

EMAS Environmental Statement 2023

For the reporting period from 1/1/2022–12/31/2022

we protect lives
worldwide

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Preface.

With this consolidated environmental statement, schülke aims to inform about the relevant developments in environmental management in the 2022 financial year. The current edition of our environmental statement 2023 serves as the basis for revalidation under EMAS III. With its certified environmental management system, schülke has been participating in the EMAS since 1996.

This management system also includes a certification in accordance with the ISO 14001 standard.

The current recertification audit takes into account the changes of the environmental management system as per the EMAS amending regulation (EU) 2017/1505 of August 28, 2017, and Regulation (EU) 2018/2026 of December 19, 2018, as well as the requirements of DIN EN ISO 14001:2015.

We appreciate your interest in our company's environmental reporting and look forward to hearing your comments and suggestions.

Company profile and the context of the organization.

Schülke & Mayr GmbH (schülke) operates a factory for the manufacture of chemical-pharmaceutical products at the site at 22851 Norderstedt, Robert-Koch-Str. 2, covering an area of approx. 8 hectares. This facility was put into operation in 1963 and has been continuously expanded and modernized over the last decades.

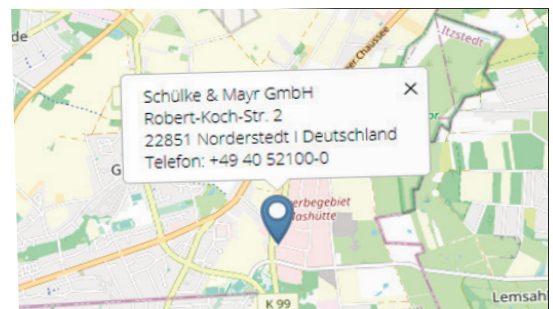
For almost 135 years, schülke has been a leading company in preventing and combatting infections. With our broad range of high-quality, innovative products, expert consultation, and reliable service, we create integrated concepts for avoiding infections in professional healthcare, for end consumers, and in the Life Science sector.

In our four essential strategic business areas of Healthcare, Over the Counter, Life Science, and Direct Patient Care, we actively contribute to safety and to protecting people's health – in line with our mission "We protect lives worldwide". With strong brands such as octenisept®, desderman®, and microshield®, we are an international market leader.

Today, the company with headquarters in Germany employs over 1,200 people worldwide and sells products in over 80 countries.

Represented by 23 subsidiaries and a network of sales partners, the company operates three production sites in the strategically important countries Germany (schülke), France (Bioxal), and Brazil (Vic Pharma).

The application field of DIN ISO 14001/EMAS (and therefore, of this environmental statement as well) applies only for the Norderstedt location.



schülke is located north of the Hamburg city limits and is part of Schleswig-Holstein.

schülke's essential stakeholders are the legislature, the supervisory authorities, the neighborhood, the public, our employees, our customers, the owner EQT, outside creditors, and insurance companies. The resulting tasks are controlled by our integrated management system. We continually examine the composition of the essential stakeholders and their interests, so we can adapt the company policies, if necessary.

Corporate development.

The 2019 sale of the technical biocides product line was followed in summer 2021 by the sale of the business of additives and preservatives for the cosmetics industry. These products were still produced to order at the Schülke & Mayr GmbH site in Norderstedt until the end of 2022. Production at schülke now focuses on the manufacture of drugs, medicinal products, cosmetics, and biocides.

The portfolio covers products such as disinfectants for wounds, skin/hands, instruments, and surface disinfection. Our customers include hospitals, medical facilities, pharmacies, end consumers, and the Life Science industry. At the end of 2022, 672 employees worked in Germany, of which 624 were at the Norderstedt location.

Because technical biocides and the products for the cosmetic industry have been eliminated, the basis for comparison of our environmental figures has changed. Production processes and work-flows are examined to that end to determine whether they must be optimized under the changed conditions.



We must always consider the impact of our actions on humans and the environment – far beyond the boundaries of our factory. That is our understanding of responsibility.

Company guidelines.

For schülke, value-based actions that comply with regulations are fundamental. Our corporate culture is marked by trust, sincerity, and fair dealings with all of our stakeholders. The protection of human health is the central corporate objective.

Therefore, schülke's company guidelines have been updated. We expect all our employees to act in accordance with our value system, our internal guidelines, and statutory regulations. Here is an excerpt:

The environment.

We consider protecting the climate and environment to be an important part of our social responsibility. Climate change, the accelerating scarcity of natural resources, and the increasing loss of biodiversity are some of the greatest challenges of the 21st century. This means schülke prioritizes the reduction of greenhouse gases and the careful handling of resources to continually reduce our carbon footprint.

We support the Paris Climate Accords and its goal of limiting global warming to well under two degrees Celsius above pre-industrial levels.

We acknowledge our responsibility to constantly increase the energy efficiency of our processes and thus counteract global warming.

We continually optimize our CO₂ emissions by converting to renewable resources.

We offer our customers assistance with ecological questions about our products and services and maintain an open dialog about the ecological aspects of our products and processes.

Delivery companies and business contacts.

We acknowledge our corporate responsibility for complying with human rights in the global supply chain. For example, this includes guarding against child labor, the right to a fair wage, and protecting the environment.

Our comprehensive approach for a responsible supply chain encompasses complying with human and labor rights, safe working conditions, protecting the natural environment, and combatting corruption.

As in our other essential fields of activity, we strive for an integrative approach as part of our responsibility in the supply chain as well. Therefore, we intertwine it with our quality management.

Together with our Supply Chain Management, it supports not only the preparation and implementation of QM provisions with our supply companies, but also the development, coordination, and optimization of structures and processes of our supplier management.

We maintain dialog-based cooperation with our delivery companies and business contacts as partners to optimize products and services, ensure customer satisfaction, and increase economic success on both sides while meeting our diligence obligations.

We select our suppliers and service providers so that the purchased products and services always meet our quality standards, and we strive to constantly reduce the greenhouse gases they emit.

Integrated management system.

To implement the company policies and ensure compliance with legal and other requirements, we have operated an integrated management system since 1996.

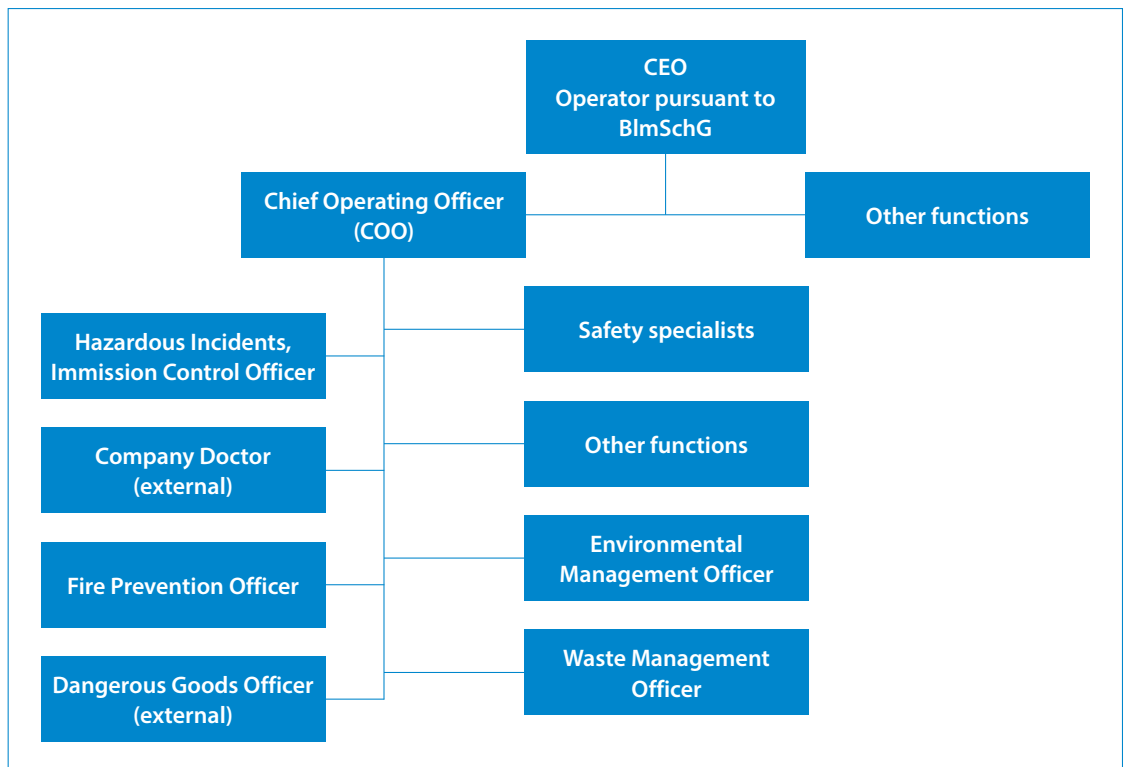
In addition to competencies and internal processes, it contains binding regulations, including those on the following topics: Compliance, personnel, environment, work safety, quality management, and risk management.

schülke conducts comprehensive internal environmental audits annually and ensures that each area is audited at least once in a three-year cycle. Together with the updated list of relevant environmental impacts and previous year's facts and figures, the audit reports form the basis for a management assessment and the updating of our environmental program. From this, we prepare an updated environmental statement every year.

Designated environmentally relevant officers on site.

The list of officers
Immission Control Officer pursuant to Section 54 of the German Federal Immission Control Act (BlmSchG)
Hazardous Incidents Officer pursuant to Section 58a BlmSchG
Waste Management Officer pursuant to Section 54 of the Closed Substance Cycle Act (KrWG)
Occupational Safety Specialist pursuant to Section 5 of the German Occupational Safety Act (ASiG)
Company Doctor pursuant to Section 2 ASiG
Fire Prevention Officer pursuant to item 5.12.3 of the Industrial Building Directive (IndBauRL)
Dangerous Goods Officer pursuant to Section 1 of the Ordinance on Dangerous Goods Commissioners (GbV)
Environmental Management Officer in accordance with Commission Regulation (EU) 2018/2026 (EMAS Regulation) Annex II A.5.3/B.2

Professional organizational connection of the environmentally relevant statutory officer.



Description of the essential environmental impacts.

In addition to the environmental and work safety regulations, pharmaceutical and medical device law is highly significant, including with regard to environmental impact. This is attributable to the fact that requirements under pharmaceutical law regarding quality and product hygiene generate a higher need for electricity for ventilation technology as well as water for the production of pharmaceutical grade sterile water. Therefore, the corresponding savings potential is significantly reduced and can absolutely overcompensate for the savings efforts in the environmental impact.

At schülke, the evaluation of significant environmental impacts is ensured by observing the following criteria as well as a few others.

- Risk of noncompliance with legal requirements
- Noncompliance with the state of the art
- Severity of the environmental impact
- Significance for our stakeholders

This evaluation of significant environmental impacts is updated annually.

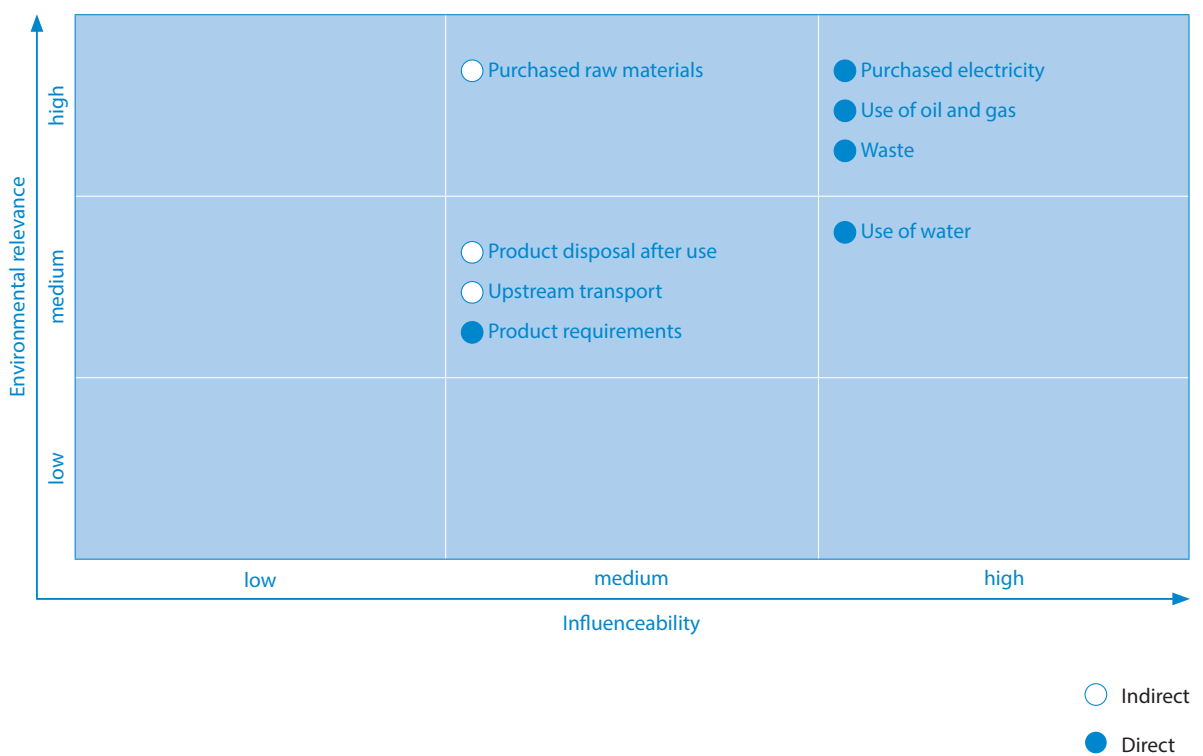
The following significant environmental impacts result from recording and evaluating our company's environmental aspects:

Lifecycle	Environmental aspect	Comment and key indicators (K)
Raw material extraction (indirect)	CO ₂ emissions pursuant to the GHGP	The energy expended to produce the raw materials used for our products
Production (direct)	Energy efficiency	The electrical current is used to operate the ventilation and cooling systems, to drive pumps, motors, and compressors, and for lighting, among other things. K = Electricity consumption in MWh. Fuel oil and natural gas are used to generate heat and process steam. K = Fuel oil and natural gas in MWh
Production (direct)	Water	Water is used to generate pharmaceutical grade sterile water for producing the products and for cleaning purposes. K = water consumption in m ³ without production water
Production (direct)	Waste	Waste arises through nonrecyclable packaging of raw materials and packaging materials, in connection with the operational wastewater treatment, during disposal of product residues, as well as through construction and maintenance measures, among other things K = Total amount of waste (for disposal and recovery) thereof proportionally amount of hazardous waste
Production (direct)	Wastewater	The process wastewater consists of the cleaning water of the production facilities with drained rainwater from the tank areas without the sanitary wastewater. K = Production wastewater in m ³
Production (direct)	Material efficiency	The production quantity / production quantity + rejects
Product use (indirect)	CO ₂ emissions pursuant to the GHGP	During product use, the product is consumed, while packaging and drug carriers are disposed of as waste.

Internally, ratios are also used to analyze the environmental data and for evaluation. However, the dependency is mathematically inconclusive. Therefore, Chapter 8 shows the environmental performance data with comments as absolute values and in proportion to the manufactured product quantity.

The CO₂ emissions pursuant to the Greenhouse Gas Protocol (GHGP) were determined in 2021 for the whole life cycle for the entire schülke Group. According to those determinations, the upstream and downstream CO₂ emissions (Scope 3) made up 96.7%. On the other hand, direct on-site emissions (Scope 1) made up only 1.5%.

Essential environmental impacts.



Key indicators of environmental performance.

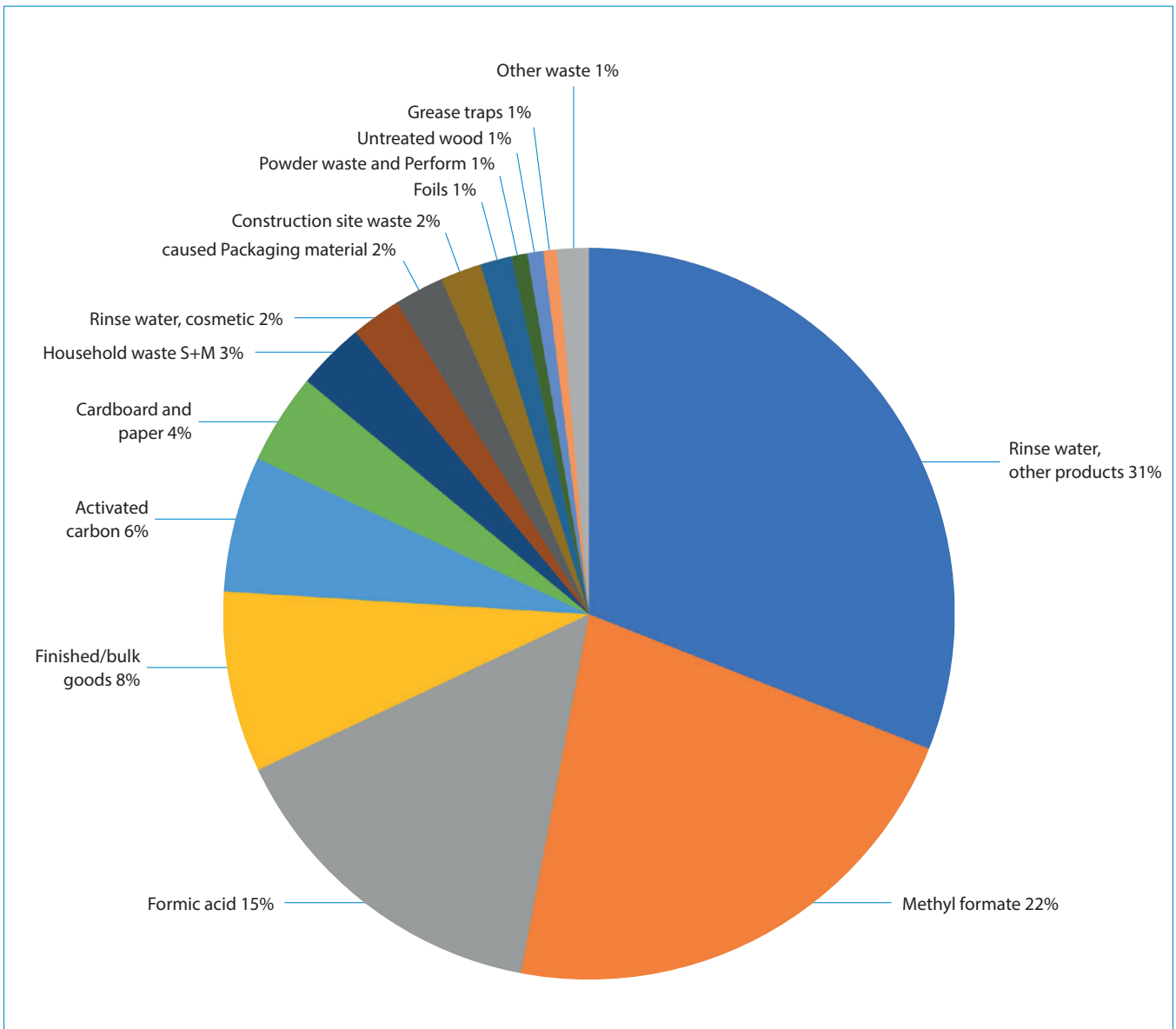
Indicator	Flow	Size 2022	Unit	Reference	KPI			Previous year (%)
					2020	2021	2022	
Energy, total	Input	24,292	MWh	Products	0.62	0.72	0.72	0
– Steam	Input	7,608	MWh		9,371	8,364	7,608	–9.1
– Heat	Input	7,274	MWh		7,607	8,155	7,274	–10.8
– Electricity	Input	9,409	MWh		9,198	8,804	9,409	+6.9
Raw materials	Input	20,422	t		27,538	21,332	20,422	–4.3
Water	Input	105,637	m ³	Products	1.90	2.61	3.13	+19.9
Products	Output	33,789	t		42,285	35,405	33,789	–1.4
Material efficiency	Output		%	Products/ rejects	99.2	99.4	99.1	–0.1
Waste, total	Output	3,795	t	Products	0.084	0.092	0.112	+22.1
– Rejects	Output	296.5	t		325.1	191.4	296.5	+54.9
– for disposal	Output	3,086	t					
– for recovery	Output	709	t					
Hazardous waste according to AVV¹⁾ (Waste Catalog Ordinance)	Output	3,327	t					
Process wastewater	Output	36,435	m ³	Products	0.87	1.11	1.08	–2.7

¹⁾AVV – Waste code number

Commentary on the development of key indicators.

Indicator								
Quantity produced	The decline results from the sale of parts of the product portfolio and the associated decline of expiring contract manufacturing.							
Steam	After correcting the consumption with the monthly average temperatures, the decline is reduced from 9% to 1% and therefore remains almost the same. The temperature correction was switched from heating degree days to the average monthly temperature, since it is more realistic than using heating degree days. The lowering of steam consumption will take a high priority in the years to come.							
Heat	The strong decline of 10.8% is reduced to around 6% through temperature correlation. The decline can be explained through better control and monitoring of heat-consuming systems. The reduction of heat requirements will take a high priority in the years to come.							
Electricity	The electricity consumption grew by 6.9%. Besides an increased quantity of filled containers up to 2 liters by more than 20%, more powerful air ventilation systems and a new refrigeration system were put into operation last year to ensure production hygiene. The optimal control of the energy consumption by these systems will be a focus of energy management.							
Water consumption	The specific water consumption increased by an additional 19.9%. The higher requirements for pharmaceutical grade production water led to a large amount of rinse water. Optimizing the process control should also further optimize water consumption.							
Material efficiency	Material efficiency has declined slightly due to the one-time disposal of remnants of abandoned shares of the product portfolio.							
Waste	The increase of 22.1% results from the disposal of remnants of the abandoned product portfolio and the last high percentage of waste in the manufacturing of cosmetic products, among other things. And four types of waste account for more than $\frac{3}{4}$ of the waste quantity:							
	<table border="0"> <tr> <td>AVV 070601*</td> <td>Product-containing rinse water</td> </tr> <tr> <td>AVV 070604*</td> <td>Methyl formate</td> </tr> <tr> <td>AVV 070608*</td> <td>Formic acid</td> </tr> <tr> <td>AVV 070609*</td> <td>Activated carbon</td> </tr> </table>	AVV 070601*	Product-containing rinse water	AVV 070604*	Methyl formate	AVV 070608*	Formic acid	AVV 070609*
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AVV 070604*	Methyl formate							
AVV 070608*	Formic acid							
AVV 070609*	Activated carbon							
Wastewater	The specific wastewater consumption has most recently declined again by 2.7%. The cause lies in switching the water supply to city water, among other things. This eliminates rinsing processes during the groundwater treatment.							

Percentage-based distribution of waste quantities 2022.



Improvement of environmental performance 2020–22.

The activities for improvement during the period under observation were overshadowed by the coronavirus pandemic and the sales of parts of the product portfolio. As a result, some activities

could not be implemented due to capacity reasons and others no longer made sense because the business has been abandoned.

Environmental goal	Measures	Status
Preventing and limiting potential environmental damage	Improving the preventive fire protection by renovating the sprinkler system and installing foam extinguishers in the external tank storage facility	Completed
	Building and developing an emergency team for hazard prevention	Completed
	Renovating the ventilation in the hazardous goods storage in the logistics center	Completed
Increasing energy efficiency	Switching to LED lighting, among other things, in the administration building, the outdoor facilities, in the logistics center, in the labs, the cantina, and the filling department	Achieved a calculated annual reduction of 186 MWH while improving illumination
	Study and preplanning of a CHP	Study created; preplanning stopped due to the energy crisis
	Preplanning of a photovoltaic system on the roof of the logistics center	Completed
	Use of IE3 and IE4 pump engines for fluid transport	Completed; equipment standard adjusted
	Installation of 160 measuring meters to optimize the energy consumption system	Completed
Reduction of water consumption	Introduction of electronic metering devices to determine water consumption	Completed
	Additional reduction projects	Included in the following environmental program due to lack of personnel
Waste prevention	Optimizing the internal disposal logistics to reduce material transport for cardboard and foil	Completed
	Improved separation of empty plastic containers with separate recycling stream	Completed
	Converting the disposal of laboratory samples to avoid chemical reactions in sumps	Completed
	Introducing a new waste container concept to optimize sorting quality	
	Reducing packaging waste by using reusable crates for packaging materials	
Optimization	Comparing the performance of various activated carbon qualities	
	Rebuilding the neutralization system for wastewater preparation to avoid direct contact with hazardous substances	Completed

Product innovations.

We pursue the goal of sustainably optimizing our product portfolio by using renewable resources, recyclable materials, and packaging while maintaining high product quality and safety.

The following product innovations were realized during the period under review:

Products	Innovation	Environmental relevance
perform® series	Packaging dimensions and the material thickness of the bags optimized	Reducing packaging material
perform® series	Switching the sterilization procedure from gamma rays to x-rays	Dispensing with the use of radioactive cobalt
mikrozyd® universal wipes green line	Market introduction of a biodegradable cloth system	Dispensing with PET plastic cloth material; CO ₂ emissions reduced by 27% due to the cloth material
mikrozyd® AF Jumbo wipes	Format change of the individual cloths and optimizing the soak quantity	Savings of PET packaging by 18% (around 48 metric tons a year)
schülke wipes safe&easy	Introduction of a new cover	Savings of 53% or around 40 metric tons PP a year

Environmental goals and program 2023–25.

		Deadline
Product lifecycle: Reduction of SCOPE 3 CO₂ emissions		
Measure	Increased use of biobased raw materials and packaging materials	12.2025
Environmental goal, energy: Reduce energy consumption by at least 1% annually based on 2022 (the measures should overcompensate for an additional increase in energy consumption through increased hygiene requirements during drug production)		
Measures	Based on the altered product portfolio, implement a needs analysis for efficient use of steam and heat	12.2023
	Based on the needs analysis performed, replace the steam and heat generator (already budgeted for)	12.2024
	Based on the newly installed measuring systems (June 2023), analyze and optimize the controls for ventilation systems and electricity consumers	12.2023
	Supplement the equipment standards for procuring new pumps relating to the requirements of energy efficiency E4	12.2023
Environmental goal, water consumption: Reduce the absolute water consumption by 5% annually based on 2022		
Measures	Optimize processes to reduce rinse water loss during the production of pharmaceutical grade sterile water	12.2024
	Optimize the cleaning processes used during production	12.2025
	Optimize two manufacturing areas regarding cleaning by installing an additional CIP station	06.2025
Environmental goal, waste prevention: Reduce the specific waste quantity by 50% based on 2022. By eliminating products for the cosmetic industry alone, we expect to reduce the specific waste quantity by 40%.		
Measures	Expanded separation of construction site waste	06.2024
	Develop a concept for reducing the disposal quantity for rinse water	06.2024
	Reduce the use of IBCs by using storage tanks	12.2023
Environmental goal, wastewater reduction: Reduce the specific amount of process wastewater by 4% annually based on 2022		
Measure	Optimize rinse processes in manufacturing	12.2024
Increase the environmental and sustainability awareness of all employees		
Measure	Introduce a digital training module for all employees	06.2024

Designation of the most important legal environmental regulations and compliance with essential environmental limits.

As a pharmaceutical company, we must not only observe and comply with other legal standards, but with the relevant environmental regulations as well. We have installed a procedure to ensure that new environmental regulations, and changes to existing ones, will be collected using an information service and checked for a need for action. Compliance with environmental legislation is also the subject matter of internal and external audits.

These examinations, and cooperation with the supervisory authorities, do not reveal any information indicating that environmental legislation is not being complied with. Besides other environmental standards, the following environmental legislation is especially relevant at this location: Immission control and hazardous incident legislation, chemicals legislation, hazardous goods legislation, wastewater and waste legislation.

Compliance with essential environmental limits.

Environmental parameter	Threshold value	2021	2022
Volatile organic compounds according to TA-Luft (German Clean Air Act)	20 mg/m ³	2.0	4.7
Adsorbable Organic Halides (AOX) according to the wastewater bylaws of Norderstedt	0.5 mg/m ³	0.02	0.03*

*Average value in the outlet of the wastewater treatment plant

Declaration of validity.

The signatory EMAS environmental assessor, Dr. Axel Romanus (DE-V-0175), accredited for the area 21, confirms that he has assessed the Norderstedt factory of Schülke GmbH, registration number DE 150-00003. He certifies that the company fulfills all requirements of Directive (EC) No. 1221/2009 of the European Parliament and Council of November 25, 2009, supplemented by the requirements of Regulation (EU) 2017/1505 of August 28, 2017, and Regulation (EU) 2018/2026 of December 19, 2018, for the voluntary participation of organizations in a combined system for environmental management and environmental company auditing (EMAS), as shown in this environmental statement.

The site address as per EMAS is: 22851 Norderstedt, Robert-Koch-Str. 2

By signing this statement, he confirms that:

- the assessment and validation were carried out in complete compliance with the requirements of regulations (EC) No. 1221/2009, supplemented by the requirements of Regulation (EU) 2017/1505 and (EU) 2018/2026,
- the results of the assessment and validation confirm that there is no evidence of non-conformity with applicable environmental regulations, and
- the data and information presented in the environmental report provide a dependable, credible and true presentation of all activities of the organization.

This statement is not equivalent to an EMAS registration.

The EMAS registration can only be granted by a competent authority in accordance with Directive (EC) No. 1221/2009. This statement cannot be used as an independent basis for briefing the public.

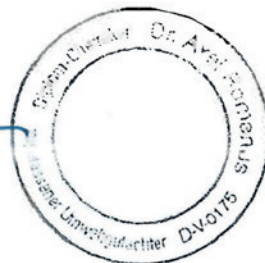
The next consolidated environmental statement will be created for May 2026.

An updated environmental statement is published and validated annually.

Laboe, dated July 3, 2023



Dr. Axel Romanus
Environmental Auditor
(DE-V-0175)
Gorch-Fock-Ring 24
24235 Laboe, Germany



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Publisher

Schülke & Mayr GmbH

Contact

Annett Keizer

Environmental Management Representative of Schülke & Mayr GmbH

Robert-Koch-Straße 2

22851 Norderstedt

Email: annett.keizer@schuelke.com

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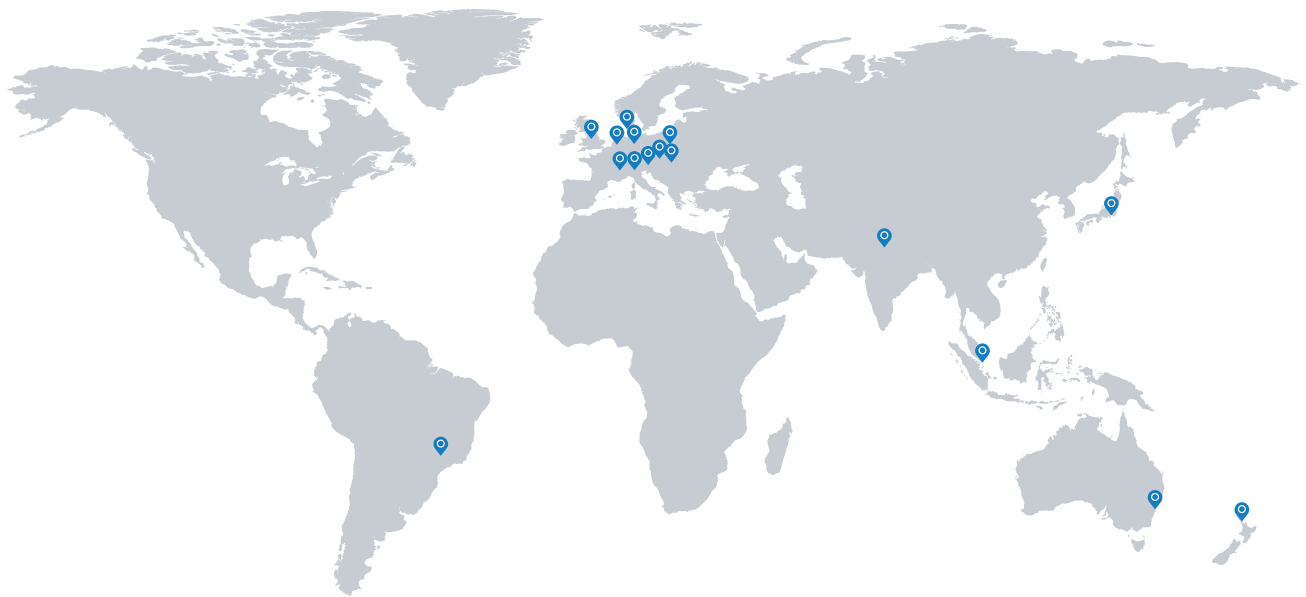
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Updated: June 2023

schülke Gruppe

we protect lives worldwide




schülke is represented by over 20 subsidiaries and production sites in Germany (schülke), France (Bioxal), and Brazil (Vic Pharma). Companies with specific application fields and markets, such as Prosenio GmbH, Vesismin Health and Wet Wipe A/S, also belong to the schülke Group.*

* Updated: September 2022

More information at www.schuelke.com

Schülke & Mayr GmbH 22840
Norderstedt | Germany
Telephone +49 40 52100-0
www.schuelke.com

 youtube.com/schuelkeChannel
 linkedin.com/company/schulke-&-mayr/