

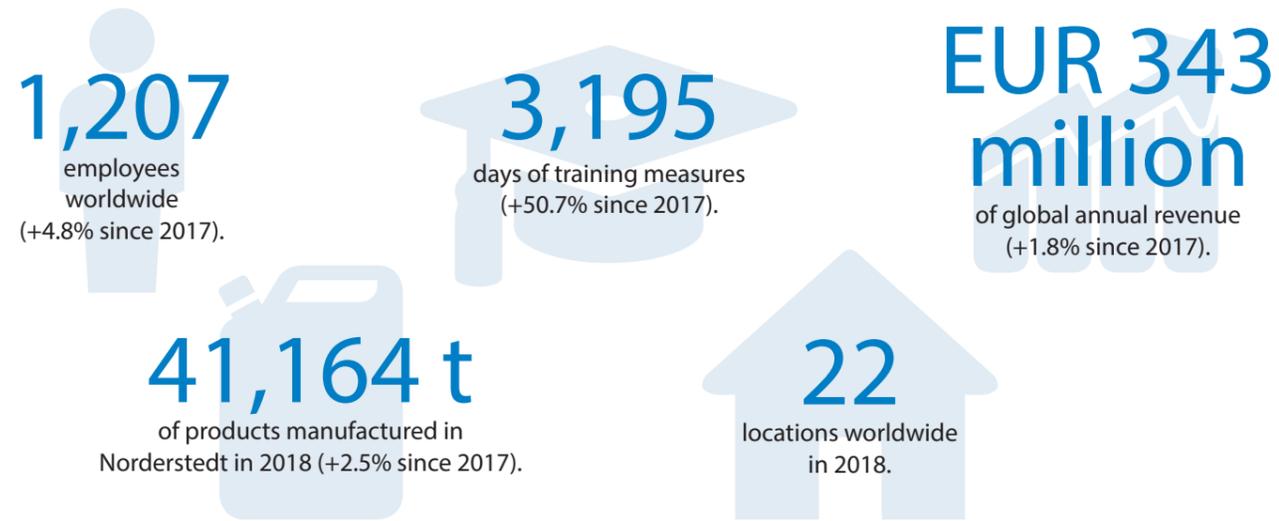
Abridged sustainability report 2019

Including the updated EMAS environmental
declaration for the reporting period from
01/01/2018 – 12/31/2018



we protect lives
worldwide

Highlights of 2018.



Key indicators of Schülke & Mayr GmbH	2018	2017	2016
Economic indicators			
Revenue (million EUR)	343	337	322
Produced volume in t	41,164	40,158	38,630
Tangible assets (million EUR)	11.90	12.30	8.23
Environmental indicators			
Specific electricity consumption (factory) per ton of product (kWh/t)	222	217*	218
Water consumption (m ³ /t)	1.71	1.73	1.71
Wastewater emission AOX value per liter of wastewater (in mg)	0.08	0.13	0.09
Waste per ton of product (kg/t)	3,161	3,164	2,484
Social indicators			
Employees worldwide	1,207	1,174	944
Trainees	23	26	23
Days of professional training	3,195	2,454	1,616
Occupational accidents	3	3	0

* Due to a calculation error, the electricity consumption figure for 2017 was adjusted upwards from 186 kWh to 217 kWh.

Organizational structure of our headquarters in Norderstedt/Hamburg



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Imprint

Preface.

As a leading manufacturer of chemical and pharmaceutical products, great responsibility lies with us: we strive to provide our customers with innovative, first-class products and be a dependable employer for more than 1,200 employees worldwide. At the same time, we are aware that our business

activities have an impact on our environment and society. We fully and confidently accept the challenges this raises. In fact, we consider the global trend towards greater sustainability a valuable opportunity. Only by systematically managing the environmental and social

standards along the value creation chain in which we participate can we safeguard the future competitiveness and performance of our company.

We want to do more than respond to legal and market-driven developments. We want to use innovative processes and management approaches to secure new product features and integrate them into our standard processes. This has allowed us, for instance, to expand and optimize our chemical management system over the course of the reporting period in order to consolidate our market leadership and meet our international customers' high expectations in our chemical and pharmaceutical products now as in future.

But that is not all. We keep thinking ahead. We have launched a systematic analysis of our product life cycles with the aim of optimizing our entire process chain – from development and production to utilization, disposal and recycling – from an environmental point of view (see page 11, Product responsibility).



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

This intermediate report provides information about all relevant developments in the field of sustainability management in 2018. It further covers new aspects of sustainability in the main fields of activity (product responsibility, sustainable employment and environmental responsibility). We continually leverage potential for optimization in those traditional aspects of our sustainability management system. We advance the methods of our health, safety and environmental management approach, ensure a healthy and safe working environment, offer extensive qualification and development opportunities and reduce our environmental footprint, e.g. by applying energy efficiency measures to our processes.

Meeting the needs of our customers and employees, achieving economic efficiency and upholding our environmental and social responsibility requires sound judgment, a clear strategy, the thoughtful use of resources and the effective implementation of all adopted measures. We are keenly aware of that. And we know just as well that our success cannot be measured in figures alone. It rests on our loyal employees who work hard for schülke's sustainability goals and convince our customers and partners of our work.

We appreciate your interest in the sustainability policies of our company and look forward to receiving your comments and suggestions.

The present sustainability report also contains our abridged environmental declaration as per EMAS standards. Since 1998, schülke has been participating in the EMAS with its systematic environmental management system. This management system also includes our certification to the ISO 14001 standard. One of the main purposes of the current monitoring audit was the transition to the requirements of ISO 14001:2015. The abridged environmental declaration, included in the present report, takes the changes of the environmental management system as per the EMAS amendment (EU) 2017/1505 of August 28 2017 and the new requirements of DIN EN ISO 14001:2015 into account.

Our last main reports, published in May 2017, provides additional information about the company profile and the importance of sustainability within the context of corporate governance alongside facts and figures about our individual fields of activity.

Company profile.

schülke has been an international market leader in the fields of hygiene, infection prevention and chemical and technical preservation for 130 years. Since 1996, it has been a part of the global corporation Air Liquide, whose primary business activity is the sale and marketing of industrial and medical gases. Air Liquide employs more than 66,000 staff in around 80 countries. In 2018, the corporation generated a turnover of more than EUR 21 billion.

The annual turnover of schülke was EUR 343 million in the past reporting year. The company employed 1,207 members of staff worldwide, 749 of

whom work in Germany. schülke's headquarters has been located in Norderstedt near Hamburg since 1963. Here, 659 employees work in production, logistics, research, marketing and sales. In addition, 23 trainees learned a variety of occupations in Norderstedt in 2018.

The Norderstedt site houses the main factory, and office building and our logistics center. State-of-the-art warehouse and fire protection methods guarantee that our products and packaging materials are stored in safe and environmentally friendly conditions.

Markets and locations.

schülke is developing dynamically: a chemical company rich in tradition is becoming a modern pharmaceutical and chemical partner. All strands of our business meet at our headquarters in Norderstedt near Hamburg. This is where our central departments work together like a well-oiled machine: research and development, management, production, marketing, sales and logistics.

schülke is further represented on all five continents by its subsidiaries and other national distribution partners. Customers all over the world value the products and services of schülke highly. Thanks to our local advisers, they have direct access to our services at any time.

Sales channels and customer segments*

Our sales channels

- sales representatives/distribution
- online sales
- OTC
- private label

Our main customer segments

- household appliances, construction materials and metal industry
- industrial hygiene
- hospitals
- cosmetic industry
- medical/dental establishments
- oil and gas industry
- private institutions

Business segments and portfolio.

The business activities of schülke belong to three separate segments: infection prevention, industrial hygiene and specialty chemicals. schülke develops, manufactures and distributes more than 200 products, including disinfectants, antiseptics,

medical skincare products, preservatives, deodorant substances and system cleaners. We continually adjust our portfolio in order to consolidate our market position by selling innovative, outstanding products.

The three schülke business areas

Infection prevention

A wide range of hygiene products and services to ensure the greatest possible hygiene.

Areas of application include

- hospitals,
- medical and dental surgeries,
- mobile nursing services,
- cosmetic studios,
- veterinary practices,
- emergency services,
- geriatric care,
- tattoo and piercing studios,
- drugstores

Services

- hygiene planning and consultancy,
- education and training,
- product application advice,
- technical services



Hospitals have the most extensive requirements in the field of infection prevention.

Industrial hygiene

A wide range of hygiene products and services for industrial needs.

Areas of application include

- manufacture of pharmaceuticals,
- manufacture of medical products,
- cosmetic industry,
- food processing industry,
- animal farming,
- laboratories,

Services

- hygiene planning and consultancy,
- product application advice,
- technical services



Hygiene plays an extraordinarily important role in particularly sensitive areas such as pharmaceutical production.

Specialty chemicals

A wide range of products and services to facilitate optimal preservation.

Areas of application include

- cosmetics,
- household and cleaning products,
- concrete additives,
- paints and varnishes,
- glue and adhesives,
- cooling lubricants,
- mineral oil and gas extraction,
- mineral preservation,
- biocidal system cleaning

Services

- technical support in laboratories and microbiological operating controls,
- training



The specialty chemicals areas offers a wide variety of solutions ranging from household applications to the extraction of mineral oil.

Total Quality Management.

schülke has been implementing sustainable business methods systematically and pragmatically for many years. With our Total Quality Management (TQM) system, we achieve continuous control and improvement of product and service quality in consideration of economic aspects such as time and cost.

We use and steadily advance an integrated system to implement the TQM. It is certified to several standards, including ISO 9001, ISO 13485, ISO 14001 and EMAS III. The management system further reflects the provisions of product law. It contains all management tools needed to comply with the requirements of the corporate group.

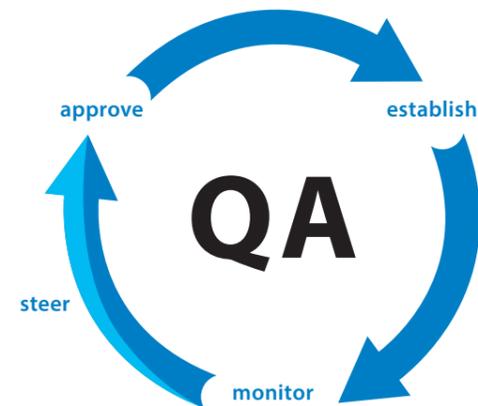
Quality assurance.

In response to our strong growth and increasing regulatory requirements, schülke established a central quality assurance system in 2018.

For more information about our Total Quality Management system, please refer to our 2017 sustainability report (p. 8 onwards) and our website, www.schuelke.com.

It consists of three departments:

- Quality Management (QM) maintains and advances our upstream quality management systems and obtains the corresponding certifications from external auditing firms.
- Quality Control (QC) analyzes our products and production processes (source materials, packaging materials, semi-finished products and finished products).
- Quality Assurance (QA) defines requirements for our quality-related processes. This includes: supplier and plant qualifications, process validation and the systematic change and deviation management system.



Excellence and process optimization with PEPP!

We have been using PEPP! since 2017 to improve communication and collaboration at schülke. PEPP! specifically advocates the involvement of employees in identifying problems and designing new processes and solutions. Improving occupational safety and environmental protection is another focal point of the program.

employees from various departments – production, bottling, logistics, research, management, quality management and the works council – have formed a new team. Under the direction of the HSE management, it will advance and implement projects relating to occupational safety and environmental protection.

During the 2018 reporting period, we made further headway in the PEPP! project: in April 2019, we established the HSE pillar of safety and environmental protection. Within the scope of the annual meeting of our security officers, a number of

Connecting the existing pillars of PEPP! with each other has proven a solid concept: it allows us to leverage the expertise and interdepartmental experience of our employees in the various PEPP! working groups perfectly.

The first occupational-safety project of the new team revolved around developing routes for industrial vehicles and pedestrians in the bottling department. Implementation will start in the third quarter of 2019. There will be another meet-

ing for the responsible HSE employees to define further projects. Increasing our project efficiency and improving environmental protection at our Norderstedt factory will remain our main objectives.

A digital contribution to sustainable development.

Sustainability is a (visionary) goal that we wish and intend to pursue for the long term. Digitalization, on the other hand, is a technological process that gives us tools with which to pursue our (business) goals. This means that digitalization can help us achieve our sustainability goals, provided that we take advantage of the opportunities it offers.

and communicate fast and directly, e.g. by using Google's video conference and instant-messaging services.

schülke does this by using state-of-the-art information technology, such as the Google G Suite. On top of conventional software tools such as email and calendars, it offers a range of group functions that help us make our everyday office work more efficient and resource-friendly.

This is how we start to build technological and digital bridges towards greater sustainability: on top of saving us time, our digital solutions lessen our environmental impact. Instead of travelling halfway across the world for a meeting, we can simply set up a video conference, which effectively reduces our CO₂ emissions. Digitalization opens up a wealth of new opportunities to protect our natural resources and climate. This includes the shared use of climate-friendly computer centers.

Last year, we rolled out Google Kite, as schülke calls the Google package of IT solutions, globally. All our subsidiaries set out to achieve the same goal: optimizing global collaboration and communication within the schülke Group and the parent company, Air Liquide.

By connecting our teams in different parts of the world and different time zones digitally, we have become able to work flexibly on shared documents

Product responsibility



To us, satisfied customers and satisfying figures are the best evidence for the quality of our product portfolio. But we cannot rest on our laurels. To ensure the performance and future success of our

company, we must take the social and environmental impact of our upstream and downstream value creation processes into account.

Product ecology and life cycle analysis.

We will be tackling the challenges surrounding product ecology and product life cycles even more proactively in future. There are promising opportunities for positive change in the product development stage, for instance. Over time, we will continually expand the scope of our efforts and analyze the various phases that make up our product life cycles: from development and utilization to recycling and disposal.

We have identified both challenges and opportunities at the individual stages of our downstream and upstream processes and in our product life-cycles, e.g. in transport and, on the customers' side, product utilization. This is where we analyze the potential for ecological optimization especially carefully.

Milestones in 2018

During the 2018 reporting period, we have selected individual products from our portfolio and analyzed their life cycles in consideration of indirect environmental aspects. At schülke, product development is a part of multiple business lines and organized decentrally. As a result of this structure, we first needed to clarify the issue of responsibility within the organizational structure. At the project level, we then determined possibilities for revising and optimizing our development processes in terms of the processual incorporation of lifecycle analyses and sustainability criteria.

Using a specially developed questionnaire that systematically explores various stages of product development, we will be able to provide insights into our life cycle analyses within the scope of the ISO 14001 and EMAS environmental management programs.

Our approaches in design and application development processes, their concrete implementation during later stages of the product life cycle and the usage regulations in the various fields of application will also be analyzed and managed systematically in future.

Sustainable employment

Our employees are the foundation of our success. schülke acknowledges this and offers its team a multifaceted working environment with plenty of professional-development options and a family-

friendly work-life balance including flexible working hours. We apply the same diligence to occupational health and safety by seeking potential for further optimization on a constant basis.

Company health care management.



During the 2018 reporting period, schülke's health care team was very active. On April 7, we expanded the annual World Health Day to a whole week of campaigns and information about health topics. Available services included spine screenings, cardio stress tests.

Furthermore, schülke offers its employees annual flu jabs from the company physician and the option of active breaks encouraging the employees to participate in brief exercise sessions or learn about interesting health topics several times a month.

We also offered our staff information and advice on improving their diet, providing concrete examples and healthy snacks. Everyone seemed to enjoy our lectures on burn-out, time management and progressive muscle relaxation. As a health-conscious employer, schülke also provides free water fountains in multiple locations of our Norderstedt factory, regular online nutritional advice from our health

care team and subsidized company sports jerseys. Our health activities in 2018 went far beyond our own gates: in April, our parent company Air Liquide S.A. organized the Metro Marathon in Düsseldorf, which colleagues from Norderstedt took part in. The next active event took place in May: schülke's runners took part in the annual B2Run again in 2018.

They finished the seven-kilometer route effortlessly and celebrated their success at the Volksparkstadion afterwards. In June, schülke officially sponsored the 7th Norderstedt Company Run in the municipal park in Norderstedt. Again, speed was secondary to the experience of enjoying an athletic event together with the team. The same applied to another special event: our annual, night-time "Zipfelmützen-Lauf", a run with pointed caps that took place in the municipal park of Norderstedt on December 6. A few of our employees participated, letting their year of sports end in style.

General information about employees.

Employees.

Employees	2018	2017	2016	2015
Worldwide	1,207	1,174	1,152	944
International	458	458	459	287
Germany	749	716	693	657
of which in Norderstedt	659	694	671	637
of which in Frankfurt am Main	22	22	22	20

Trainees.

Trainees	2018	2017	2016	2015
Number	23	26	24	23

Seniority.

Seniority (excluding trainees)	2018	2017	2016	2015
Average duration in years	10.5	9	8	11

Professional development.

Professional development	2018	2017	2016	2015
Professional development expenses (€)	1,500,000	1,120,000	860,109	867,330
Days spend on professional development per year	3,195	2,454	2,120	1,616

Occupational accidents.

Occupational accidents	2018	2017	2016	2015
Number	3	3	3	0



Environmental responsibility

Systematic environmental protection is a schülke tradition. As in all our fields of activity, the work we do is varied. We permanently challenge ourselves to go a step further and be firm in our actions to

lower our environmental footprint wherever we can. We are aware that the path we have chosen will continue to require dedication, concentration and resources.

Environmental policy and further environmental concerns.

In the 2018 reporting year, we attached particular importance to product ecology, using the life cycle analyses described above, and energy management. In response to the latest amendment to the EMAS and the transition to DIN ISO 14001:2015, we determined the requirements of all internal and external stakeholders and developed resulting measures. That means that we have considered the environmental aspects and their significance within a broad context.

Beyond that, we focused on ensuring full compliance with all legal requirements – as always. The opportunities and risks determined during that process will influence the decision-making processes in our company.

But we need all our employees to uphold the environmental responsibilities we hold as a direct result of our value creation process. To foster familiarity with those obligations, we have developed a special knowledge management system

and implemented it into our HR concept. It promotes knowledge, awareness and communication in the field of environmental responsibility within the company.

The following criteria are examined to assess the relevance of specific environmental concerns:

- Energy efficiency
- Potential to cause environmental harm with hazardous substances and production processes
- Context analysis of the company's economic development and legal frameworks
- Special factors affecting specific target groups, such as customers, suppliers and the public
- Extraordinary environmental incidents, such as extreme weather
- Efforts to protect biodiversity

The following matrix shows the main direct and indirect environmental aspects in terms of their environmental relevance and our ability to influence them with our management system.

Environmental relevance	high	<input checked="" type="radio"/> Environmental incidents <input type="radio"/> Impact of the product on the environment	<input checked="" type="radio"/> Energy efficiency <input checked="" type="radio"/> Material efficiency <input checked="" type="radio"/> Emissions air/ground	
	medium	<input type="radio"/> Use of resources supplier/customer	<input checked="" type="radio"/> Waste <input checked="" type="radio"/> Context of the organization	
	low	<input type="radio"/> Customers' environmental and consumer habits <input type="radio"/> Environmental awareness		
		low	medium	high
		Influenceability		

● direct ○ indirect

Chemical compliance.

Sustainable business offers us a great opportunity. That is why we welcome the trend towards an increasingly regulated international market for pharmaceutical and hygiene products with confidence. We ensure best practices in our industry, especially when it comes to chemical compliance. By mastering the certification and production challenges involved, we cater to the high requirements of our customers and the law alike. Our ability to implement the ever-heightening constraints imposed by international chemical legislation into our own processes quickly and efficiently is our greatest strength. We operate a reliable database containing compre-

hensive answers to all binding requirements and issues in the field of chemical law, which allows us to guarantee the success of our chemical management system.

SAP-EH&S system

The SAP-EH&S system with its EH&S regulatory content module constitutes a central component of our chemical management concept. Chemical data is integrated into our processes with SAP assistance.

Energy management 2018.

We intensified our energy management concept by means of systematic team and project work in 2018. Our newly established energy team has been working on the most important energy topics during monthly meetings since last year. The distinction of our energy-consuming systems into process plants and ancillary plants is one of the most significant changes:

- process plants are required to make our products;
- ancillary plants provide all required auxiliary energies that power our processes.

Both categories are considered utilization units within our energy management system. Their respective operators determine the energetic basis of the plants through their utilization habits.

In the final quarter of 2018, we launched a measuring system that records all our performance and consumption data. In future, this new system will manage the continuous improvement process with which we optimize our environmental performance:

- **Stage 1: Energy assessment**
Measurement and evaluation of essential energy utilization and consumption
- **Stage 2: Determining a basic energy position**
Using the data from the energy utilization and consumption evaluation carried out in stage 1, we will determine energy performance indicators for a suitable period in collaboration with the operators overseeing the utilization units.
- **Stage 3: Determining goals and action plans**
We will formulate strategic and operative goals for the various utilization units.

After measuring the performance and consumption data, we will produce action plans that lay down the measures we will take to achieve the set goals. To implement those three stages successfully, we need to enshrine the corresponding awareness and expertise within our company. We will provide training to help our team acquire the necessary skills. Aside from the steps described above, the establishment of an interdepartmental communication structure for our energy management system will be crucial for the success of our energy management.

Additional efficiency measures in 2018.

We no longer cool the newly commissioned air compressors through the central water recooling cycle. Instead, we have installed separate systems featuring closed cooling cycles that use waterless cooling media. Compared to the central evaporation air cooler, this new method saves around 150 kW and approximately 200 m³ of water per year.

Having examined the steam traps across the entire steam distribution network in the factory and rectified the faults detected, we were able to reduce our steam consumption by 1,200 tons.

Environmental indicators.

Electricity.

The electricity consumption at our Norderstedt site grew by 0.5% in 2018 due to a 2.5% increase in our production volume. Our basic energy consumption remains nearly unchanged. We have every reason to believe that our specific electricity consumption would have been lower than it was in the previous year if the extremely hot summer of 2018 had not

necessitated increased cooling and ventilation. The final value clearly underscores the positive impact of our energy-saving measures. The commissioning of the new air compressors and the repair of leaks in the compressed-air lines also had a positive impact on our energy balance in 2018.

Energy consumption at the Norderstedt site	2018	2017	2016	2015
Overall energy consumption (kWh/a)	8,972,471	8,704,874	8,570,417	8,194,917
Specific electricity consumption (factory) per ton of product (kWh/t)	218	217*	222	222
Deviation in %	+/- 0.0	-2.3	+/-0.0	+7.8

* Due to an error, the electricity consumption figure for 2017 was adjusted upwards from 186 kWh to 217 kWh.

Heating.

Despite a 0.8 °C increase in the average annual temperature and a decrease of heating days by 38 days,

our heating requirements increased by 2.5% since the previous year.

Heating (gas and oil) in Norderstedt	2018	2017	2016	2015
Heating (kWh/year)	7,785,030	7,591,858	7,694,431	6,778,705
Average outdoor temperature (°C)*	10.7	9.9	9.9	10.1
Heating days**	229	267	250	290

* Source: www.wetterkontor.de ** Source: www.dwd.de

Steam.

In 2018, we used 10.5 million kWh of steam. Despite our increased output volume of around 1,000 tons, our steam consumption remained

unchanged. The recent servicing of our condensate separator has had a positive impact on our total consumption.

Steam consumption at the Norderstedt site	2018	2017	2016	2015
Steam per ton of product (kWh/t/year)	255	255	253	230
Deviation (%)	+/- 0.0	+0.8	+10.0	-0.4

Water.

In 2018, the Norderstedt site consumed 68,332 m³ of water, approximately 330 m³ (+0.5%) more than in the previous year. Considering the increased tonnage (+2.5%), however, our net water con-

sumption has decreased by 1.0%. That reduction was due to the optimization of our cleaning processes at the AP water systems.

Water consumption at the Norderstedt site	2018	2017	2016	2015
Water consumption (m ³ /t)	1.71	1.73	1.71	1.65
Deviation (%)	-1.0	+1.2	+3.6	-6.3

Wastewater.

In 2018, we produced around 14% more wastewater than we did in the previous year. In relation to our

production output, this constitutes a net increase of 11.5%.

Wastewater volume at the Norderstedt site	2018	2017	2016	2015
Wastewater volume (m ³)	34,737	30,368	38,910	-

Wastewater emission.

In 2018, the mean AOX values measured at the inlet of the wastewater plant were 1.9 mg/l, which amounts to an overall increase compared to the median wastewater inlet values of 2017 (1.3 mg/l).

Our 2018 outlet values amounted to 0.08 mg/l, which constitutes a decrease of 0.05 mg/l since 2017. They are equal to the values measured in previous years, such as 2016.

Wastewater emission at the Norderstedt site	2018	2017	2016	2015
AOX value per liter of wastewater (mg/l)	0.08	0.13	0.09	0.09

The increased AOX values measured at the inlet of the wastewater plant are due to an increase in our production volume, which has in turn led to increased amounts of wastewater from the cleaning

process. Technical challenges in our production system also played a role. We were able to absorb the increased inlet values by means of internal measures in our wastewater treatment department.

Exhaust air emission.

In 2018, the average load of pollutants in the process exhaust air was 2.28 mg C/m³ (measured in total carbon per m³ of process exhaust air) after

treatment by the exhaust air incineration plant (2017: 2.41 mg C/m³).

Exhaust air emission at the Norderstedt site	2018	2017	2016	2015
Volatile organic compounds (mg C/m ³)	2.28	2.40	2.16	1.36

Waste.

86.7% of all waste of which we disposed in 2018 was hazardous waste for removal or recycling.

Amount of waste at the Norderstedt site	2018	2017	2016	2015
Total amount of waste (t)	3,161	3,164	2,484	1,612
Amount of waste per ton of product (kg/t)	76.8	78.8	64.3	43.6

Our total waste volume in 2018 was 3,161 tons. It remained nearly unchanged since the previous year (2017: 3,164 t/a). The production volume of our cosmetic preservatives has increased again, albeit less drastically than it did in past years. For a more accurate comparison of the waste volumes that were not produced as a result of the cosmetic-preservative manufacturing process, the following table alternately lists the total waste volumes and,

separately, the waste volumes from the production of cosmetic preservatives.

The table clearly shows that the volume of waste per ton of product has decreased slightly since 2016, despite the increase in our production volume during the same period. That development is partly due to the use of intermediate bulk containers (IBC) for raw materials and their tankers.

Remediation wells.

Amount of groundwater extracted at the Norderstedt site	2018	2017	2016	2015
Annual extraction volume (m ³)	10,323	7,835	6,724	9,102

During our 2018 renovation of the process plant, we increased the flow rate of the two remediation wells. This allowed us to reduce the median phenol pollution of the aquifer considerably. A fault in the plant sewage system which occurred in the 1970s made the renovation measure necessary: back then, phenolic wastewater was introduced into the upper aquifer. Since the late 1990s, two remediation

wells have been in operation. The contaminated feed water is cleaned by the chemical and physical wastewater treatment plant at the factory. The effectiveness of this hydraulic remediation process is audited regularly (samples and laboratory tests). Laboratory tests of the lateral and effluent streams in the contaminated area have not shown any phenols since mid-2008.

Social commitment.

Sustainability program 2017 – 2019.

Unit	Qualitative	Quantitative	Measure	Goal	Deadline	Note
Compressed air		x	Replacement of the existing compressed-air generators with more efficient compressors	Savings 20,000 kWh = 25%	03/2019	Project completed
Compressed air		x	Based on a demand assessment, the compressed-air distributor will be adapted to the changed demands from the production units	Savings 1.2 m Nm ³	03/2019	Project completed
Electricity		x	Switching the lighting system in the production halls to LED	Planned savings 20%		Project postponed due to coordination issues
		x	Use of presence and motion sensors for light control			
Electricity		x	Conversion of the heat transportation technology to high-efficiency pumps Use of IE3 and IE4 pump engines for fluid transport	Planned savings 25%		Project stopped; hydraulic balancing of the hot-water distribution system required
Water		x	Optimization of the backwashing (cleaning) process in the purified-water production to consume less water	Since 2016 reduction by 12% = 480 m ³	04/2019	Project completed
		x	Saving water by validating the cleaning processes in the production units			
Heat		x	Reducing the amount of heat required to ventilate the pharmaceutical production unit	Planned savings 10%		Technically infeasible
Heat		x	Improvement of the building insulation (facades, windows, doors)	Planned savings 10%	12/2019	
Waste		x	Reducing the amount of hazardous waste by optimizing processes and plants	Planned reduction 20%	12/2019	
Personnel development	x		Optimization of the employee qualification system by implementing a learning management system	Uniform system to ensure instruction/training	12/2019	

Beyond its core business, schülke has organized a range of activities at its various factories to put its social commitment into action. For a summary, see the complete sustainability report of 2018 (for the 2017 reporting year) and www.schuelke.com

In other news, we are honored to tell you about a very special social and professional achievement of the past reporting year. In 2018, schülke received the renowned SEPAWA Innovation Award for euxyl® K 830 its cosmetic preservation mixture for dishcloths, wet wipes and sensitive applications.

SEPAWA e.V, one of Europe's largest professional associations for the detergent/cleaner, cosmetic and perfume industry, awards the prize annually to companies with an outstanding innovation and idea management system.

euxyl® K 830 won in three categories: Personal Household, Personal Care and Perfume. The award is a significant acknowledgement of schülke's efforts to develop a comprehensive approach that can satisfy a wide range of its customers' needs. The new schülke product keeps cosmetic products free from microbes. It contains a strong fungicide and was designed to meet complex, sophisticated requirements in customer-developed formulations.



Declaration of validity.

The signatory EMAS environmental assessor, Dr. Axel Romanus (DE-V-0175), accredited for the areas 20/21, confirms that he has assessed the Norderstedt factory of Schülke & Mayr GmbH, registration number OE-150-00003. He certifies that the company fulfills all requirements of the 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 2019 Environmental Report.

The site address as per EMAS is: 22851 Norderstedt, Robert Koch Strasse 2

By signing this declaration, 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 an authorized authority in accordance with the directive (EC) No 1221/2009. This declaration cannot be used as an independent basis for briefing the public.

The next consolidated environmental declaration will be produced by May 2020. An updated environmental declaration is published and validated annually.

Norderstedt, June 7 2019

Dr. Axel Romanus

Environmental Expert DE-V-0175



About this report.

2018. The EMAS environmental declaration was carried out at the company headquarters in Norderstedt (Germany). It applies to the audit period from January 1 to December 31, 2018. The report further covers important topics in the field of sustainability at schülke. The editorial deadline of the publication was in the fourth quarter of 2019.

The sustainability report provides insights into existing and planned measures to improve the sustainability of our business. It describes which goals we have achieved and which challenges we are facing within the scope of our sustainability program for 2017-2019.

We will continue the past publication cycle of our sustainability report: two interim reports will alternate with a full-scale report including an EMAS environmental declaration. This report is published in German and English.

Statements about the future

This sustainability report contains statements about the future, some of which are based on assumptions and expectations. These statements are subject to risks and do not constitute definite predictions of future developments and results. Some of these risks are determined by factors that are beyond the influence of Schülke & Mayr GmbH. They include future market conditions, economic data, the realization of anticipated synergistic effects and legal and political decisions. Schülke & Mayr GmbH is not obliged to update any statements of the future that have been made in this report.

Designated contact
Ralf Kummerfeldt
Head of HSE Management
Telephone: +49 40 52100-570
ralf.kummerfeldt@schuelke.com

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Publisher
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Contact:
Ralf Kummerfeldt
HSE Management
Environmental Management Officer,
Schülke & Mayr GmbH
Robert-Koch-Straße 2
22851 Norderstedt
Email: ralf.kummerfeldt@schuelke.com

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HOFMANN UND CAMPE X, Hamburg

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schülke worldwide:

Australia

Schulke Australia Pty Ltd
Macquarie Park NSW 2113
Phone +61 2 8875 9300
Fax +61 2 8875 9301

Austria

Schülke & Mayr Ges.m.b.H.
1070 Vienna
Phone +43 1 523 25 01 0
Fax +43 1 523 25 01 60

Brazil

Vic Pharma Indústria e
Comércio Ltda.
Taquaratinga/SP – CEP
15900-000
Phone +16 3253 8100
Fax +16 3253 8101

China

Shanghai Representative
Office
Shanghai 200041
Phone +86 21 62 17 29 95
Fax +86 21 62 17 29 97

Czech Republic

Schulke CZ, s.r.o.
73581 Bohumín
Phone +420 558 320 260
Fax +420 558 320 261

France

Schülke France SARL
Paris la Défense
92257 La Garenne-
Colombes Cedex
Phone +33 1 42 91 42 42
Fax +33 1 42 91 42 88

India

Schulke India Pvt. Ltd.
New Delhi 110044
Phone +91 11 30796000
Fax +91 11 42595051

Italy

Schülke & Mayr Italia S.r.l.
20158 Milano
Phone +39 02 40 26 590
Fax +39 02 40 26 609

Malaysia

Schülke & Mayr (Asia) Sdn Bhd.
47301 Petaling Jaya, Selangor
Phone +60 3 78 85 80 20
Fax +60 3 78 85 80 21

Netherlands

Schülke & Mayr Benelux B.V.
2031 CC Haarlem
Phone +31 23 535 26 34
Fax +31 23 536 79 70

New Zealand

Schulke New Zealand Limited
Auckland 1010
Phone +61 2 8875 9300
Fax +61 2 8875 9301

Poland

Schulke Polska Sp. z o.o.
02-305 Warszawa
Phone +48 22 11 60 700
Fax +48 22 11 60 701

Singapore

Schülke & Mayr (Asia) Pte. Ltd.
Singapore 159410
Phone +65 62 57 23 88
Fax +65 62 57 93 88

Slovakia

Schulke SK, s.r.o.
97101 Prievidza
Phone +421 46 549 45 87
Fax +420 558 320 261

Switzerland

Schülke & Mayr AG
8003 Zurich
Phone +41 44 466 55 44
Fax +41 44 466 55 33

Turkey

Schülke & Mayr GmbH
Kavacik, 34805 Beykoz,
Istanbul
Phone +90 216 331 39 66
Fax +90 216 331 39 36

United Kingdom

Schülke & Mayr UK Ltd.
Sheffield S9 1AT
Phone +44 114 254 35 00
Fax +44 114 254 35 01

USA

schülke inc.
Fairfield, NJ 07004
Phone +1 973 770 7300
Fax +1 973 770 7302

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Schülke & Mayr GmbH

22840 Norderstedt | Germany
Phone | Fax +49 40 52100-0 | -318
www.schuelke.com

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