

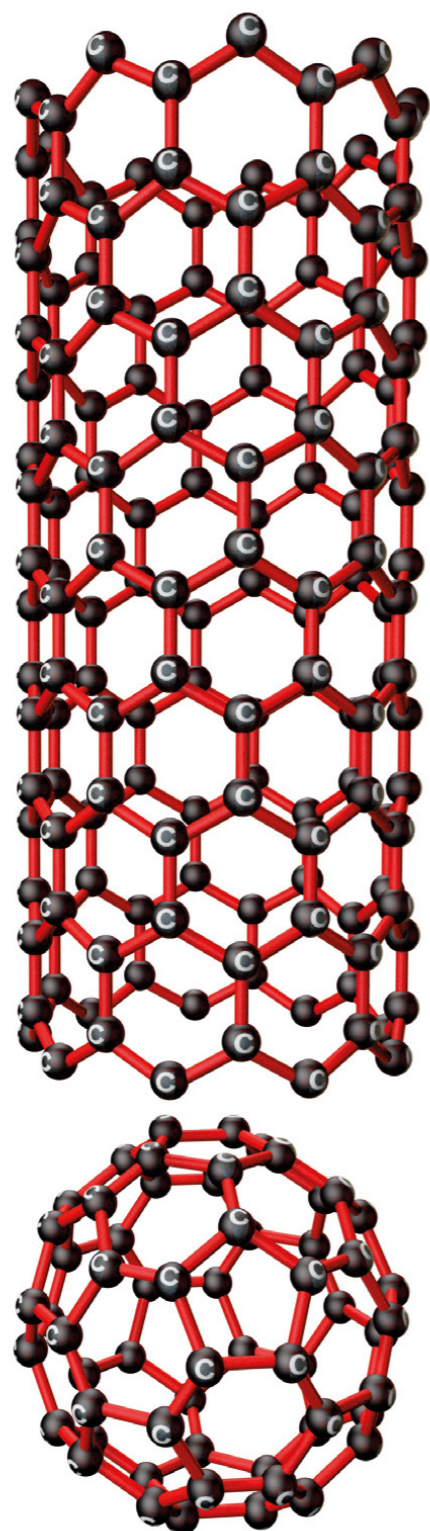
QUALITY **INNOVATES.**



Your Partner in Innovation

QUALITY **WORKS.**

LANXESS
Energizing Chemistry



Energizing Chemistry is the driver for your success

YOUR PARTNER IN INNOVATION

LANXESS' material experts provide customers with energizing chemistry, turning market trends into your competitive advantage.

Not only do we offer a wide breadth of sustainable solutions to meet today's customer needs – we are already ahead of the curve, continuously working to solve the challenges of tomorrow with advanced market insights and customer collaboration.

Our aim is to deliver the most innovative range of technologies and services available in our industry, as the world's most sustainable, future-focused, and resilient global supplier of specialty chemicals.

WHY LANXESS?

For us, quality is the individually perceptible sum of premium character, workmanship, service, and emotional desire.

We are a resilient global supplier that provides our customers with value-added components, solutions, and raw materials. We enable you to optimize the attributes that translate directly to value for your applications and business.

Quality is also infused into every part of our operations: expertise, friendliness, reliability, corporate citizenship, and a strong focus on solutions. As a responsible supplier, we are focused on staying ahead of regulations, ensuring our suppliers meet our standards, supporting our communities, and driving leadership in sustainability, becoming climate neutral by 2040.



ENERGIZING CHEMISTRY – IT'S IN OUR DNA

Our mission is to **drive success and shape the future of the industries we serve**, helping to build a more sustainable, technology-enabled future for all, in alignment with the UN Sustainable Development Goals. Through energizing chemistry, we set the standard for superior performance, green solutions, and technical expertise.

Our approach to innovation begins with a broad portfolio of solutions to deliver value to our customers. We have teams that are laser-focused on emerging market trends and application requirements, allowing us **to expand our offerings for specialty chemistries and meet both current and future demand.**

Innovation goes beyond our product offerings; it also defines the way we operate, as we innovate ways to serve you and your applications better. Our energized teams are focused on solutions, which enables us to offer **best-in-class service and exceed industry benchmarks for safe, sustainable, and resilient operations.**

And that's just the beginning. At LANXESS, we understand that innovation is a continuous process that requires agility.

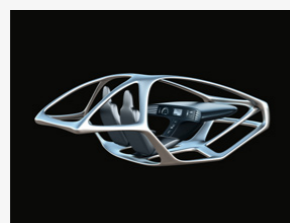
We never stop developing and tailoring our offerings to address future demands and technology gaps in the industries we serve.

EXAMPLES OF FOCUS AREAS FOR INNOVATION



SOLVING SUPPLY CHAIN CHALLENGES

Mitigate supply bottlenecks straining your operation. We offer solutions for constrained materials, such as thermoplastic polymers to replace PA66 and MODULAST® urethane-grade modifiers to reduce monomers such as isocyanates.



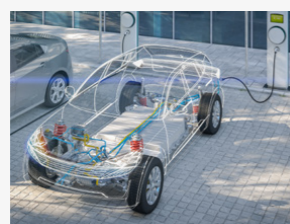
LIGHTWEIGHT SOLUTIONS

Complex, lightweight components must perform against a variety of challenges, including mechanical stress. Advanced solutions for Hollow-Profile Hybrid technologies and Tepex® thermoplastics help to create stronger, higher performing lightweight materials.



ONE HEALTH AND BIOSECURITY

Effective antimicrobial technologies such as Virkon™, Velcorin®, Kalaguard®, Purox®, and Nagardo® are essential to protect us from hazardous contamination, prevent the spread of pathogens, ensure products function as they should, and prevent product waste.



E-MOBILITY

To keep pace with the rapid adoption of eco-friendly, electric transportation, we innovate a full suite of e-mobility technologies, from housings and materials for batteries, to flame retardants, to advanced compounds tailored for high-voltage applications.



DIGITAL TRANSFORMATION

We are expanding implementation of virtual resources and capabilities to connect, grow, streamline our business, become more data-enabled, and serve you better, with dedicated solutions and an expanding digital ecosystem.



CIRCULAR ECONOMY

We are accelerating sustainable materials to reduce carbon footprint and utilize circular feedstocks, such as Scopeblue® offerings, Durethan® polyamide compounds, Tepex® composites, and Preventol® and Nagardo® preservatives.



BLOW MOLDING

We work with customers to create value-driven solutions for even the most challenging applications, with customized engineering plastics solutions



CONSUMER FRIENDLY INGREDIENTS

Gentle ingredients can help to eliminate irritation for even the most sensitive skin, without sacrificing efficacy or aesthetics, such as Saltidin® insect repellent active



Learn more about specific innovation initiatives at:
lanxess.com/products-and-solutions/focus-topics



INNOVATIVE CHEMISTRIES

LANXESS organizational structure is split into diverse business units offering a unique range of chemistries, so that each group can focus on the specific requirements of its customers' applications and market needs. This allows our teams to hone in on precisely what matters most to you and your end customers. At the same time, customers can benefit from a broad range of specialty solutions and synergies between businesses and offerings.

Our portfolio is built upon a breadth of specialty chemistries to address evolving challenges and needs within the markets we serve. Our business units are aligned to four key segments:

- **ADVANCED INTERMEDIATES**
- **SPECIALTY ADDITIVES**
- **CONSUMER PROTECTION**
- **ENGINEERING MATERIALS**

Whatever the application, we have customized solutions to enhance your formulations and processing.

Delivering more value –
to every part of your application.

LANXESS HAS DEVELOPED PRODUCT OFFERINGS TO EXCEL IN THE FOLLOWING CATEGORIES

HS&E PROFILE

- Many offerings have been launched that contain a high percentage of **biorenewable or recyclable content**, such as polyamide compounds, composites, and natural or bio-based preservatives.
- **Unique alternatives to classical chemistries** under scrutiny allow you to eliminate health and safety concerns related to VOC content, bioaccumulation, short chain lengths, phthalates, allergens, and SVHC's – without sacrificing your other requirements.
- By offering **ingredients of the highest quality** — such as preservatives, fragrances, and functional ingredients used in consumer products — our offerings can help protect end users from risks associated with potential impurities.
- Many offerings for consumer products meet criteria for **cleaner, greener labels**, such as EPA Safer Choice, Ecolabel, Nordic Swan, and retailer lists.



REGULATORY NEEDS

- Meet tightening restrictions on **VOC limits and raw materials of concern**, with many offerings that have desirable HS&E profiles relative to traditional chemistries being phased out.
- Avoid ingredients that require undesirable labeling, such as **GHS label requirements** in the U.S. or Europe or labeling for **allergens and sensitizers**.
- Our regulatory and quality personnel focus on supporting regionally specific requirements, for example with **REACH, TSCA, and FDA FSMA**.
- Food grade operations utilize the **highest industry standards** for continuous safety and quality, with offerings certified to meet.



PERFORMANCE DEMANDS

- Create products that perform in even the **most challenging end environments**. If it's high pressure, corrosive, difficult-to-cure, UV exposed, prone to microbial contamination, or an extreme temperature – LANXESS has you covered.
- Enhance the **end product's physical characteristics and appearance**, increasing value and lifespan.
- **Safeguard the reputation of your brands** against risks due to poor product quality or safety, supply bottlenecks, microbial contamination, and more.





Adhesives and Sealants



Agriculture



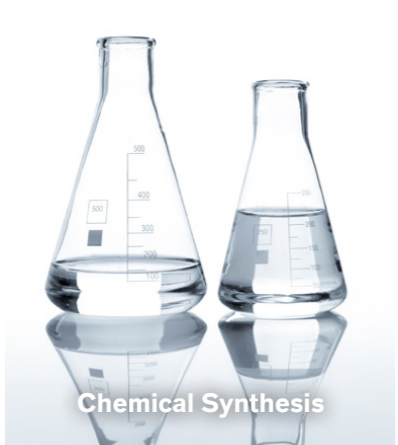
Animal Nutrition



Automotive and Aerospace



Concrete



Chemical Synthesis



Energy



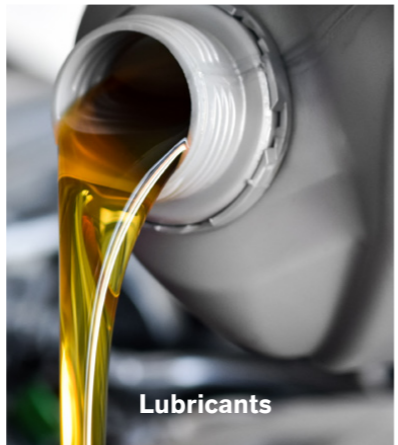
Food and Beverages



Fragrance



Household, Industrial and Institutional Cleaning



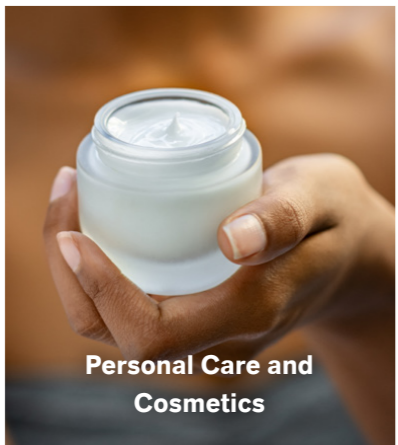
Lubricants



Microbial Control



Paints and Coatings



Personal Care and Cosmetics



Search our full portfolio at:
lanxess.com/Products-and-Solutions/Product-Search



Construction and E&E



Pharmaceuticals



Plastics



Urethanes



Water Treatment

TAILORED OFFERINGS

Our chemistries are specially designed to perform in certain end uses, ensuring they meet the exact requirements of your applications and

customers. Ask us about our ever-expanding, full range of offerings for these important end markets.

■ Adhesives & Sealants

■ Lubricants

■ Agriculture

■ Microbial Control

■ Animal Nutrition

■ Paints and Coatings

■ Automotive and Aerospace

■ Personal Care and Cosmetics

■ Concrete

■ Construction and E&E

■ Chemical Synthesis

■ Pharmaceuticals

■ Energy

■ Plastics

■ Food and Beverages

■ Urethanes

■ Fragrance

■ Water treatment

■ Household, Industrial and Institutional Cleaning



SUSTAINABLE DEVELOPMENT

Our offering development objectives are linked directly to our goals for sustainability. **Our Development of New or Changed Products, Processes and Applications Directive** stipulates that development ideas are systematically

examined with specific assessment for potential economic, ecological and social effects. In this way, we ensure that unsustainable products, processes, or applications do not enter our development process.

Our product stewardship strategy covers the safe handling of chemical substances and products throughout their entire life cycle.

EXAMPLES OF RECENT INNOVATIONS FOR SUSTAINABLE OFFERINGS:



Adiprene® Green low-free, biobased prepolymers help to reduce the level of VOC components in the final prepolymer products, such as free diisocyanates, while also producing highly resistant polyurethane elastomers.



Scopeblue® offerings are validated through stringent prequalification for exceptional performance in environmental, social, and economic criteria. They have a carbon footprint lower than conventional products by 'cradle to gate' Life Cycle Assessment and/or sustainable raw materials, such as those that are recycled, bio-based, or produced with renewable energy.



Colortherm® iron oxide pigments are free from heavy metals and are being adopted for colored biodegradable and compostable plastics, providing color without affecting polymer decomposition.



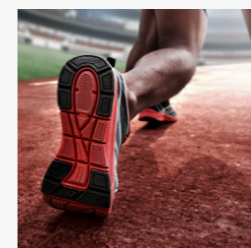
Kalaguard® SB home care preservative was recently registered under EPA FIFRA and BPR PT6, giving formulators a wider pallet of preservation options from which to select.



Emerald Innovation® 3000 is a brominated polymeric flame retardant for polystyrene foams, an alternative to hexabromocyclododecane (HBCD), which has been banned due to its ecotox profile. Our Polymer Additives Business has also won a Blue Tulip award for our Polystyrene Loop project to separate HBCD from construction waste and recycle it.



Kalama® VITROFLEX® plasticizers can replace benzyl phthalate and chlorinated paraffins in polysulfide applications, enhancing both the HS&E profile and performance.



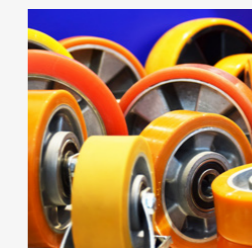
MODULAST® PUR Modifier is a low-VOC, non-phthalate solution to enhance performance in urethanes, with no GHS hazard label requirements in the U.S. and Europe.



Lewatit® ion exchange resins and iron oxide adsorbers are being researched and used to treat water contaminated with polyfluoroalkyl substances (PFAS), which have recently come into the public spotlight due to bioaccumulation and endocrine disruption concerns.



Pellart® water-based compounds help to drive the transition toward environmentally friendly aqueous solutions, such as adhesives and coatings, where solvents are being phased out.



Vibrathane® and Vibracure® urethane system enables curing at room temperature for ease of use, energy savings, EH&S improvement and significantly reduced CO₂ emissions.



Tepex® composites are being transitioned to 100% biological compositions (based on flax and polylactic acid), to promote sustainable plastics and a more circular economy, especially in sports articles, automotive interior parts and electronics for case components.

Our offering development objectives are linked directly to our goals for sustainability.

In addition to new innovations, our product stewardship strategy covers the safe handling of chemical substances and products throughout their entire life cycle. Robust solutions for managing product stewardship includes our „Central Product

Monitoring“ guideline to systematically control the worldwide monitoring of our products and their application with regard to possible health and ecological effects.



INNOVATIVE PROCESSES AND ORGANIZATION

Many of our manufacturing operations utilize innovative processes, with the aim of improving quality, efficiency, and sustainability. Our dedicated task force teams continuously optimize production processes worldwide.

Our Ningbo plant is an example; we launched a unique process based on patented technology (the “Ningbo Process[®]”), which is the first truly sustainable red iron oxide production process in China, with extensive recycling and treatment of all by-products. This achievement has been honored by the prestigious National Green Plant Certificate from China’s Ministry of Industry and Information Technology.

We also employ advanced metrics tracking at our sites to help optimize sustainability, reliability, and efficiency.

Our dedicated task force teams continuously optimize production processes worldwide.

OUR VISION FOR INNOVATIVE PRODUCTION: THE LANXESS PLANT OF THE FUTURE

Digital technologies **increase capacities, improve processes, and enhance occupational safety and sustainability**, resulting in stronger links between production and business processes.

A little over two-thirds of all plants are now equipped with new data analysis software to enable more effective management of complex production networks.



Intelligent use of operating data:

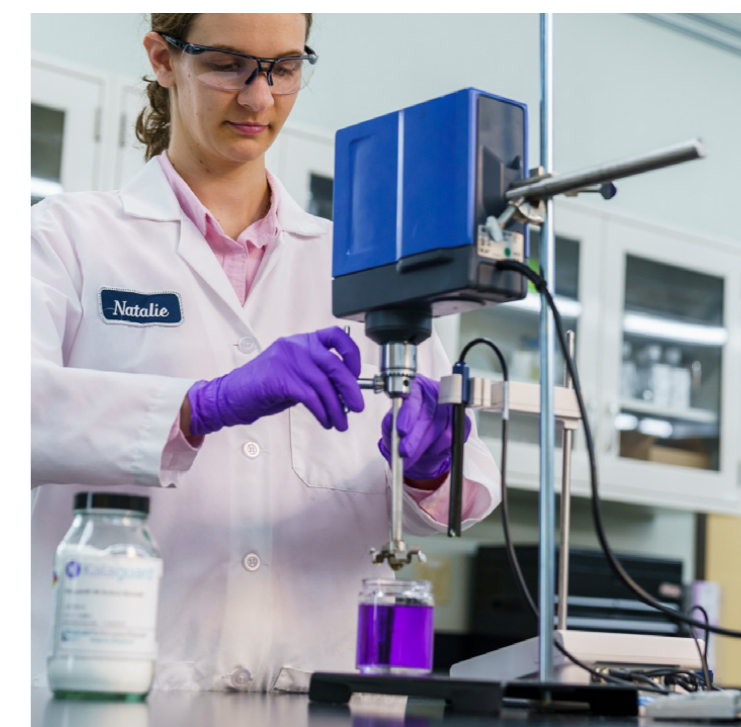
- Improves production processes’ efficiency and reliability, helps to reduce waste, and helps to avoid unplanned plant downtimes
- Provides employees with mobile access to crucial information
- Monitors the entire life cycle through computer-aided plant design

For example, our phosphorous chemicals plant in Leverkusen has successfully used data to optimize the process for manufacturing phosphorous chemicals so that a reduction in steam not only lowered operating costs but also reduced CO₂ emissions by nearly 4,000 tons a year.

LEADING EXPERTS IN THE APPLICATIONS WE SERVE

Whether we’re creating a formula to meet specific requirements, expanding our portfolio, developing a new design process, or proving the efficacy of our offerings, we are committed to achieving the highest degree of technical support and expertise within our industries and segments.

Our technical teams are applications experts, with an understanding for how to **optimize our technologies in formula to achieve the best possible value and performance.**

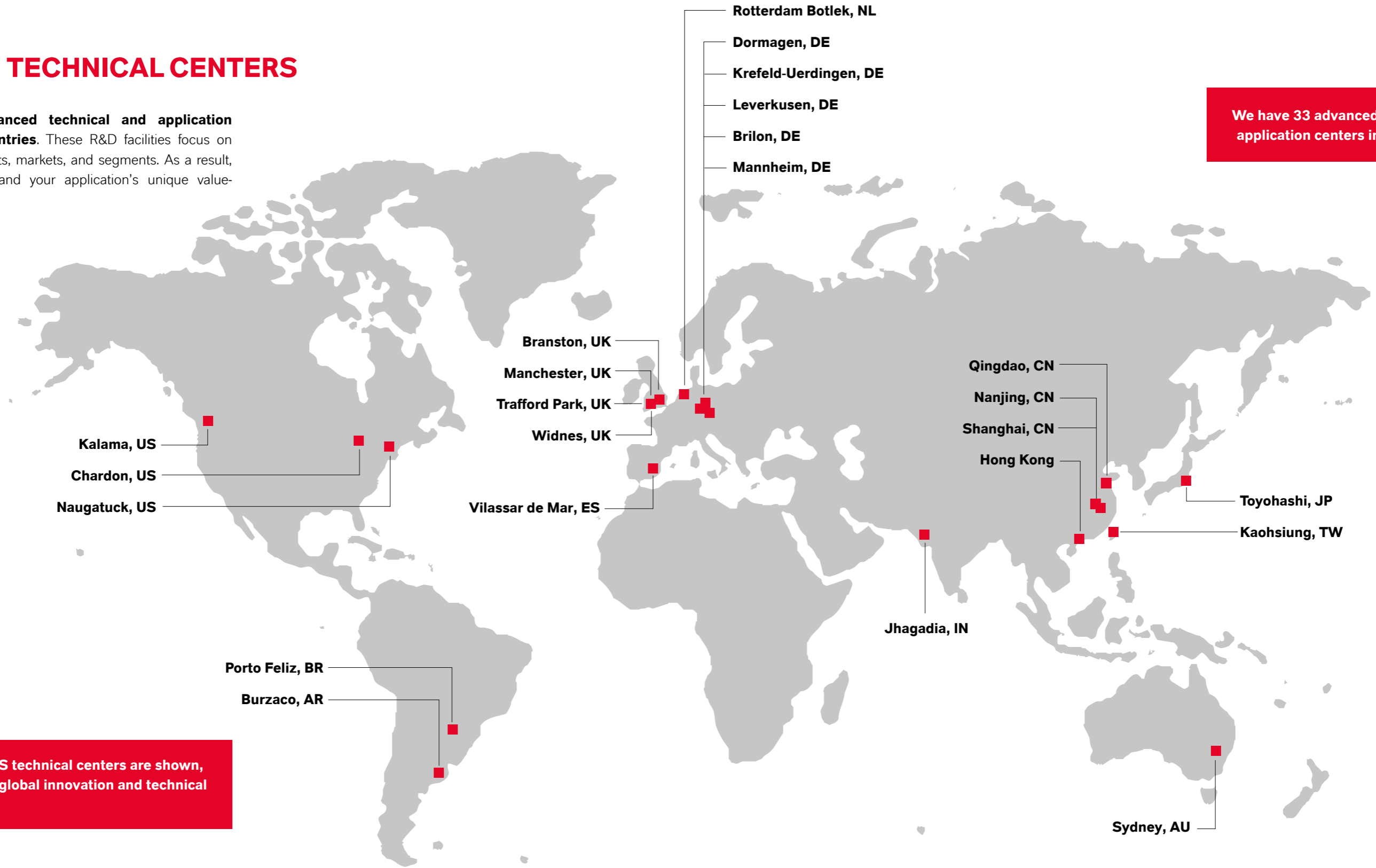




LANXESS TECHNICAL CENTERS

We have **33 advanced technical and application centers in 14 countries**. These R&D facilities focus on specific business units, markets, and segments. As a result, our experts understand your application's unique value-drivers and needs.

We have 33 advanced technical and application centers in 14 countries.



Some key LANXESS technical centers are shown, demonstrating our global innovation and technical support network.

We utilize the highest quality equipment and internationally recognized standards and methods in our testing, such as ISO, OECD, ASTM, and US and EU Pharmacopeia (as relevant to the application and market).



Our innovation is fueled not only by smart people, but also by smart technology. We collaborate with leading specialists in artificial intelligence to optimize development. High Performance Materials was one of the first LANXESS businesses to use AI in innovation, working with Citrine Informatics to optimize and customize glass fibers in shorter time spans.

Many of our application centers are recognized for excellence in sustainability, innovation, and economic contributions. A recent example is our new Asia Pacific Application Development Center in Shanghai, which was awarded an Excellence Award for Innovation & Governance 2021 by the Shanghai Daily.



COMPLIANCE AND REGULATORY SUPPORT

Our expertise also includes strong **competence in regulatory affairs**, with one of the largest global expert teams in the industry.

The compliance landscape is constantly shifting. We use our regulatory know-how to help our customers to stay ahead of the curve, outpacing shifting application requirements and market drivers.

For example, our team has completed new biocidal registrations in Europe and the U.S., expanding the range of preservative chemistries available under EPA FIFRA and EU BPR and enabling the use of non-sensitizing, readily biodegradable in-can microbial control. Our global team supports many regionally specific needs and registrations, such as REACH and TSCA.



DIGITAL TRANSFORMATION

The digital transformation is revolutionizing how we do business in the chemical industry. For our workforce, new technologies simplify our work, and we have more scope and time for value-adding activities. LANXESS is becoming a smarter company, and our productivity, connectivity, and innovation constantly improves.

For our customers, we are a partner that actively moves forward in the age of digital transformation and finds new solutions. Our digital ecosystem includes initiatives to grow our expertise, serve customers in new ways, run our plants even better, and streamline our supply chain.



Learn more at:
digital.lanxess.com



VIRTUAL CONNECTIONS TO EXPAND OUR TALENT

LANXESS invests in digital solutions for robust skills development and the growth of our expertise. This is the basis for building energized, engaged, solutions-oriented teams. By investing in a talented and virtually connected workforce,

we provide a growth-oriented workplace culture, drive ownership for core objectives such as sustainability, and strengthen the LANXESS organization of the future.

Virtual development:

Our development program focuses on the virtualization of the company's global, cross-divisional and cross-hierarchical talent programs. **SAP Enable Now and SAP Services and Support** provide a single, robust solution for broad 24/7 access to global knowledge portals and training. Our virtual talent programs are available to all personnel and includes tracks tailored for specific career goals: eXplorer, Compass, and Navigator. This way, employees at all levels can grow and expand their expertise throughout their careers with LANXESS, with consistent, streamlined education and resources.

Highly digitalized recruitment:

Specialized LANXESS recruitment teams work in the U.S., China, India, Germany, and other countries in Europe. The software platform helps to make processes in connection with approaching and acquiring new talents more **standardized, transparent, and customer-focused**.

Inner Green Deal Initiative:

Developed by Awaris GmbH and the Lund University Centre for Sustainability Studies (LUCSUS), the Inner Green Deal Initiative has helped us to develop leadership skills and an action lab to **integrate sustainability into all areas of our business**, including strategy, operations, and stakeholder engagement. The pilot was launched in 2021.

Recognition:

Our sites have been recognized by key organizations for our work on skills development. LANXESS has been named as a top employer or as an employer of choice in countries such as Brazil and China. LANXESS India was recognized by the Indian Chemicals Council for its HR management and is Great Place to Work®-Certified.* Our site in Widnes, United Kingdom received a Chemical Industries Association (CIA) Skills Award in 2021, recognizing employers who have done the most to contribute to actively developing employee skillsets.



Learn more at:
lanxess.com/en/Responsibility/Material-Topics/Good-Governance-and-Energized-Employees

*Great Place to Work-Certified is a trademark of the Great Place to Work Institute.

For our customers, we are a partner that actively moves forward in the age of digital transformation and finds new solutions.



INNOVATIVE SUPPLY

Growth companies understand that the most successful innovation often comes through partnership. As a collaborative supplier, LANXESS works with customers and other industry stakeholders to develop needs-oriented solutions that drive value for today's conscientious consumers and tightening regulatory environment.

As of 2021, we currently have more than 150 research cooperations with customers, universities and other research institutes worldwide.

LANXESS currently has more than 150 research cooperations with customers, universities and other research institutes worldwide.

CUSTOMER COLLABORATION – MUTUAL GROWTH THROUGH INNOVATION

Our technical teams often help customers to optimize their ideal formulations and end products.



Through partnership and collaboration, we offer:

- Dedicated **applications science teams for key innovation segments**, who generate methods and data to optimize your full product or formulation based on market-specific needs, saving you time and money
- Laser focus on **shifting drivers and regulations**, to help our customers to outpace emerging trends and requirements
- **Many customized high performance materials** – designed especially to solve your biggest challenges
- **Shortened time to market** with advanced technical support and solutions

A COMPETITIVE SUPPLY CHAIN FORMS THE CORE ELEMENT OF OUR BUSINESS MODEL

Horizontal integration of our supply chain processes strengthens our offering and builds value, through **holistic solutions, flexibility, transparency, and shorter delivery times.**

- Integrated connection of employees, production, warehouses and sales
- Globally standardized and automated processes for better resource utilization and higher reliability
- Integration with the supply chains of our suppliers and customers for optimal collaboration

In addition to our focus on improving supply chain efficiencies, we also use digital, data-driven tools to evaluate and optimize our supply chain for sustainability. For example, our XCORE “radar screen” is used for strategic buying processes, in



cooperation with EcoVadis as an assessment partner. Overall, our suppliers' average EcoVadis sustainability assessment ranks above the EcoVadis benchmark (per our 2020 report).



REACHING MORE CUSTOMERS IN A DIGITAL WORLD

eCommerce and market platforms provide new ways to do business. CheMondis Marketplace provides a platform for customers to find and purchase raw materials, founded in 2018 to “provide an entirely new business model for the chemical industry and to rethink traditional sales and marketing.”

CheMondis is one of the largest and fastest growing B2B marketplace for industrial chemicals in the western world.

CheMondis is one of the largest and fastest growing B2B marketplace for industrial chemicals in the western world, giving customers an alternative way to source many LANXESS offerings, with a digital experience that guides the user from RFQ to delivery. It also integrates with other systems for a streamlined experience, such as ERP systems.

We utilize both new and traditional ways to interact and supply our customers, ensuring you receive the type of service that works best for your business.

SUSTAINABILITY AND INNOVATION GO HAND-IN-HAND

Environmental stewardship is more than just an ethical imperative; it also makes good business sense. By innovating for more responsible production, we **shrink our environmental footprint, while also enhancing our capabilities and resiliency.** As a result, LANXESS is turning the focus of our development and strategy toward climate-neutral innovations.

LANXESS is committed to setting the most ambitious goals for sustainability at all of our sites worldwide, and we use creative problem solving to achieve them. These objectives are aligned with the **UN Sustainable Development Goals** and important industry standards.

■ Energy:

Innovations for greater energy efficiency lower emissions and reduce the burden of rising energy costs. We have implemented solutions for more renewable energy sources at many of our sites, such as nitrous oxide in Antwerp, Belgium; biomass in Porto Feliz, Brazil; and waste-to-steam in Rotterdam Botlek, Netherlands. We have also developed offerings to optimize energy efficiency by allowing reactions to occur at ambient temperatures, lowering emissions for our customers' operations, such as Kalama® 3PP multifunctional for personal care and Vibracure® for urethanes.

■ Climate Neutral 2040:

The chemical industry in Europe aims to be climate-neutral by 2050. Our objective is to outpace that goal by a decade, achieving climate-neutral status by 2040. We are already well on our way; from 2004–2018, we cut our greenhouse gas emissions in half, and we will strive to do so again before 2030.

**CLIMATE
NEUTRAL 2040**

■ Water:

We have lowered our water abstraction and consumption by over 20% since 2015. We have also optimized the Lewatit® ion exchanger brand, enabling customers around the world to make efficient and sustainable use of water, a scarce resource in some places.

■ Integrated production network structures,

such as heat exchange between plants and air purification

■ Dedicated leadership and responsibility for sustainability:

All business units are responsible for climate targets. Our personnel are trained on sustainability and tasked with taking personal responsibility for it, in addition to having dedicated teams focused on this topic. Our sustainability objectives are built into our incentive plans.



RESILIENT, SUSTAINABLE SUPPLIER

Our mission to lead the chemical industry in sustainability has been recognized by respected sustainability-focused organizations around the world. In 2021, we ranked first in the **Dow Jones Sustainability Index (DJSI)** in Europe and second in DJSI World, with particularly high ratings for product stewardship, management of water related risks, and human rights.

We also received a top "A" rating by the **international climate protection organization CDP** (formerly known as the Carbon Disclosure Project). We have committed to the **Responsible Care® Global Charter**, participate in **Together for Sustainability AISBL**, and are included in the FTSE4Good Index Series. We maintain **ISO certifications** at our sites for responsible environmental management.



"Innovation is exactly what we need for the future to work on sustainability, especially climate protection. We are doing our part to reduce emissions globally with innovative and sustainable products (partly through chemical recycling) and investments in production facilities at our global sites. I am very proud of my colleagues who work every day to achieve our Climate Neutral 2040 goal and minimize greenhouse gas emissions by creativity, good ideas and hard work."

Dr. Anno Borkowsky
Board of Management
LANXESS AG



Learn more about sustainability at LANXESS:
lanxess.com/responsibility





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Note: The information contained in this publication is current as of February 2022. Please contact LANXESS to determine if this publication has been revised.

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