



 **BASF**

We create chemistry

**BASF Schwarzheide GmbH  
at a Glance 2023**



“Our site is geared towards growth and is continuing to press ahead with the transformation to climate neutrality even in challenging times.

Ensuring our competitiveness and a clear focus on sustainability are at the heart of our actions. Our aim is to produce innovative, future-proof products and thus to generate added value for our customers. In production, we rely on modern processes, recycling-based economy and increasingly use renewable energies to further reduce CO<sub>2</sub> emissions.

To be successful, we build on our competent and dedicated employees and are constantly looking for specialists to strengthen our team.”



Jürgen Fuchs  
Chairman of the Executive Board  
of BASF Schwarzheide GmbH

Employees **2,176**

Investments 2022 **€343 million**

(as of 31.12.2022)

Even under the influence of the energy crisis, BASF Schwarzheide GmbH proved to be an efficient and competitive company within the BASF Group in 2022. The agreed production orders were completed. 343 million euros were invested in the modernisation and expansion of the production facilities and infrastructure. BASF Schwarzheide GmbH employs some 2,176 people. They are supported by temporary staff and contractors. Together with the employees at other BASF Group companies, new additions and service providers, nearly 4,400 people work at the Schwarzheide site.

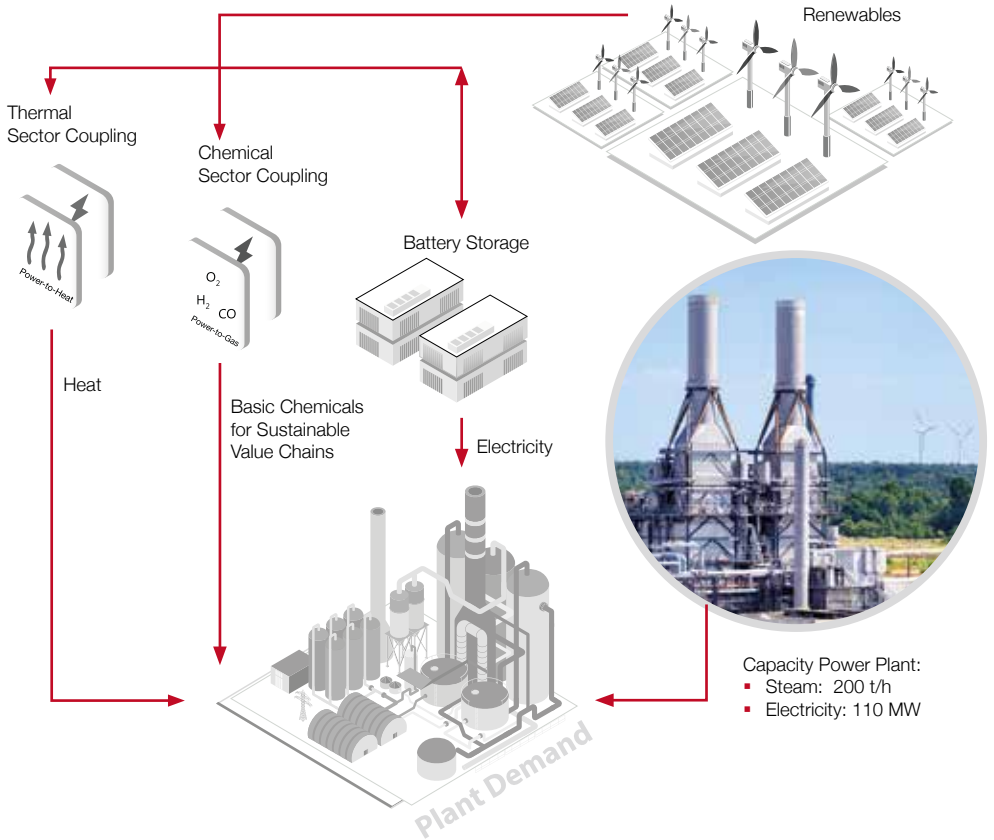


# Sustainability Determines our Actions

BASF's corporate purpose sums up what also defines our work at the Schwarzheide site: "We create chemistry for a sustainable future." That's why we are working on becoming one of the first CO<sub>2</sub>-neutral production sites at BASF, on inspiring our customers with future-proof products and on covering our need for skilled workers through practical training and further education.

## Renewables

BASF Schwarzheide aims to become a beacon for the energy transition in the chemical industry. Working alongside envia Mitteldesche Energie AG (enviaM), a solar park was constructed in the immediate vicinity of the plant for 13 million euros in 2022, which supplies 25 gigawatt hours of power for production each year.



# On Course for CO<sub>2</sub> Neutrality

## Supply

BASF Schwarzheide GmbH operates a combined heat and power plant (CHP) which is highly efficient thanks to efficient co-generation. As a result of modernisation between 2019 and 2022, electric power was increased and fossil fuel consumption was reduced. A much more flexible operating regime is the key to efficient integration of renewables.

### Power Plant Modernization

- Investment of €73 million
- New gas turbine including lithium-ion battery storage
- CO<sub>2</sub> emissions cut by 16 per cent with an increase in electrical power of 10 per cent

## Disposal

Wastewater is cleaned and treated in the sewage plant. Non-recyclable waste is disposed of in an environmentally friendly manner in the waste incineration plant, which was modernized in 2018 at a cost of €33 million. Process optimizations and an improved flue gas cleaning process save 7 GWh of energy each year ensuring significantly reduced emission levels.

- Wastewater treatment plant, 3-stage process combines biological, physical and chemical cleaning processes
- Waste water evaporation facility about 800 m<sup>3</sup> per day
- Waste incineration plant with 2 rotary furnaces, about 45,000 tons per year



# Driving forward Digital Transformation

Apps and applications tailored to the needs of the production plants are developed in Schwarzheide. Digital assistance systems help to make the right decisions. Data modeling and machine learning are used to optimize processes and thus save raw materials and energy. Thanks to mobile devices, information is also available in the field at all times. Using new technologies and new ways of working, the site is demonstrating its innovative strength and competitiveness.

Solutions developed in Schwarzheide can be used in BASF plants worldwide. The production site is pioneering digital transformation within the BASF Group.



Cloud  
Computing



Predictive  
Maintenance



Big Data



Augmented  
Reality



5G  
Campus Network

## A Wide Range of Services



Schwarzheide is an excellent production site and offers ideal conditions for establishing companies that require an infrastructure typical of the chemical industry. Nine manufacturing and 49 service enterprises are currently located at the site. Investors can benefit from the extensive services and expertise of BASF.

### General Services

- Occupational medicine and fire brigade
- Authority engineering
- Information management

### Technical Services

- Project management
- Maintenance and assembly
- Specialist departments and workshops

### Logistics Services

- Order controlling & transportation processing
- Rail logistics
- Raw materials supply and filling

### Analytical Services

- On-site analysis
- Specialist analysis
- Process analytical measurement technology

# Securing Skilled Workers and Young Talents



Our employees are the crucial factor for achieving the targets set. They receive support from the company to develop their talents and continue to develop themselves.

The excellent operational health management team helps them to maintain their individual performance.

In order to better reconcile family and career, flexible working arrangements are available tailored to different phases of life.

Scholarships in Germany  
**Training Above Demand**  
Starting your Career  
Summer School  
**Trainee programmes**

Dual Study Programs

Glass Laboratory at the  
German Hygiene Museum



## Recruiting New Talents

We want to recruit the best talents to our company and actively address demographic change. We offer young talents a wide range of offers.



# Shaping the Future of E-Mobility



processes are to be developed there and technologies optimised to enable the higher recovery of lithium, nickel, cobalt and manganese from used lithium-ion batteries. In addition, a recycling facility for the production of black mass is being constructed. From 2024, used batteries and waste from battery production will be mechanically processed here. The black mass created in this way contains valuable metals that can be chemically recovered in a subsequent step.

Since the end of 2022, a production facility for the manufacture of cathode active materials has gradually been put into operation in Schwarzheide. This production capacity will enable the supply of around 20 GWh of cell capacity per year with BASF battery materials. A prototype facility for battery recycling is being created for 2023. New operational



## Electric Car



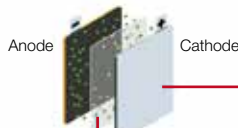
Most modern electric vehicles are powered by lithium-ion batteries.

## Lithium-Ion Battery



A lithium-ion battery contains a few hundreds of single cells.

## Battery Cell



While driving, the battery is discharged. The lithium ions carry the battery charge from the anode to the cathode, creating electrical energy.

The properties of the cathode active material significantly determine both, the driving range of the electric car and the recharging time of the battery.

## Cathode Active Material



The porous surface of the particles plays a decisive role in enabling future fast-charging technologies for electric vehicles.



The different size of the individual spheres results in a particularly dense packing of the spheres in the cathode — the prerequisite for a longer driving range of electric cars.

Our investment and research activities in Schwarzheide and Ludwigs- hafen, Germany, receive funding from the German Federal Ministry for Economic Affairs and Climate Action and the Ministry for Economic Affairs, Labor and Energy of the German state of Brandenburg under the IPCEI on Batteries (funding code 16BZF101A/B).

Gefördert durch:



Bundesministerium  
für Wirtschaft  
und Klimaschutz

aufgrund eines Beschlusses  
des Deutschen Bundestages



LAND  
BRANDENBURG

Ministerium für Wirtschaft,  
Arbeit und Energie

# The BASF Group

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. More than 111,500 employees worldwide contribute to the success of our 90,000 or so customers from almost all sectors – from global key accounts to small and medium-sized companies as well as end consumers.

Our portfolio is organized into six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €87.3 billion in 2022.

Several business units of the Group operate production facilities at the Schwarzheide site and manufacture products in almost all segments.

## Sales BASF Group

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**€87.3 billion**

## EBIT

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**€6.9 billion**

## Employees worldwide

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**111,481**

Source: BASF Report 2022

## Segments of BASF



### Chemicals

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Petrochemicals  
Intermediates\*



### Materials\*

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Performance Materials  
Monomers



### Industrial Solutions

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Dispersions & Pigments\*  
Performance Chemicals



### Surface Technologies\*

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Catalysts  
Coatings



### Nutrition & Care

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Care Chemicals  
Nutrition & Health



### Agricultural Solutions\*

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\* Activities at the Schwarzheide production site



# Performance Chemicals

Laromer® brand products make furniture and floors shine. They ensure high abrasion resistance and are used as coatings for wood and plastics. PU dispersions are used as bonding agents for paints, coatings or adhesives in the furniture, packaging and automotive industries, but are also used to produce cosmetics.



Dispersions & Pigments



# Coatings

In the automotive industry, base coatings contribute significantly to the visual appearance of painted car bodies. Coatings solutions manufactured in Schwarzheide are produced using water-based technology and are therefore particularly environmentally friendly. Water-based coatings have become an indispensable product for car manufacturers worldwide.



Coatings



# Foams

Basotect® and Neopolen® are foams for special applications in buildings, transport and everyday objects. They are characterized by their good insulating properties. Basotect® absorbs sound waves excellently and thus ensures pleasant room acoustics. Neopolen® is ideal for transport containers due to its low weight.



Performance Materials

# Engineering Plastics

Engineering plastics such as Ultradur® and Ultramid® can be used for special applications in the automotive sector due to their outstanding properties, for example for vehicles with electric, hybrid or fuel cell drives. They are also indispensable in electrical and mechanical engineering. At BASF Schwarzheide GmbH, these high-performance materials are produced by compounding.



Performance Materials



## Polyurethanes

Soft polyurethane foams are used in sports shoes, car seats and mattresses. They are used in refrigerators as rigid foams because of their insulating properties. In Schwarzheide, polyester and polyether are used to produce individual PU components as well as ready-made PU systems.



Performance Materials

## Fungicides

The active ingredients F 500® and azole are used in highly effective fungicides to protect crops against fungal infection and increase yields. F 500® is produced exclusively in Schwarzheide. The contents of just one 125-gram yogurt pot are enough to protect an area of arable land the size of a soccer field.



Agricultural Solutions

# We are investing in the Future and are looking for Reinforcements!

The professional profiles at the Schwarzheide site are as varied as our product range - from chemical technicians to engineers, from data scientists to laboratory assistants, from commercial clerks to logistics specialists.

BASF offers many opportunities and jobs – discover yours! Our job offers and entry options for employees can be found at:

[www.basf-schwarzheide.de](http://www.basf-schwarzheide.de)



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Photos: BASF

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