industrial waxes on the world market. The biggest success factor is the high demand for quality with the claim to be able to offer all types of waxes for every application and property. The next generation of the family business is now focusing on sustainability issues. With the latest invention of BIOMERE, DEUREX AG is now consistently pursuing this path, whereby it becomes clear what great potential the wax industry holds when it comes to sustainability issues.

Products

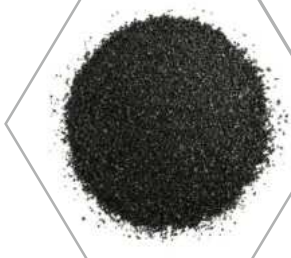
Biodegradable Wax

BIOMERE®



Sustainability aspect

- Biodegradable waxes can prevent the formation of microplastic
- Same performance and properties like conventional polymers
- Up to 100 % bio-based
- Proven biodegradable material according OECD 301 B



CABOT 

Cabot Corporation

Cabot Corporation (NYSE: CBT) is a leading global producer of reinforcing carbons used to improve the properties of elastomer-based composites in most rubber applications. EVOLVE® Sustainable Solutions, Cabot's technology platform for advancing sustainable reinforcing carbons, is focused on developing products that leverage circular value chains and materials recovered from end-of-life tires, products from bio-based feedstocks and particles, and/or products with a reduced greenhouse gas footprint. Cabot's EVOLVE® Sustainable Solutions technology platform is designed to deliver products that offer sustainable content with reliable performance at industrial scale.

Products

Carbon Black

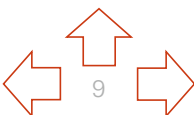
VULCAN® 7H-C



Sustainability aspect

- VULCAN® 7H-C circular reinforcing carbon is powered by EVOLVE® Sustainable Solutions
- VULCAN® 7HC circular reinforcing carbon via ISCC PLUS mass balance approach enables 100% circular content with drop-in performance
- Full suite of reinforcing and ultra-reinforcing carbon grades available globally

Please contact us for country availability.





Products

Calcium Carbonate (CaCO_3)

Eco SP AroraTek

Searching for a “low impact on carbon footprint and economy technology” brought Eco SP AroraTek into a technique to refine a bio-marine waste material sourced from seashell generated at oyster farms. Shells are collected, refined and processed into powder or pellets adaptable and viable to be used by the industry. The product is called OYSTERLEAN™ with a very low carbon footprint also including a carbon capture feature. Eco SP AroraTek has more than 30 years’ experience in plastics packaging, bio-renewable plastic technologies.

Oysterlean™



Sustainability aspect

- Content is 100% biobased CaCO_3 , produced from oyster shells which became waste during the harvesting season
- Can replace fossil fuel-based carbon black in rubber products
- Lower carbon footprint compared to equivalent fossil fuel-based alternatives
- Proven bio-renewable material according to ASTM D6866



Products

(Bio-)Circular Balanced Synthetic Rubber

LG

LG Chem is a leading South Korean chemical company operating in a wide range of sectors, including the production of high-performance polymers and chemical materials.

It is one of the most renowned companies in the petrochemical and polymer industry, offering products used across various industries, including the rubber sector.

SSBR

BR

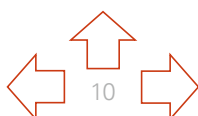
NBR



Sustainability aspect

- Renewable, plant-based materials and biomass balance technology is used to produce ISCC PLUS-certified products
- Reduces reliance on fossil fuels and lower carbon emission (In case of BR, 120~140% lower carbon footprint for Bio-Circular Balanced and 60-70 % (estimated values) lower for Circular Balanced)
- Raw material (bio-circular balanced) do not compete with food chain

Please contact us for country availability.





Elkem

Elkem is a global leader in the production of silicones, silicon products, and carbon solutions.

With a strong focus on sustainability, Elkem combines innovative technologies and efficient processes to meet customer needs while minimizing environmental impact.

Products

Amorphous (non-crystalline) spherical silicon dioxide

Sidistar®



Sustainability aspect

- Produced with 100% hydro power
- Improved performance in viscosity control, processing and dispersion



Chem-Trend

Chem-Trend is a leading provider of release agents, purging compounds, and specialty products for processing plastics, rubber, and other materials.

The products are designed to optimize production processes, extend tool life, and reduce waste.

Products

Release Agent

Mono-Coat®



Sustainability aspect

- Reduces consumption of release agents, minimizing waste and need for frequent reapplication
- Protects molds from wear, reduces maintenance needs and lowering material and energy usage
- Uniform demolding reduces scrap rates, conserving resources
- Optimized production cycle saves energy and improves the carbon footprint of manufacturing operations

Sustainability at Biesterfeld

As a family business we think in generations. We see sustainability as a key element and driver for all our activities. We care for people, our environment and our business. We will guide our partners in all aspects of sustainability and chemical compliance and actively contribute to shaping the path to a more sustainable future.

Details of our sustainability strategy and performance are outlined in our Sustainability Report or on our website.



Our Engagement & Recognitions

To put our engagement into practice, we support internationally recognized standards and initiatives. In addition, our efforts and activities are externally assessed and/or certified on a regular basis.

- Participant of the UN Global Compact
- EcoVadis Silver Medal
- Signatory of Operation Clean Sweep (OCS)
- Responsible Care certified
- Integrity Next profile
- Roundtable on Sustainable Palm Oil (RSPO) member
- ISCC PLUS certified*
- ISO 9001 certified

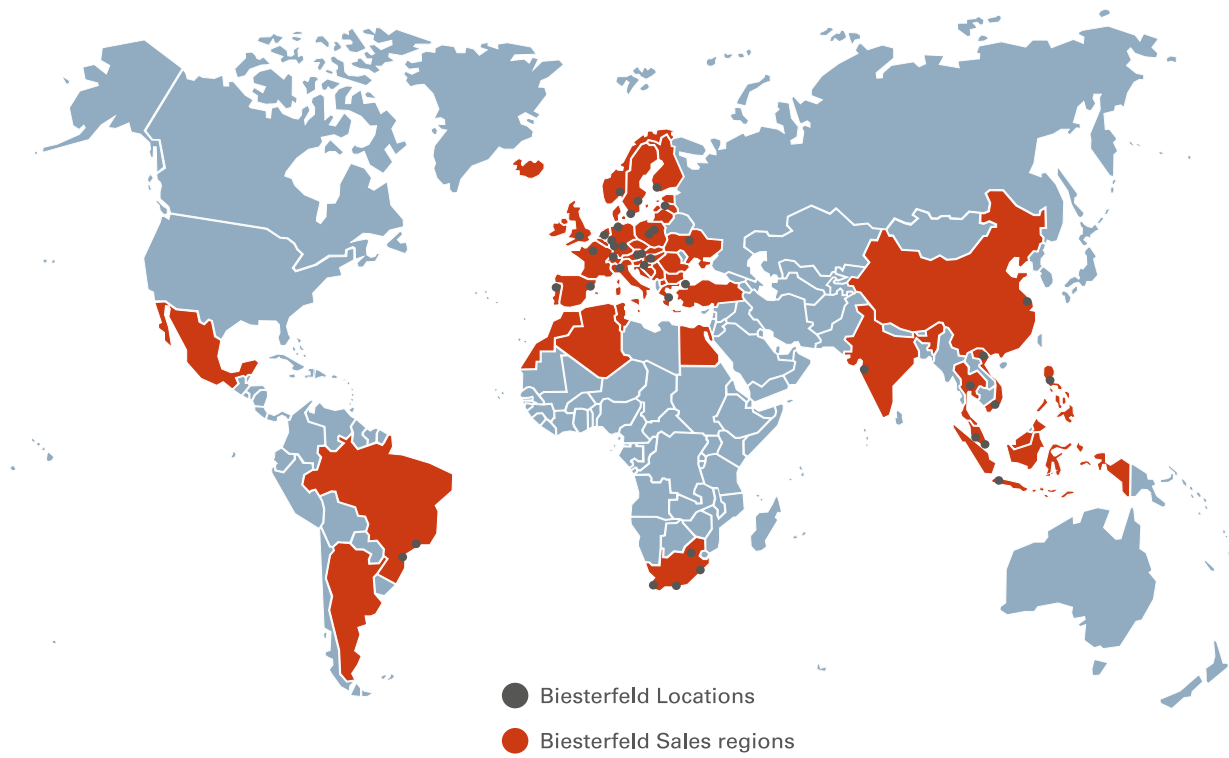


* Covers part of the company, further expansion planned

Our commitment in the rubber industry...

... as a team for our customers

Our rubber experts are always available to assist and guide our customers. They work closely with each client to develop tailored solutions for rubber applications and support efforts to incorporate more sustainable materials in production. Whether you need technical advice or general information, our team is here to help. Feel free to contact your local representative for specific product questions.



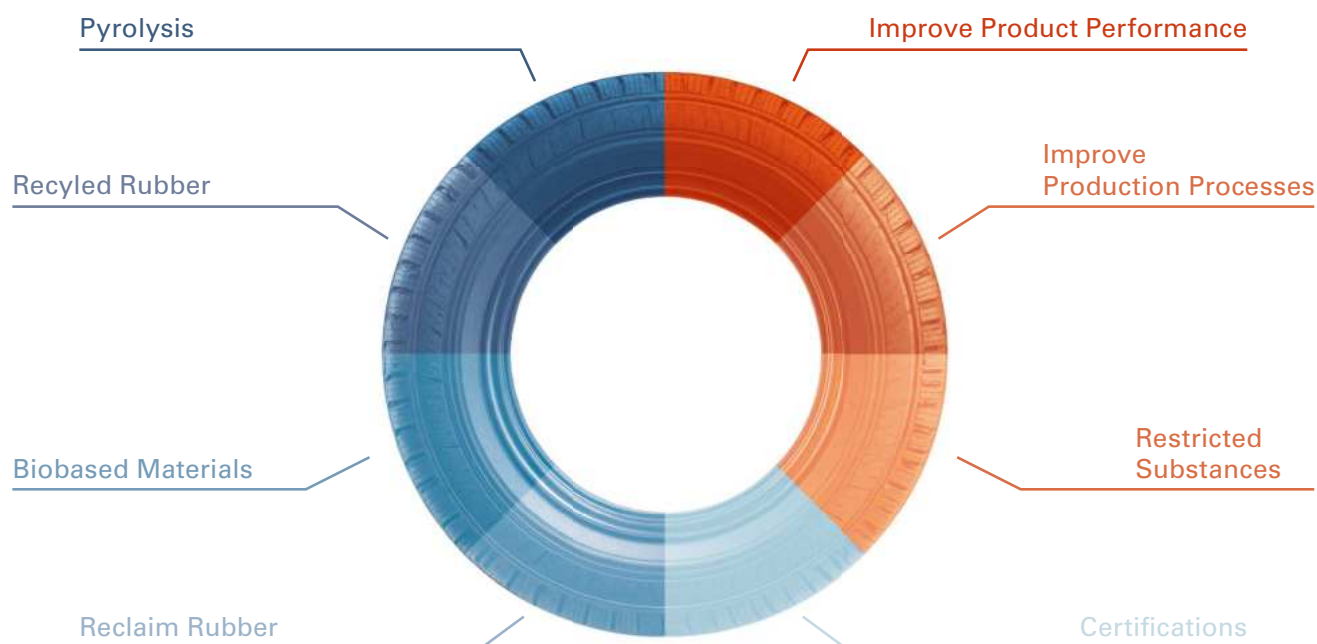
... as distributor for various rubber solutions

Sustainability is a valuable addition to our general product portfolio. By combining more sustainable rubber solutions with conventional rubbers, we are able to offer the right solution for all your rubber needs. This synergy allows us to meet both environmental goals and performance expectations in your specific applications.



... as your partner for trend-driven solutions

There is not just one way to achieve greater sustainability. In the rubber industry, several methods are used to produce more sustainable materials. We help you to keep an eye on the latest trends and find customised solutions for your applications.



... as a member of the Circular Rubber Platform

At the start of 2025, we joined the Circular Rubber Platform, taking another step toward increasing our visibility and demonstrating our commitment to a more sustainable rubber industry. This membership also allows us to share our expertise with customers and inspire them to explore sustainable alternatives.



What is the Circular Rubber Platform?

The Circular Rubber Platform (CRP) is an independent platform that unites companies in the rubber industry that are taking a proactive approach to sustainability by showcasing their sustainable rubber raw materials (bio-based and recycled) or services for recycling or reuse. In addition, CRP also organizes physical events to connect engineers and solutions for sustainable rubber materials. Head of the platform are Jan Boomsma (MSc Mechanical Engineering) and Enrico Koggel (Mechanical Engineer)

Why did we join the platform?

Our business for more sustainable rubber solutions began with the material Oysterlean™ out of Oyster shells. Since then, our sustainability portfolio has steadily expanded and we become more recognized in the market as distributor of more sustainable solutions. Customers are not only looking for materials but also for support during their transformation to more sustainable products.



Published by:

Biesterfeld SE
Ferdinandstrasse 41
20095 Hamburg
www.biesterfeld.com



September 2025

Imprint: Biesterfeld Performance Rubber GmbH, Ferdinandstrasse 41, 20095 Hamburg, Germany, www.biesterfeld.com | Registered Office: Hamburg, Commercial | Register: Hamburg, HRB 8492, VAT ID DE811186167 | Managing Director: Sascha Hennig | Our raw material information, data and graphics was obtained from the records of our raw material suppliers. Local availability of products might differ from country to country.

