WERNER & MERTZ

ENVIRONMENTAL STATEMENT 2024

Werner & Mertz GmbH
Erdal-Rex GmbH
Tana-Chemie GmbH
Werner & Mertz Service & Logistik GmbH
BNS International GmbH

Rheinallee 96 ▪ D – 55120 Mainz

As of: 05/2024

Contents

In this Environmental Statement the generic masculine pronoun is used for ease of reading. Feminine and other gender identities are explicitly included wherever required by the context.

1.1. Foreword from Management

Dear Readers,

We at Werner & Mertz want to make a notable contribution to the conservation of our natural resources. To do so, we live in an exemplary energy-saving circular economy that protects the climate and preserves biodiversity. We encourage and challenge our employees to help us reach this goal according to their abilities and needs.

Every year since 2003 we have released an Environmental Statement in which we report our company's progress in making our production ecologically compatible and resource conserving. During this time, we have improved year after year for the good of people and Nature. The Environmental Statements for the Werner & Mertz sites in Mainz and Hallein document the company's activities in ecological terms. As we see it, sustainability rests on three pillars—economic, social and environmental—all of which we monitor closely.

We are certain that consumers want to do business with companies that believe social and ethical issues are as important as ecological criteria. Experience has shown that customers appreciate the quality of our products, our productivity and manufacturing methods and their chance to bring sustainability into everyday life.

With EMAS, the most comprehensive and demanding environmental certification system, we can prove that we consistently integrate a functioning circular economy in our company. That starts with the use of renewable energies in production processes and efficient water treatment in our own Water Center and continues with integrally sustainable ingredients in our formulas and recyclate in our packaging. Furthermore, we are committed to social responsibility, ecological fairness and the protection of biodiversity. EMAS thus contributes greatly to solidifying the high level of trust our customers have in our brand.

We hope that our activities will prompt other companies and consumers to emulate us. Our efforts will succeed if we can effectively communicate all facets of our corporate responsibility and present both our accomplishments and the challenges we face.

Reinhard Schneider
Chairman of the Management Board

2. 2. Major Changes since Environmental Statement 2023

Structural:

- The shell of the energy-efficient manufacturing building H26 has been completed.
- Recycling center F36 has been put into operation.
- Factory gate F37 with new Incoming Goods dock has been put into operation.
- Property line was marked between factory premises and neighboring property.
- Well 1 has been prepared to allow trucks to drive over it.
- Replacement of glass facade on Administration building K8 was completed.

Organizational:

- New waste managers have been appointed.
- Occupational Safety has been moved into Integrated Management.
- Restructuring of workshops has begun.

Technical:

- Additional formulas requiring heat have been converted to reduce natural gas use.
- Line 702 (old pouch line) was taken out of operation.
- New ethanol dilution unit was put into operation.
- New ammonia tank was put into operation.
- New Dissolvine tank was put into operation.

3. 3. Our Company

Werner & Mertz, a Mainz-based family company in the hands of the fifth generation, has always considered sustainability as its foundation. We are concerned with the question of how a sustainable lifestyle can be made feasible for most people. As a sustainability pioneer, we want to push market development with circular products, i.e., integrally sustainable and high-performance cleaning and hygiene solutions that are harmless to humans and Nature.

The Werner & Mertz Group concentrates on two areas of competence. The traditional Consumer Division puts the end consumer at the center and offers an extensive product portfolio for household cleaning and care. The Professional Division provides professional bulk consumers with special cleaning and maintenance products and services.

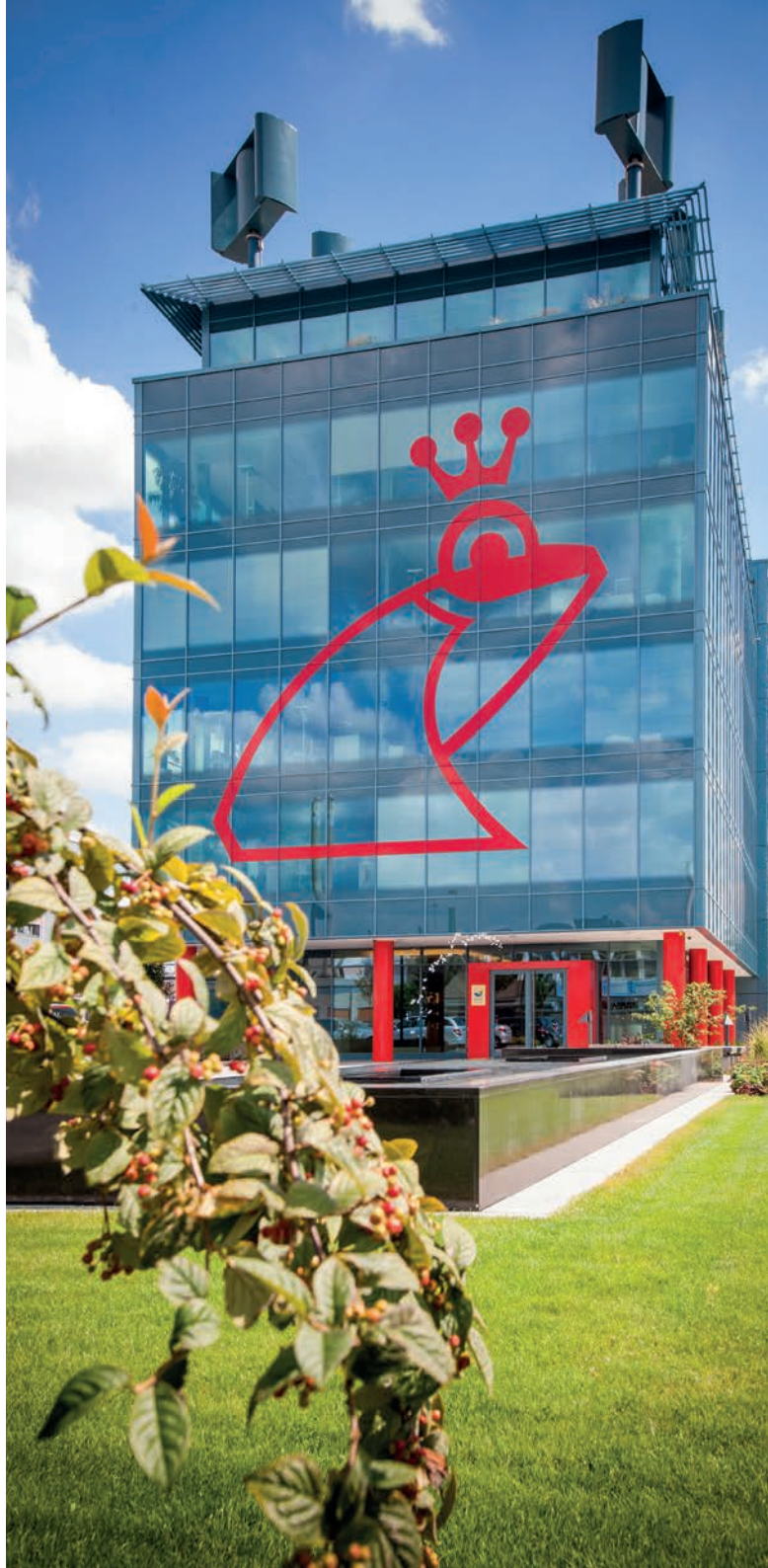
With our trusted brands such as Frosch, emsal and Green Care Professional, we are firmly established and recognized as an innovative company for cleaning products and laundry detergents.

We have been committed to our Mainz location for more than 150 years. The headquarters of the Werner & Mertz Group are here and will remain here. More than 800 employees work on the site of the EMAS-validated companies Werner & Mertz GmbH, Erdal-Rex GmbH, Tana-Chemie GmbH, BNS International GmbH and Werner & Mertz Service & Logistik GmbH in the core business areas of Product Development, Product Supply, Marketing, Administration and Logistics.

Our second production site was founded in Hallein near Salzburg in 1953. It is home to the EMAS-validated companies Werner & Mertz GmbH & Co KG, Erdal GmbH, W&M Professional Vertriebs GmbH and W&M Holding GmbH. Over the years, the Austrian location has grown to about 160 employees and produces mainly specialized maintenance products for the Professional Division and small series for the Consumer Division.

Our commitment to the production sites in Germany and Austria reflects our respect for local business conditions and our appreciation of extensive social services, the high level of vocational education, and ecological and social awareness.

From seven distribution sites, we deliver our laundry detergents, cleaning products and cosmetic products such as soaps and shower gels to many European countries and, via the Export department, to other parts of the world.



4. Our Corporate Policy

The core concerns of the Werner & Mertz Group are consolidated in our corporate policy. It clarifies our company profile, our goal orientation, our engagement in the areas of environment, energy and quality, other key topics and the values we stand for and live by every day. The content of our corporate policy serves as our guideline for making decisions and taking action.

This link takes you to our Corporate Policy:

Corporate Policy

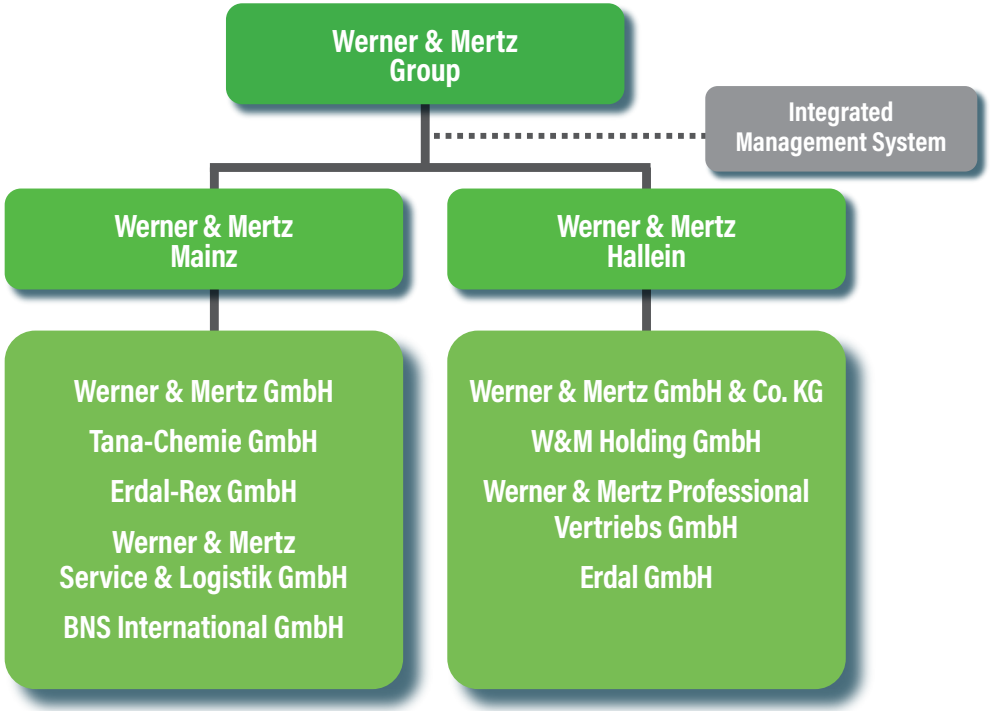
Beyond our dutiful compliance with legal requirements, we are committed to the following:

1. We want to develop recyclable, high-performance cleaning and hygiene solutions that are harmless to human life and Nature.
2. We want to maintain and further develop our Environmental and Energy Management systems in order to optimize our resource use, reduce burdens on the environment, increase energy efficiency and promote biological diversity.
3. We want to integrate our integrally sustainable approach and our goal-oriented culture in all processes.
4. We want to be at least one development generation ahead of the ecological benchmark for all fundamental elements such as formulas, packaging and production conditions, and to set new standards for feasibility.
5. With continuous risk management, we want to recognize early any potentially negative influences and derive suitable countermeasures as needed to reduce risk.

5. Our Environmental Management System

The success story of the Werner & Mertz Group is based on the highest standards for **sustainability** and **quality** and the ensuing consumer trust in our products and brands.
To meet our own standards, we combined the Environmental, Energy and Quality Management systems, whose criteria are used to certify companies within the Werner & Mertz Group, into an Integrated Management System (IMS).
The aim is to define requirements from norms and standards and implement them uniformly, address interdisciplinary topics, and create synergies between processes in varied management systems. We work reliably and verifiably on improving our environmental performance and energy efficiency in Environmental and Energy Management. The services and the functionality of the IMS are subject to annual company audits (on-site inspections and internal audits) by internal auditors.

The organizational chart shows the interrelationships of the Integrated Management system with EMAS-validated companies.



Interrelationships with Integrated Management System

Our Certified Management Systems

The Eco Management and Audit Scheme is particularly important for Werner & Mertz. It is the world's most extensive and demanding system for sustainable environmental management. Companies and other organizations voluntarily participate with the goal of making continuous improvements to their environmental protection activities. With EMAS validation of our production sites, we can prove that we consistently live our sustainability philosophy. EMAS thus contributes to deepening the trust our customers have in our products. In 2023 we celebrated 20 years of EMAS validation in Mainz.

Our Environmental and Energy Management system is structured according to the internationally applicable and recognized ISO 14001 and ISO 50001 standards and is examined and certified annually by an independent external auditor.

Our Quality Management System is structured according to the internationally applicable and recognized ISO 9001 standard and is examined and certified annually by an independent external auditor.

The production companies at the Mainz and Hallein sites are certified by the International Featured Standard (IFS), which includes requirements for the safety and quality of our products.

What makes EMAS special?

- Highest environmental standards based on the strictest EU criteria
- Annual internal audit
- Annual external audit conducted by independent environmental auditors
- Proof of continuous improvement to environmental performance
- Employee involvement
- Legal compliance monitoring
- External communication regarding the Environmental Management System

Legal Compliance

Adherence to statutory regulations is an essential component of our management systems. Certified companies' legal obligations regarding the environment and energy are managed in a digital legal system which is regularly updated with the latest statutory regulations. Norms and obligations can thus be systematically tracked and documented.

6. Milestones in Environmental and Energy Management

Milestones Mainz
Milestones Hallein
Milestones at both locations

1985

At the Hallein site, the fuel used in the boiler house was converted from heavy oil to natural gas. The change resulted in a significant reduction in emissions from steam generation for process and building heating.

1986

Launch of the Frosch brand that established the successful product line of environmentally friendly household cleaners.

1987

At the Mainz site, the wastewater network was divided into two systems: production wastewater in one and sanitary and other wastewater in another to allow targeted treatment for different types.

1989

At the Mainz site, construction begins on a physiochemical wastewater pretreatment system for production wastewater.

Launch of the Tana-Chemie GmbH Green series of environmentally friendly cleaning products for bulk customers.

1990

At the Mainz site, a pigging system was installed to clean pipelines. It significantly reduced the amount of rinsing water required.

1991

At the Mainz site, the fuel used in the boiler house was converted from heavy oil to natural gas. The change resulted in a significant reduction in emissions from steam generation for process and building heating.

1994

At the Mainz site, production facilities for household cleaners were rebuilt and automated in Building L1. The new facilities achieved savings in energy, wastewater and waste.

At the Hallein site, a biofilter was installed to eliminate odor emissions.

1995

At the Mainz site, business partner ALPLA moved onto factory premises. With packaging manufacturing close to production lines, 1,500 truck transports per year were eliminated, sparing the environment 570 metric tons of CO_2 emissions per year.

1996

At the Mainz site, production facilities for floor care and auto care products and for bulk customers in Building H22 were rebuilt and automated. Significant reductions were achieved in energy consumption, wastewater and waste.

1997

At the Mainz site, manufacturing and bottle-filling systems for innovative shoe care products were rebuilt and automated in Building L1. Significant reductions were achieved in energy consumption, wastewater and waste.

At the Hallein site, a special crisis plan was drafted in coordination with the responsible authorities. In addition, the factory's own waste area was rebuilt.

1998

A quantum leap for the environment was achieved with the development of a water-based, solvent-free formula for the range of shoe care products.

6. Milestones in Environmental and Energy Management

Milestones Mainz
Milestones Hallein
Milestones at both locations

2000

Implementation of risk management system that covers environmental production too.

2001

At the Mainz site, a quality management system was implemented for the business unit Product Supply and was ISO 9001 certified. Werner & Mertz GmbH became a member of the ÖKOPROFIT-Club. Since then, it regularly communicates with regional companies that pursue a similar sustainability philosophy in environmental matters.

2002

At the Mainz site, an Environmental and Energy Management System is set up.

Portions of buildings no longer required are demolished, resulting in a reduction of about 2% in annual heating energy consumption.

At the Hallein site, a Quality Management System for Product Supply is set up and certified according to ISO 9001 criteria.

2003

Werner & Mertz GmbH in Mainz publishes its first Environmental Statement and has its Environmental Management System certified according to ISO 14001 criteria and validated by EMAS.

2004

At the Hallein site, an Environmental Management System is set up.

2005

At the Mainz site, the Quality Management System is expanded to include Product Development and is certified according to ISO 9001 criteria.

The companies in Hallein, Werner & Mertz GmbH & Co KG, Erdal GmbH and W&M Professional Vertriebs GmbH, publish their first Environmental Statement and have the Environmental Management System certified according to ISO 14001 criteria and validated by EMAS.

Werner & Mertz implements a Group-wide sustainability guideline and, is the first medium-sized enterprise to become a member of the A.I.S.E. Charter for Sustainable Cleaning, an initiative of the European soaps, detergents and maintenance products industry.

2006

The first formulas of our foreign consumer brands Rainett and Froggy, and Tana-Chemie GmbH professional products are converted to comply with EU Ecolabel criteria.

At the Hallein site, the company's own well is put into operation for the production of fully demineralized water for our products and for cooling purposes in Production.

2007

Top management at Werner & Mertz orders the further development of the Environmental Management system into a sustainability system that is based on the three pillars of economy, ecology and social responsibility.

2008

Werner & Mertz Group publishes its first Sustainability Report.

6. Milestones in Environmental and Energy Management

Milestones Mainz
Milestones Hallein
Milestones at both locations

2009

At the Mainz site, construction begins on the new administration building K8, which is planned in compliance with sustainability guildelines.

Werner & Mertz becomes a founding member of the Business and Biodiversity Initiative in order to further emphasize its engagement in biodiversity. The umbrella brand Frosch receives the German Sustainability Award.

2010

At the Mainz site, the new administration building K8 goes into operation. It uses renewable energies such as wind power, photovoltaic cells and a geothermal groundwater system.

With the use of a minimum 50% of recyclate in plastic packaging, the umbrella brand Frosch sets new standards for environmentally friendly packaging in Europe.

2011

At the Mainz site, construction and operation of the new Water Center for the production of fully demineralized water and pretreatment of wastewater.

Werner & Mertz joins the German Environmental Management Association (B.A.U.M. e.V.). The proportion of recyclate in Frosh PET bottles is increased to 65%. In addition, for the first time, RSPO-certified palm oil is used.

At the Hallein site, parts of the production building are equipped with energy-optimized LED lighting. It is coupled with operation of the filling facilities and automatically adjusts to daylight.

2012

At the Mainz site, the new administration building K8 is the first industrial management building in Europe to receive the LEED Platinum certificate. Furthermore, Werner & Mertz Service und Logistik GmbH was EMAS-validated for the first time and is integrated in the existing Environmental Management System on the Mainz site.

Werner & Metz kicks off the Frosch Initiative: from here other initiatives are launched beyond our industry, e.g., the Recyclate Initiative, which aims to establish a functioning circular economy.

2013

The Energy Management System for both production sites in Mainz and Hallein is certified according to ISO 50001 criteria.

2014

At the Mainz site, the ventilation system in the Research & Development building F14 is modernized and optimized for energy efficiency.

At the Hallein site, Production is equipped with process-integrated cleaning. With Cleaning in Place (CIP), the facilities can be cleaned faster with less water. In addition, the lighting in the production halls was made more energy efficient.

2015

At the Mainz site, an online measuring device was installed in the wastewater pretreatment system to capture the CSB and TOC values. It saves about 1,200 test cuvettes containing mercury and dichromate per year.

At the Hallein site, a warehouse with state-of-the-art noise and thermal insulation was put into operation.

The production and filling of shoe care products was moved to Hallein, where the new shoe care competence center was established.

6. Milestones in Environmental and Energy Management

Milestones Mainz
Milestones Hallein
Milestones at both locations

2016

Werner & Mertz receives RSPO (Roundtable for Sustainable Palm Oil) certification.

At the Hallein site, the energy-efficient production facilities (Symex) for shoe polish goes into operation.

2017

At the Mainz site, construction begins on the new production building L8, which is designed according to state-of-the-art technology and with use of renewable energy such as photovoltaic cells.

At the Hallein site, W&M Holding GmbH is certified for the first time against ISO 140001 and ISO 50001 criteria and is EMAS validated. For optimized energy efficiency in Production, the fixed compressor was replaced with a variable speed screw compressor.

Werner & Mertz combines all management systems into an Integrated Management System (IMS).

2018

The Mainz site celebrates 15 years of EMAS certification.

At the Hallein site, a natural gas-based heating system was installed and put into operation in the administration building. Until now, the building had been supplied with heat via poorly insulated pipes from the production building.

2019

At the Mainz site, the entire new production building L8 was put into operation. Our business partner ALPLA moves into the ground floor and begins producing packaging that now goes directly into the bottle-filling facilities. For the first time, BNS International GmbH is EMAS-validated and ISO 14001 and ISO 50001 certified.

CEO Schneider receives the German Environmental Award. In addition, the stand-up pouch of 100% recyclable monomaterial is ready for market and the first cosmetic bottle of 100% HDPE material obtained from household waste collection is launched.

At the Hallein site, planning begins for a new wastewater pretreatment facility that will optimize wastewater quality.

2020

Werner & Mertz publishes for the first time its Sustainability Report according to the recognized GRI (Global Reporting Initiative) via the German Sustainability Code (DNK).

The Hallein site celebrates its 15-year EMAS anniversary. In addition, the new wastewater pretreatment system goes into operation.

Werner & Mertz merges the departments of Sustainability and Quality Management to make the management systems uniform and to secure its role as sustainability pioneer without loss of quality.

2021

Werner & Mertz manages for the first time to increase from 20% to 50% the share of recyclate obtained from consumer waste collections in its PET packaging.

2022

The joint venture Aneks Polska, a direct supplier of BNS International GmbH, is for the first time EMAS-validated and ISO 14001-certified. In addition, the completely recyclable spray head is market-ready. It contains a share of post-consumer recyclate in its mechanical components.

Werner & Mertz GmbH & Co KG is for the first time a system partner of bluesign, a sustainability standard for textile production that considers chemical safety for users and consumers. In addition, the outdated ion exchange system was replaced by a modern reverse osmosis system, which makes it possible to reduce significantly the chemical needs for water treatment.

2023

At the Hallein site, completion of construction and commissioning of the reverse osmosis system for the production of completely demineralized water. In addition, the multi-line unit, including double batch system, was put into operation. The focus was on regional deliveries to the Southern Europe customer group in efforts to reduce transport routes.

Werner & Mertz successfully increased the recycled share obtained from household waste in all PET packaging from 50% to 75%. Furthermore, in cooperation with the Öko-Institut e. V., the company calculated a complete, scientifically sound Corporate Carbon Footprint (CCF) that includes all three scopes for both production sites.

7. Direct and Indirect Environmental Impact

Environmental parameters are a company's activities, products and/or services that have a direct or indirect impact on the environment. The impact can be positive or negative. To monitor and manage all meaningful environmental parameters, all the EMAS-validated companies of the Werner & Mertz Group identify, analyze and assess their direct and indirect enviromental impact. The assessment provides information about the significance of environmental impact and serves as the basis for defining environmental goals. To better adjust to the always changing conditions, the companies regularly update the assessment of their environmental impact and consistently follow up with feasibly implemented measures.
The previously identified types of environmental impact are assessed according to the urgency with which they must be handled and how much influence we have over them.

7.1 Direct Environmental Impact

Direct environmental impact is directly connected to our activities and is under our control.

Composition of the Product Portfolio

Our company with the Frosch operates in accordance with sustainable, environmentally responsible business principles. We are driven by a desire to make a sustainable lifestyle beyond our brands attainable for a majority of the population. Within our industry, we accomplish that with exemplary ecological products and concepts for cleaning and care.
What all the products from Werner & Mertz have in common is their origin. They all come from our in-house Research & Development, which is made up of several groups, including the departments Formula Development, Packaging Development, and Research & New Technologies. In addition to coming up with innovations and new developments, R&D optimizes existing products and processes. Attributes of the contents, manufacturing, packaging and application are regularly examined. To meet high sustainability standards, our specialists thoroughly analyze raw materials, formulas and packaging components. We pursue our goal of sustainable development by considering a raw material's entire life cycle and the natural recycling that follows.

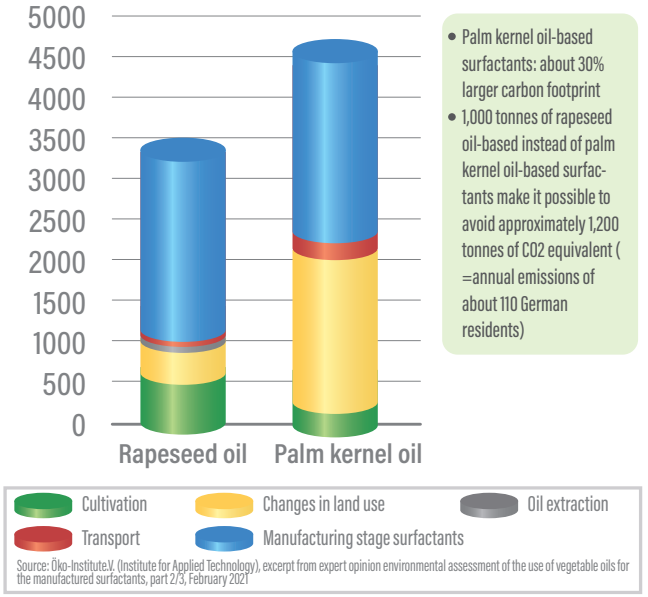
Formulas

For a long time, our company has used natural ingredients such as vinegar, lemon and soda in our products. A major portion of our cleaning products, however, consist of washactive substances called "surfactants". Surfactants in cleaning products and detergents provide cleaning power by dissolving dirt or soiling in water. Different variations of surfactants are available. Conventional cleaning products often contain petroleum-based surfactants; sustainable cleaners require surfactants made from regenerative raw materials. In addition to using petroleum, market participants have produced surfactants from mostly tropical palm kernel oil and, to a lesser extent, coconut oil. However, the conventional, nonsustainable cultivation of tropical oils destroys the rainforest's biodiversity in the long term and even the rainforest itself, the green lungs of the Earth. As part of our ambitious European Surfactants Initiative, Werner & Mertz continuously increases the share of surfactants based on European oil plants such as rapeseed, olive, linseed and sunflowers which come from Germany, Poland, France and Spain. That protects the rainforest in tropical regions and reduces the CO_2e emissions of our products. For this innovation, Dr. Edgar Endlein, managing director of Research & Development at Werner & Mertz, received in 2021 the respected Meyer-Galow Prize, which is awarded for the market launch of an innovation in chemistry with emphasis on sustainability.

Because the conversion requires substantial R&D expenditures, we are supporting the Roundtable on Sustainable Palm Oil (RSPO) and the sustainable cultivation of palm oil until we achieve long-term goal, i.e., obtaining all surfactants from European oil-producing plants.

Website European Surfactants Initiative

Carbon footprint (GWP - Global Warming Potential) **in kg CO_2 equivalent / tonne surfactants based on example of palm kernel oil** (Indonesia/Malaysia) **vs. rapeseed oil** (Central Europa)



- Palm kernel oil-based surfactants: about 30% larger carbon footprint
- 1,000 tonnes of rapeseed oil-based instead of palm kernel oil-based surfactants make it possible to avoid approximately 1,200 tonnes of C02 equivalent (=annual emissions of about 110 German residents)

Source: Öko-Institute.V. (Institute for Applied Technology), excerpt from expert opinion environmental assessment of the use of vegetable oils for the manufactured surfactants, part 2/3, February 2021

Frosch and Green Care Professional products are developed according to our strict Development Guidelines in which the European Ecolabel (EU Ecolabel) applies as the minimum standard. The EU-Ecolabel is the driving force behind the promotion of especially environmentally friendly formulas for cleaning products. It includes all national ecolabels and sets strict criteria for environmentally friendly products.
Currently, the highest eco certification is Cradle-to-Cradle Certified®. For the certification, the product is analyzed against a detailed assessment key. The materials used, their recyclability, water and energy consumption and the social impact of product cycles and production methods are assessed. The effect of all ingredients of a detergent and cleaning product on human life is determined precisely to a concentration limit of 0.01 percent. That exceeds the European detergent regulation by a significant margin. In Europe the certificate with the Gold performance level was first awarded in 2013 to a product in the cleaning industry. We are proud that it was our Frosch brand Citrus Shower and Bath cleaner. Since then more than 50 of our Green Care Professional products have been awarded this certification.

The Cradle-to-Cradle Principle

7. Direct and Indirect Environmental Impact

Packaging

Werner & Mertz long ago began working on a establishing functional circular economy. The concept of sustainability cannot be limited to the product itself, but has to consider the packaging too. That's why Werner & Mertz founded the Recyclate Initiative in 2012 with the goal of obtaining plastic from European household waste collections like the Yellow Bag and reprocessing the material for high-quality reuse. In cooperation with our partners along the entire value chain, we managed—by means of energy-efficient mechanical recycling—to produce equivalent packaging from recyclate. Now a major portion of our packaging is made 100% of recyclate, 75 to 100% of which comes from post-consumer waste collections like the Yellow Bag. By 2025, all the packaging from Werner & Mertz should be made of 100% recyclable material and 100% recyclate.

We reached another milestone in the Recyclate Initiative with our sustainable stand-up pouch, . It is the first flexible packaging in the world to achieve Gold in all categories of the Cradle to Cradle Certified Product Scorecard. The completely recyclable pouch, made of a monomaterial (polyethylene) with removable wraparound label, solves the problem posed by printed plastic in recycling.

The latest success in the Recyclate Initiative is the completely recyclable spray head, which is the first to contain post-consumer recyclate in the mechanical components and to adhere to all 3R circularity strategies of reduce, reuse and recycle. All cleaning product bottles for the brands Frosch, Green Care Professional and Tana Professional will be equipped successively with the innovative spray head.

The environment benefits from our efforts in two ways. Plastic recycling prevents the polluting of land and sea and conserves natural resources by eliminating the need for crude oil in the production of new plastic. We effectively reduce the carbon footprint of every single product and thus actively contribute to climate protection. Moreover, we engage at social and political levels, advocating the use of high-quality plastic recycling and increasing awareness of our innovative solutions that can be implemented for immediate effect. Over the past decade, we have been recognized internationally as a Best-Practice example for recyclable packaging. Our innovations developed within the scope of the Recyclate Initiative have earned multiple awards.

Recyclate Initiative Chronology

Website We for Recyclate

7. Direct and Indirect Environmental Impact

Vehicular Fleet

As a rule, vehicles for our sales companies are replaced every three years or when they exceed a pre-defined number of kilometers. We use vehicles with environmentally friendly technologies which have lower CO_2 founded emissions than conventional models. The allowed CO_2 limits for vehicle models are specified in our Car Policy. We review our policy regularly and adjust it to reflect current developments, e.g., expansion of E-charging technology and the infrastructure at all our European locations. In addition, fuel consumption of our vehicles is regularly monitored to allow for quick reaction to unusual changes in consumption pat-terns. At the Mainz site, an e-auto as a pool vehicle is available for short business trips. Trips can be made to the external warehouse with a plug-in hybrid company car from Werner & Mertz Service & Logistik GmbH. In 2020 an external consulting company conducted a study on the topic "Sustainable Fleet".

Business Trips

The economic and ecological aspects should be considered in the planning of any business trip. It is recommended that all companies avoid unnecessary travel and, if possible, switch to virtual communication channels or use public transportation. Unavoidable air travel is overseen by our travel agency. The emissions generated by travel are assessed every year. On the basis of the assessment, we decide how much we donate for climate awareness education in German schools.

Internal Factory Logistics

At our production sites, short transport routes and optimized value chains are key components in our efforts to reduce negative environmental impact. The following examples provide impressive proof of our approach. For packaging manufacturing close to our production lines, our business partner ALPLA moved operations onto our factory grounds in Mainz in 1995. On our site, primary packaging of recyclate is manufactured and, since 2019, has been delivered by conveyor belts directly to our bottle-filling lines. Both sites have an all-electric fleet of forklifts, whose lithium-ion batteries are maintained with an energy and runtime-optimized charging management system.

7. Direct and Indirect Environmental Impact

Factory Structure Planning

For construction projects on our sites, planning always includes the sustainability aspect. Good examples are our administration building K8, which was awarded the respected building certification LEED Platinum, and the production building L8 on our Mainz site. Construction plans supported the use of recycled building material and took into account the Werner & Mertz sustainability concept for the building's interior equipment. In the foyer of the administration building, for example, untreated flooring made from native wood was installed. Office furniture is almost completely recyclable. Furthermore, both buildings have a well thought-out energy concept based on the highest energy standards and, with state-of-the-art environmental technology, ideally adapted to the unique geological and climatic conditions on the banks of the Rhine. A geothermal well, for example, is used for building cooling and heating in K8. Sixteen small wind turbines and photovoltaic modules are installed on the roof of the building. Two-thirds of the roof surface of production building L8 is equipped with PV modules. Another special features is the waste heat recovery from compressed air systems that is used to heat water and the building itself. Greenery on the facades and rooftops fosters the natural air-conditioning of the building and promotes biodiversity on our factory grounds. In the interior rooms of the administration building too, planted walls improve the indoor climate.

7. Direct and Indirect Environmental Impact

Biodiversity

We are concerned with protecting, preserving and promoting biological diversity. That's why Werner & Mertz, an ecologically oriented and socially responsible company, is engaged in many projects and cooperative efforts. Beyond protecting flora and fauna, binding climate-damaging greenhouse gases is an important aspect that plays a key role in our projects.

Biodiversity Projects in Germany:

- The project "Frosch protects frogs" was launched in 1998. In cooperation with the NABU Nature Conservation Center Rheinauen, Werner & Mertz works to improve living conditions for the tree frog and other amphibian species in their native Rheinauen (Rhine wetlands).
- Wetland meadows are among the most species-rich natural habitats in Germany. They also bind CO_2 and thus contribute greatly to climate protection. These are reasons why Werner & Mertz participates in NABU projects aimed at expanding and protecting regional floodplains.
- Werner & Mertz supported the since-completed LIFE Project "Restoration and conservation of sloping and transition mires in low mountain range Hunsrück (Hochwald area)". The goal was to reactivate the valuable wetlands so that flora and fauna typically found in mires could resettle there and halt the disintegration of the peat. Intact peatlands contribute significantly to climate protection as they store CO_2 over the long term.

Biodiversity Projects in Austria:

- The project "Frosch protects frogs" has been active for more than 10 years in Austria too. Together with WWF, we work for the protection and conservation of the Morava-Thaya floodplains, which are unique specimens of their type and among the absolute hot spots of species diversity in Central Europe.
- Werner & Mertz purses the goal of nature conservation and sustainable development of the Alpine region. In cooperation with the Austrian Alpine Club, about 40 mountain forest projects and environmental work sites are supported every year.

7. Direct and Indirect Environmental Impact

Inter-regional Biodiversity Projects:

- The charitable organization BOS Deutschland e.V. (Borneo Orangutan Survival) has devoted itself to protecting the orangutans and their habitat in the tropical rainforest of Indonesia, which is home to a wide variety of endangered plant and animal species. 2019 Werner & Mertz entered into long-term cooperation with BOS Deutschland. During the life of the agreement, Werner & Mertz will support the BOS orangutan rescue centers on Borneo along with the reintroduction of rehabilitated orangutans and monitoring of animals returned to protected rainforests. The objectives of both partners are species protection on Borneo, maintenance and expansion of the orangutans' habitat and a mutally beneficial exchange of information regarding palm oil and surfactants.
- In September 2019 Werner & Mertz owner Reinhard Schneider received the German Environmental Award from the German Federal Environmental Foundation (DBU). He donated his prize money of 250,000 EUR to BOS Deutschland for the reforestation of the Mawas reserve, one of Indonesia's largest peatlands. Plans call for the establishment of the most valuable type of forest for the climate – a wooded peatbog – on the degraded wasteland.
  It should create a natural habitat for many endangered species, including orangutans, frogs and several types of plants. Unlike many other companies, we understand reforestation exclusively as protection of biodiversity, not as a way to offset CO_2 emissions and certainly not as "climate neutrality".

Biodiversity Projects on Company Grounds:

On company grounds too, small biotopes can be created for plants and animals. As part of the trainee and employee projects, Werner & Mertz, together with NABU, has done quite a lot to increase the biodiversity on its own premises. Examples include setting up wild bee hotels and nesting blocks, cultivating rare plants and wild roses, and changing the mowing frequency. The flowering areas on the Mainz company grounds have since developed very well. Biological diversity also is promoted at our site in Hallein. With the "Frosch and Wild Bees" project, Werner & Mertz Hallein contributes to the conservation of habitats for native and organically cultivated plant species. Additionally, all green areas on the property and two traffic circles in Hallein were redesigned to make them bee-friendly. Since the beginning of the redesign in 2016, a wild bee expert has monitored the development of the wild bee population. The success of the project can be seen and quantified.
To call more attention to the subject of biodiversity, Werner & Mertz became a member in the cross-industry initiative Biodiversity in Good Company, which advocates biodiversity protection at political, business and social levels.

We want to make a notable contribution to the conservation of our natural resources. To do so, we live in an exemplary energy-saving circular economy that protects the climate and preserves biodiversity. We encourage and challenge our employees to help us reach this goal according to their abilities and needs.

Reinhard Schneider, Chairman of the Management Board

7.2 Indirect Environmental Impact

We can influence indirect environmental impact to a limited extent only because it arises in interaction with third parties.

Employees' Commute

To offer our employees options for an eco-compatible commute, we support the Jobticket and Jobrad and provide charging infrastructure for e-vehicles on company premises. We have equipped the site in Mainz with more than 40 outdoor electrical outlets and three charging stations whose use is free for employees.

Sustainability in the Supply Chain

Integrity, honesty, respect for human dignity and responsible handling of our ecological resources are at the core of our business activities. Our principles are anchored in a Code of Conduct that applies to the entire Werner & Mertz Group. We expect our business partners within the supply chain to conduct themselves accordingly. We have established processes and guidelines that define our sustainability standards in procurement processes. With the Supplier Code of Conduct, Werner & Mertz ensures that we maintain an ongoing dialog with business partners as we work together to communicate and promote our high sustainability standards and to identify possible ambivalence. We also strive to recognize early any potential risks that arise from our business relationships and act promptly to eliminate them.

Distribution and Procurement Logistics

In keeping with our corporate philosophy, we take sustainability viewpoints into consideration when we select our service providers. For our major partners, sustainability is a core element in corporate decision-making. Since 2008 we have conducted a study with the Fraunhofer Institute for Material Flow and Logistics (IML) in Dortmund on the sustainability aspects in our distribution logistics. The study determines the generated CO_2e emissions based on vehicle class, utilization, fuel consumption and type, and mileage (kilometers traveled). The findings give us a good overall view of our logistical structures and a solid basis for decisions about corrective measures.

Since 2008, CO_2e emissions per metric ton-km have been reduced significantly by using modern vehicles and our transport services providers' diligent fleet management. The comparison of 2008 and 2018 showed a reduction of about 40%. In the same 10-year period the share of low-emission vehicles (Euro Class 5/Enhanced Environmentally-Friendly Vehicle = 28% and Euro Class 6 = 66%) increased from 21% to more than 94%.

Since 2023, consideration has been given to the procurement and distribution logistics in calculating the Corporate Carbon Footprint (CCF).

8. Input-Output Assessment

The most important input and output data from the past four years are presented separately in the following tables.

Input Water

Indicator	Unit	2020	2021	2022	2023
Total consumption	m^3	413,208	383,587	365,784	325,750
Well water	m^3	385,980	346,890	284,392	246,873
Municipal water	m^3	27,228	36,697	81,392	78,877

Input Energy

Indicator	Unit	2020	2021	2022	2023
Total consumption	kWh	17,532,912	17,768,022	16,022,372	14,197,175
Electricity*	kWh	8,747,991	8,639,859	9,042,696	8,429,951
Natural gas	kWh	1,989,578	1,867,540	1,422,146	1,277,116
District heating	kWh	6,795,343	7,260,623	5,557,530	4,490,108

** The electricity comes from 100% renewable energy sources.*

Input Raw Materials

Indicator	Unit	2020	2021	2022	2023
Total of all raw metarials	t	37,178	34,848	33,306	32,302
Surfactants and detergent raw materials	t	18,563	17,316	16,289	16,173
Solvents	t	10,533	10,265	9,933	9,434
Acids, lyes and salts	t	4,143	3,689	3,843	3,625
Other raw materials	t	3,939	3,578	3,241	3,070

Input Packaging

Indicator	Unit	2020	2021	2022	2023
Packaging (bottle, pouch, canister, caps)	piece	357,905,139	342,577,347	356,998,928	337,654,355
Cartons	piece	21,746,378	20,587,561	21,692,882	19,966,856
Labels	piece	353,801,725	351,608,490	319,901,709	292,749,686

8. Input-Output Assessment

Output Emissions

Indicator	Unit	2020	2021	2022	2023
Total CO_2e emissions (market-based approach, Carnot method, FW 309-6)	kg	1,124.311	1,140,567	874,312	748,332
Total CO_2e emissions (market-based approach, energy credit method, FW 309-1)	kg	499,139	472,590	363,019	335,242
Total CO_2e emissions (location-based approach)	kg	5,532,834	5,585,778	5,187,873	4,654,921
Scope 1					
CO_2e emissions from natural gas	kg	489,436	459,415	349,848	314,171
CO_2e emissions from refrigerant losses	kg	9,405	12,895	12,958	20,880
CO_2e emissions from SO_2	kg	13	12	9	8
CO_2e emissions from NO_x	kg	285	268	204	183
Scope 2					
CO_2e emissions from electricity (market-based approach)	kg	0	0	0	0
CO_2e emissions from electricity (location-based approach)	kg	3,280,497	3,239,947	3,391,011	3,161,232
CO_2e emissions from district heating (market-based approach, Carnot method, FW 309-6)	kg	625,172	667,977	511,293	413,090
CO_2e-emissions from district heating (market-based approach, energy credit method, FW 309-1)	kg	0	0	0	0
CO_2e emissions from district heating (location-based approach)	kg	1,753,198	1,873,241	1,433,843	1,158,448
Other Emissions					
Particulate matter	kg	0	0	0	0
VOC emissions	kg	0	0	0	0

8. Input-Output Assessment

Output Products

Indicator	Unit	2020	2021	2022	2023
Cleaning and care products	t	148,366	144,853	148,296	143,939
Cleaning and care products	piece	164,349,457	161,330,698	164,928,948	159,049,534

Output Water

Indicator	Unit	2020	2021	2022	2023
Direct discharge (Rhein)	m^3	245,835	203,909	188,038	158,095
Indirect discharge (municipal treatment plant)	m^3	50,917	66,982	51,890	53,137

Output Waste

Indicator	Unit	2020	2021	2022	2023
Total waste	t	2,533	2,750	2,687	2,430
Non-hazardous Waste					
Industrial waste (residual waste)	t	130	120	134	144
Plastic sheets	t	41	39	47	41
Filter cakes	t	1,279	1,412	1,152	1,046
Backing paper (for labels)	t	195	215	199	140
Cardboard and paper	t	448	437	454	390
Wood waste	t	73	96	56	70
Green waste	t	19	12	10	4
Metal scrap	t	40	28	32	33
Miscellaneous waste*	t	-	-	-	53
Hazardous Waste					
Production and laboratory waste	t	15	83	142	177
Rinsing water	t	293	308	461	322
Miscellaneous waste**	t	-	-	-	10

**including construction waste, E-waste, glass*
*** including insulation material*

8. Input-Output Assessment

Basis for Calculations:

Natural gas: *The emissions are calculated on the basis of Gemis 4.7, in which CO_2 emissions correspond to 0.246 kg per kWh of natural gas. The resulting emissions are offset by the supplier. We report them here for reasons of transparency.*

Refrigerant: *The emissions are calculated on the basis of the specific GWP (Global Warming Potential) of the refrigerant used. The emissions arise from the maintenance and refilling of air-conditioning systems on our factory grounds.*

SO_2: *The emissions are calculated on the basis of Gemis 4.7, in which the CO_2e emissions correspond to 0.0000066269 kg per kWh of natural gas. The emissions arise from the burning of natural gas.*

NOx: *The emissions are calculated on the basis of Gemis 4.7, in which the CO_2e emissions correspond to 0.000143266 kg per kWh of natural gas. The emissions arise from the burning of natural gas.*

Basis for Calculations Scope 2:

Electricity, market-based approach: *The emissions are calculated using the emission factor of the supplier for the delivered electrical product. It is specified at 0 kg CO_2 per kWh.*

Electricity, location-based approach: *The emissions are calculated on the basis of the emission factor of the electricity mix for the power grid on which the consumer is found. It is specified at 0.375 kg CO_2 per kWh.*

District heating, market-based approach (Carnot method): *The emissions are calculated based on the worksheet FW 309-6 (As of 12/2014, valid until 04/2027) from district heating supplier. The emission factor is 0.092 kg per kWh.*

District heating, market-based approach (Energy Credit method): *The emissions are calculated based on the worksheet FW 309-1 (As of 2020, valid until 04/2027) from the district heating supplier with an emission factor of 0,00 kg per kWh.*

District heating, location-based approach: *The emissions are calculated on the basis of the emission factor of the district hearing mix in the network on which the consumer is found. It is specified at 0.258 kg per kWh.*

For transparency reasons, we report all emission factors and approaches which are permitted by the GHG protocol.

Basis for Calculations Total Emissions:

Basis for Calculations Total Emissions:
CO2eTotalemissions(market-basedapproach,Carnotmethod, FW 309-6): The total emissions are calculated from all Scope 1 and other emissions and the following Scope 2 emissions are added: CO2e emissions from electricity (market-based approach), CO2e emissions from district heating (market-based approach, Carnot method, FW 309-6).

CO2e Total emissions (market-based approach, Energy Credit method, FW 309-1):
The total emissions are calculated from all Scope 1 and other emissions and the following Scope 2 emissions are added: CO2e emissions from electricity (market-based approach), CO2e emissions from district heating (market-based approach, Energy Credit method, FW 309-1).

CO2e Total emissions (location-based approach):
The total emissions are calculated from all Scope 1 and other emissions and the following Scope 2 emissions are added: CO2e emissions from electricity (location-based approach), CO2e emissions from district heating (location-based approach).

9. Environmental Performance Figures for 2023

The following environmental performance figures and the environmental and energy indicators derived from the Input-Output Assessment serve as a critical instrument for steering and monitoring the effective-ness of the Environmental and Energy Management System.

The core indicators make possible:

- an environmental accounting of the actual state of the system
- environment-oriented and energy-efficient planning and steering
- regular checks of improvement in environmental performance

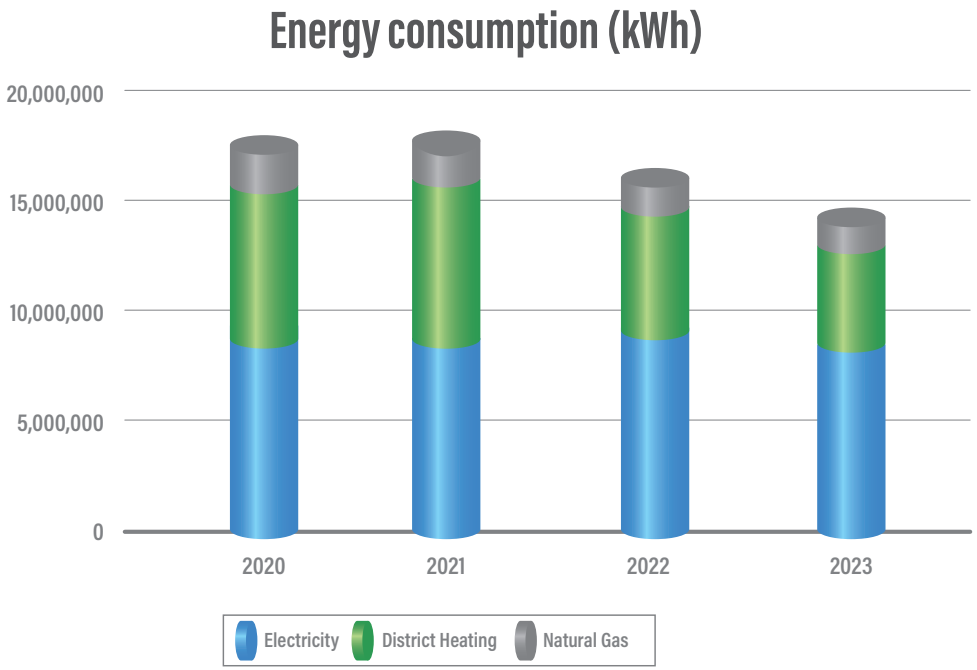
The relation to the produced tonnage (metric tons) and number of pieces of finished product also is shown.

9. Environmental Performance Figures for 2023

Energy

The responsible use of energy is an important element of sustainability. For purposes of monitoring and optimizing energy use, we implemented an energy management system in compliance with ISO 50001 in 2013. By means of targeted energy data capture, we can determine in detail the consumption of electricity, natural gas, district heating and compressed air. The findings help us to identify key usage areas and potential savings and develop action plans for energy management that supplement measures in the Environmental Program.

The key energies at the Mainz site are electricity and district heating. We require significant amounts of electricity for production and air-conditioning in our buildings. District heating is exclusively for heating the buildings and hot water heating. An increasingly smaller energy source is natural gas.



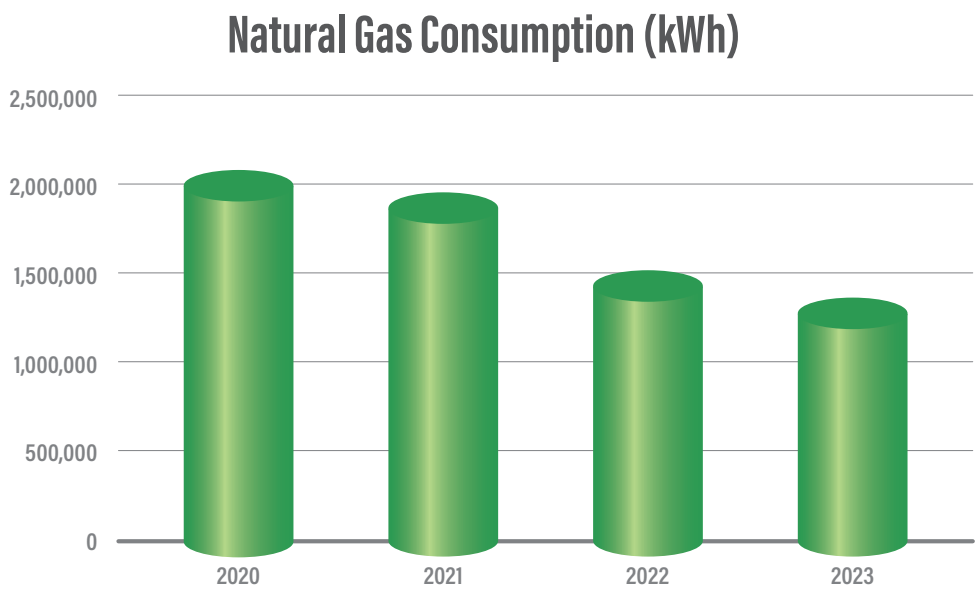
9. Environmental Performance Figures for 2023

Natural gas

Natural gas is used on the Mainz site only to generate process steam for the manufacturing of a few product groups. In the past, the heating systems for production buildings and warehouses operated with natural gas and the heat chambers for frost-sensitive raw materials were converted to district heating one after the other. Altogether, the conversions and the demolition of outdated parts of buildings have achieved significant savings.

Starting in August 2022, with the involvement of Formula Development in the Energy Team, many soap-containing formulas were identified for which the use of process steam could be reduced or eliminated in product manufacturing. Formula conversions were expanded further in 2023. This plan has been incorporated as a goal in the Environmental Program.

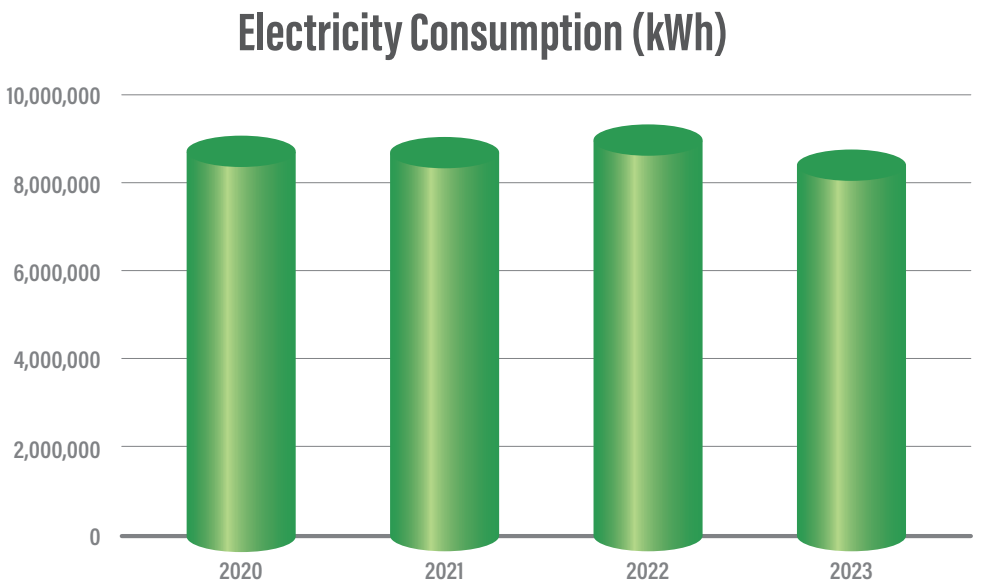
We were able to reduce natural gas consumption by 32%, compared to 2021.



9. Environmental Performance Figures for 2023

Electricity

Werner & Mertz uses green electricity only. Furthermore, Werner & Mertz GmbH generates electricity from renewable energies, mainly from photovoltaic modules on building rooftops. In 2023 the generated energy equaled 127.137 kWh. Compared to 2022, the electricity consumption at the Mainz site decreased by 6.8% in 2023 (see Input-Output Assessment). The reduction is attributed mainly to the elimination of construction and demolition work on factory premises and to lighting changes and lamp replacement on the factory premises.

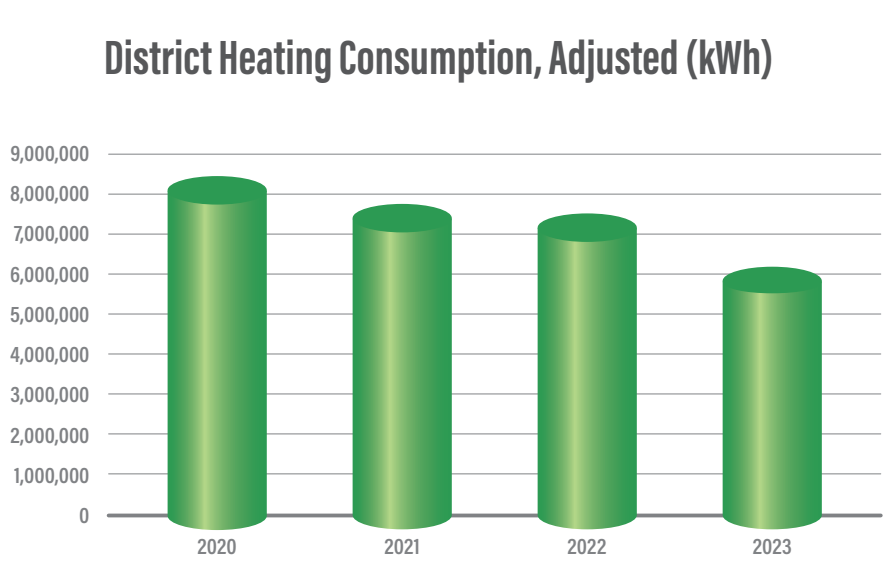


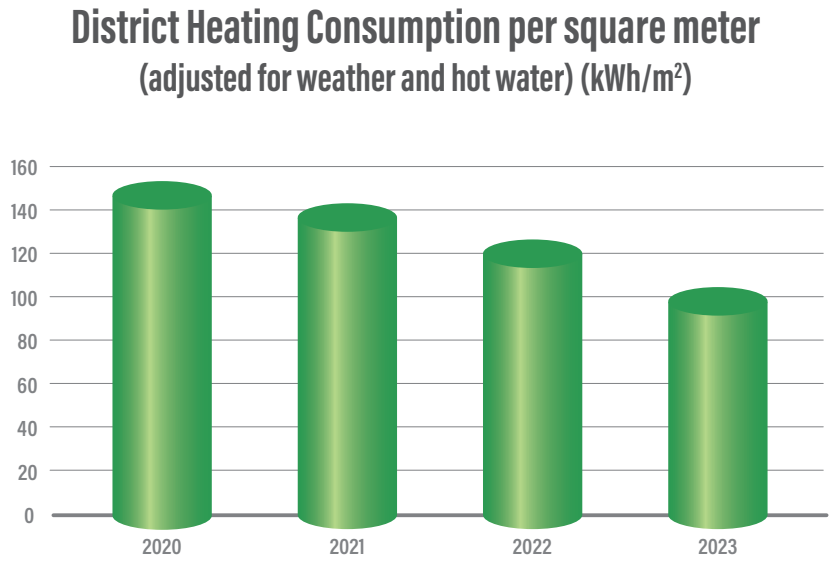
9. Environmental Performance Figures for 2023

District heating

District heating is required on the Mainz site to heat buildings and produce hot water. On our factory grounds we have 13 decentralized heat transfer stations that transfer the heat as needed to the buildings.
The unadjusted district heating consumption decreased 19.2% in 2023 as compared to the previous year (see Input-Output Assessment). The figures have to be adjusted for a correct comparison of district heating consumption. That means the district heating consumed for building heating has be be adjusted for weather conditions. The portion consumed for hot water heating remains unaffected. The adjusted district heating was 17.4% lower in 2023 as compared to previous year. The reduction is attributed to the optimization of heating management, including lowering the room temperature.

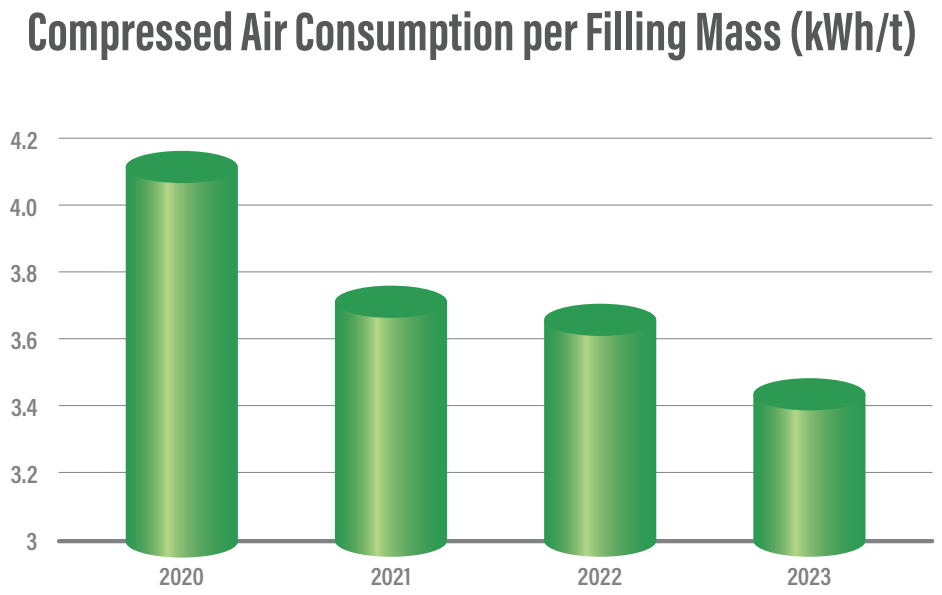
District heating consumption per square meter, adjusted for weather conditions and hot water heating, is shown in the following chart.





Compressed Air

Compressed air is used on the Mainz site primarily in production processes, e.g., filling stand-up pouches. Compressed air use in 2023 decreased by 9.2%, compared to previous year. A concept is to be developed in 2024 for the waste heat potential of the compressor station in boiler building F6. The waste heat potential of the compressor station in production building L8 is already being fed into the local supply network.



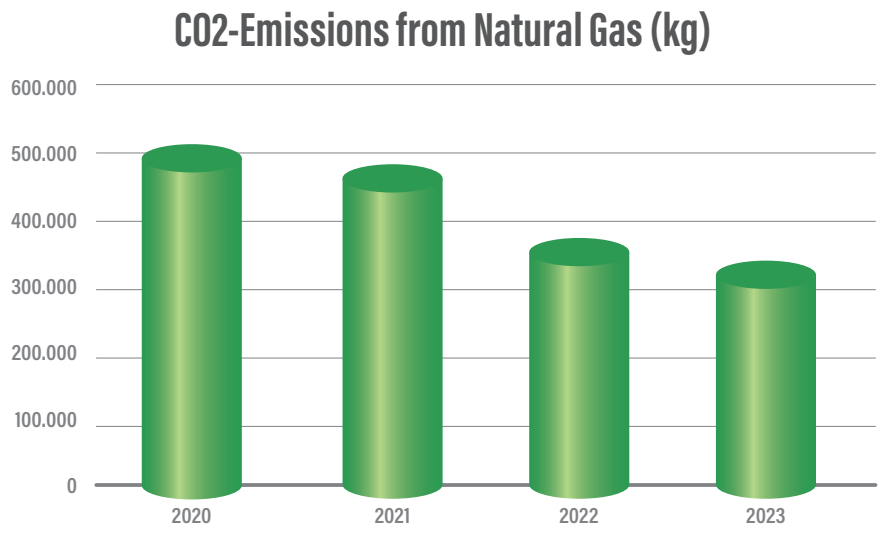
9. Environmental Performance Figures for 2023

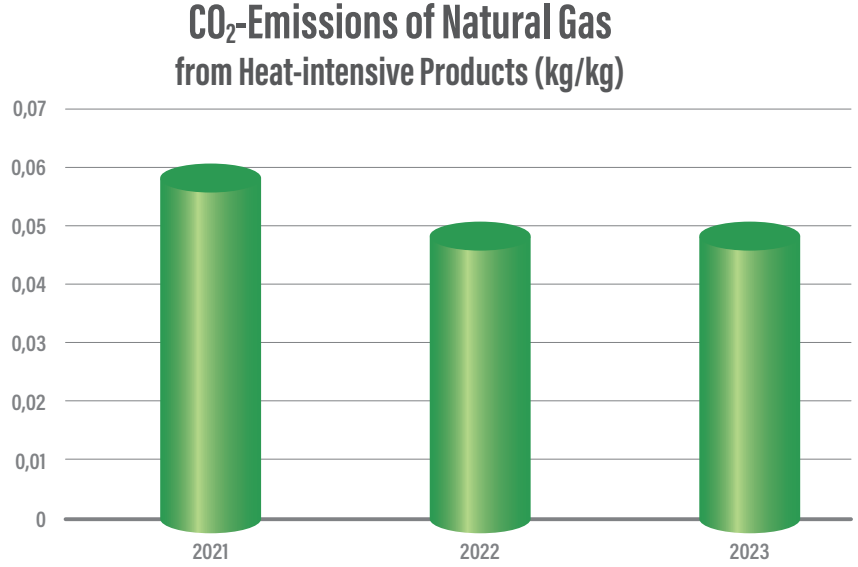
Emissions

We capture or assess our CO_2e emissions from our Scope 1 and Scope 2. Together with the independent Öko-Institut e. V., we carried out a project for the creation of an integrally sustainable, scientifically sound greenhouse gas assessment. The calculated Corporate Carbon Footprint, based on the Greenhouse Gas Protocol, has been written for the production sites in Mainz and Hallein. The assessment is updated annually.
Emissions from natural gas within Scope 1 fell by 35.8 % in 2023 compared to 2022, equivalent to consumption.

As previously stated, we use natural gas on the Mainz site only to generate process steam for the manufacturing of a few product groups. The following chart shows CO_2 emissions of these heat-intensive products. They are soap-containing products and fabric softeners.

There are no VOC facilities on the premises which are subject to the VOC (Volatile Organic Compounds) ordinance. The Mainz site is subject to the limits on organic substances in the exhaust emissions as specified in TA Luft (Technical Instructions on Air Quality Control). Those limits are not exceeded and are regularly measured by third parties.
To monitor compliance with the statutory regulations, we have appointed an Immissions Control Officer on the Mainz site in accordance with the Federal Immission Control Act.





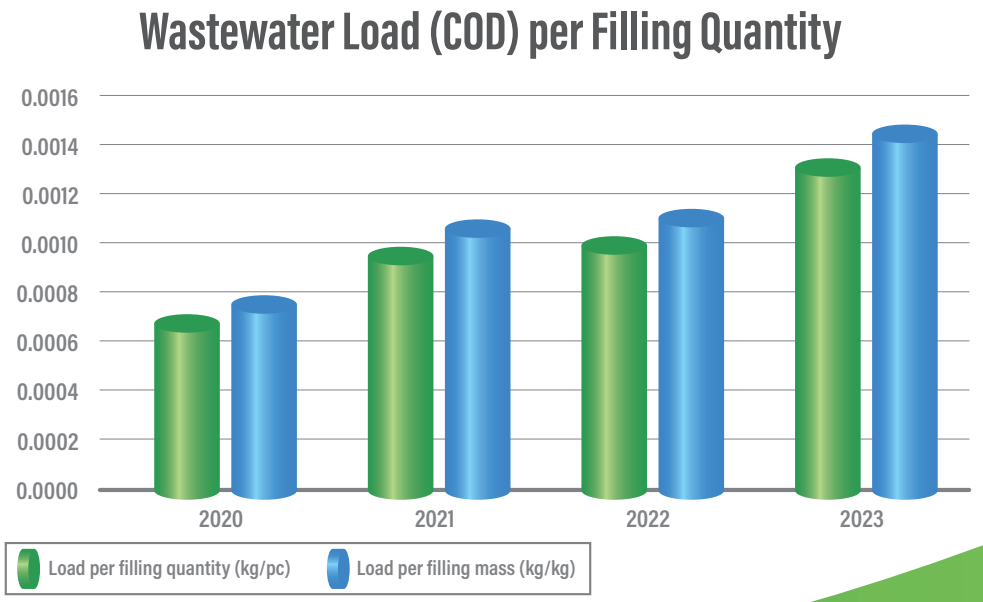
9. Environmental Performance Figures for 2023

Water

In close consultation with the responsible authorities, we draw water from two wells on the Mainz site. A portion of the extracted well water is used by the geothermal energy system to cool and heat the administration building. Afterwards, the water is fed either as a direct discharge into the receiving waters of the Rhine or is treated for product manufacturing in our factory's own Water Center equipped with a Reverse Osmosis (RO) system and thus is used many times over. When the water is treated in the RO system (physical separation technique,) production can to a large extent do without chemical substances such as sodium hydroxide and hydrochloric acid. Because the treated well water covers the predominant need for water in Production, valuable drinking water can be conserved. If needs increase, a small portion of the required water can be drawn from the city of Mainz public drinking water system. Becauses the Rhine has had longer periods of low water levels since 2022, the ratio of water purchased from the municipal system and from company wells has changed in recent years. Another portion of the well water is used for processing cooling in Production. No water treatment is necessary for this use. The water, which does not come into contact with products or with other resources, is returned, unpolluted, to the Rhine via a direct discharge. The adjustments to production procedures and conversions of formulas have led to a significant reduction in the need for cooling water.

The partial flows in the direct discharge have varied regulatory limits. We monitor and measure them in a self-monitoring process and submit a discharge monitoring report every year. The authorities have the right to check the values at any time. During the year, unannounced random sampling takes place. We comply with all regulatory limits.

Wastewater from Production is handled carefully too. It is treated in a special facility in which the minerals in the water are pressed out through a membrane. In the spirit of the circular economy, the filter cakes (sludge) are reused as a supplemental material in the production of Poroton bricks for the construction industry. The pretreated wastewater is then cleaned in the municipal treatment plant and returned to the Rhine—a true circular economy in accordance with the Cradle to Cradle principle. In efforts to reduce the finished products inventory, we increased production of small lots, which requires frequent material change-overs in the production lines. Between the change-overs, the facilities are cleaned and the pipes are rinsed to assure consistent product quality. Consequently, the amount of wastewater, including wastewater pollution (wastewater load), increased in past years.



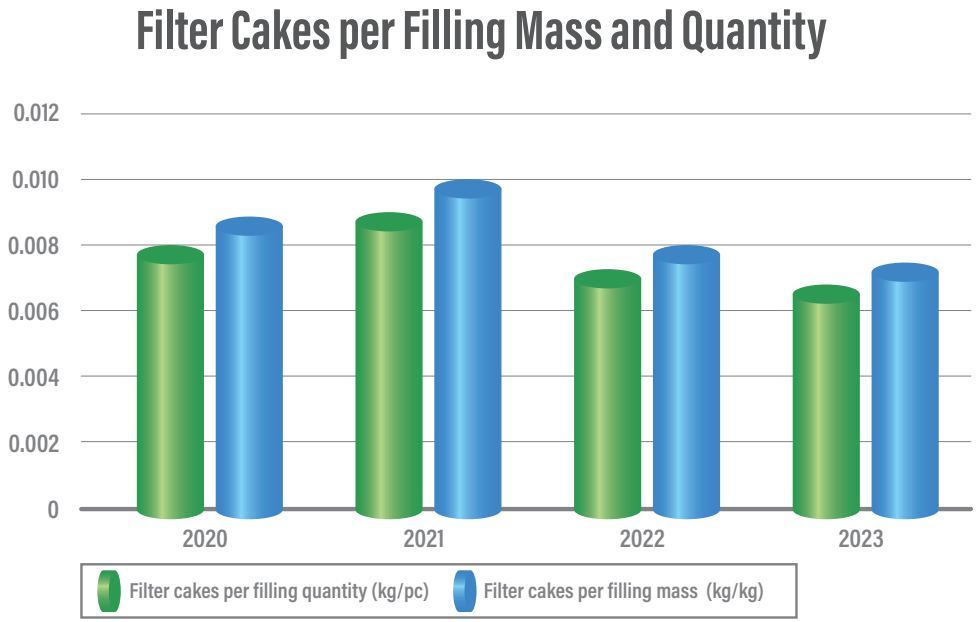
9. Environmental Performance Figures for 2023

Waste

Responsible handling of resources is part of a sustainable lifestyle. With resource-conserving use of raw materials, we want our activities to have maximum impact to keep the environment—local and global—in balance. Wherever possible, we close loops. At our production sites we long ago introduced a sustainable disposal concept and regularly look into ways to use our waste. Examples include the recycling of backing paper for labels and the installation of recyclable paper towel dispensers. According to the motto "Cellphones for bees and bumblebees," used cellphones and tablets from employees were collected and handed over to Telefónica Deutschland Group. In return, Telefónica donated money to the Nature and Biodiversity Conservation Union, which was earmarked for the NABU insect protection fund.

The largest portion of waste at the Mainz site consists of filter cakes that come from the physico-chemical water treatment processes. For many years the material has been recycled and used as a supplement in the production of Poroton bricks for the construction industry.

In the past, smaller lots were produced in order to reduce the finished product inventory. Small lots, however, often require a change-over of materials in the production line. Between the change-overs, the plant and pipes are rinsed and more wastewater is produced. The higher amount of wastewater was treated in the Water Center, resulting in an increased amount of filter cakes per filling mass and filling quantity from 2019 to 2021. Faced with a shortage of raw materials in 2022, we, in consultation with the municipal water treatment plant, used less ferric chloride in water treatment. That resulted in a decrease in filter cakes in 2022; the same was done in 2023.



9. Environmental Performance Figures for 2023

Noise

No noise emitted from the Werner & Mertz site in Mainz exceeds statutory limits.

Contaminated Sites

There are no environmentally relevant indicators of contaminated sites or areas of suspected contamination at the Mainz location.

10. Core Indicators

Core indicators showing our fulfillment of requirements from the Directive (EC) Nr. 1221/2009 (EMAS III) are listed in the following table. These indicators were first established for the year 2009 and updated for each year thereafter.

Legend:
Figure A: Total annual input/impact in specified environmental area
Figure B: Overall annual output of the organization (in metric tons (B1); 1000 pieces (B2))
Figure R: Ratio of A/B (metric tons (R1); to 1000 pieces (R2))

Core Indicat ors per Year		2020	2021	2022	2023	Comments
Figure B_1		148.366 t	144.853 t	148.296 t	143.939 t	
Figure B_2		164.349 *	161.331 *	164.929 *	159.050 *	(* = 1000 pieces)
Energy Efficiency						
Total direct energy consumption:	Figure A	17,533 MWh	17,768 MWh	16,022 MWh	14,197 MWh	Direct energy consumption includes use of electricity, natural gas and district heating.
	Figure R_1	0.1182 MWh/t	0.1227 MWh/t	0.1080 MWh/t	0.0986 MWh/t	
	Figure R_2	0.1067 MWh/*	0.1101 MWh/*	0.0971 MWh/*	0.0893 MWh/*	
Total use of renewable energies:		8.748 MWh 0,0590 MWh/t 0,0532 MWh/*	8.640 MWh 0,0596 MWh/t 0,0536 MWh/*	9.043 MWh 0,0610 MWh/t 0,0548 MWh/*	8.430 MWh 0,0586 MWh/t 0,0530 MWh/*	We use only (100 %) green electricity.
Material Efficiency						
Total of all raw materials additives and operating supplies:		37,178 t 0.2506 t/t 0.2262 t/*	34,848 t 0.2406 t/t 0.2160 t/*	33,306 t 0.2246 t/t 0.2019 t/*	32,302 t 0.2244 t/t 0.2031 t/*	See Input-Output Assessment for details.

10. Core Indicators

Legend:
Figure A: Total annual input/impact in specified environmental area
Figure B: Overall annual output of the organization (in metric tons (B1); 1000 pieces (B2))
Figure R: Ratio of A/B (metric tons (R1); to 1000 pieces (R2))

Core Indicat ors per Year	2020	2021	2022	2023	Comments
Wasser					
Total annual water use:	413,208 m^3 2.7851 m^3/t 2.5142 m^3	383,587 m^3 2.6481 m^3/t 2.3776 $m^3/*$	365,784 m^3 2.4666 m^3/t 2.2178 $m^3/*$	325,750 m^3 2.2631 m^3/t 2.0481 $m^3/*$	Water use includes water drawn from municipal water system from wells.
Waste					
Total annual waste generation:	2,533 t 0.0171 t/t 0.0154 t/*	2,750 t 0.0190 t/t 0.0170 t/*	2,687 t 0.0181 t/t 0.0163 t/*	2,430 t 0.0169 t/t 0.0153 t/*	See Input-Output Assessment for details.
Total annual hazardous waste generation:	308 t 0.0021 t/t 0.0019 t/*	391 t 0.0027 t/t 0.0024 t/*	603 t 0.0041 t/t 0.0037 t/*	499 t 0.0035 t/t 0.0031 t/*	See Input-Output Assessment for details.
Biological diversity					
Total area used (property site):	15,452 m^2	15,452 m^2	15,452 m^2	15,452 m^2	An architectural firm determined the area of sealed and unsealed surfaces.
Total sealed surface area:	6,617 m^2	6,617 m^2	6,617 m^2	6,842 m^2	
Total near-natural area:	8,835 m^2	8,835 m^2	8,835 m^2	8,610 m^2	
Proportion of sealed surfaces:	42,82 %	42,82 %	42,82 %	44,28 %	

Legend:
Figure A: Total annual input/impact in specified environmental area
Figure B: Overall annual output of the organization (in metric tons (B1); 1000 pieces (B2))
Figure R: Ratio of A/B (metric tons (R1); to 1000 pieces (R2))

10. Core Indicators

Core Indicators		2020	2021	2022	2023	Comments
Core Indicators per Year	Figure B_1	148,366 t	144,853 t	148,296 t	143,939 t	
	Figure B_2	164,349 *	161,331 *	164,929 *	159,050 *	(* = 1000 pieces)
Emissions						
Total annual emissions:	CO_2e from natural gas	489 t 0.0033 t/t 0.0030 t/*	459 t 0.0032 t/t 0.0028 t/*	350 t 0.0024 t/t 0.0021 t/*	314 t 0.0022 t/t 0.0020 t/*	The emissions are calculated on the basis of Gemis 4.7, in which CO_2 emissions correspond to 0.246 kg per kWh of natural gas.
	CO_2e from electricity	3,280 t 0.0221 t/t 0,0200 t/*	3,240 t 0.0224 t/t 0.0201 t/*	3,391 t 0.0229 t/t 0.0206 t/*	3,161 t 0.0220 t/t 0.0199 t/*	Location-based approach: The emissions are calculated on the basis of the emission factor of the electricity mix for the power grid on which the consumer is found. It is specified at 0.375 kg CO_2 per kWh.
	CO_2e from electricity	0 kg 0.0000 kg/t 0.0000 kg/*	o kg 0.0000 kg/t 0.0000 kg/*	o kg 0.0000 kg/t 0.0000 kg/*	0 kg 0.0000 kg/t 0.0000 kg/*	Market-based approach: The emissions are calculated using the emission factor of the supplier for the delivered electrical product. It is specified at 0 kg CO_2 per kWh.
	CO_2e from SO_2	13 kg 0.0001 kg/t 0.0001 kg/*	12 kg 0.0001 kg/t 0.0001 kg/*	9 kg 0.0001 kg/t 0.0001 kg/*	8 kg 0.0001 kg/t 0.0001 kg/*	The emissions are calculated on the basis of Gemis 4.7, in which the CO_2e emissions correspond to 0.0000066269 kg per kWh of natural gas. The emissions arise from the burning of natural gas.
	CO_2e from NOx	285 kg 0.0019 kg/t 0.0017 kg/*	268 kg 0.0019 kg/t 0.0017 kg/*	204 kg 0.0014 kg/t 0.0012 kg/*	183 kg 0.0013 kg/t 0.0012 kg/*	The emissions are calculated on the basis of Gemis 4.7, in which the CO_2e emissions correspond to 0.000143266 kg per kWh of natural gas. The emissions arisefrom the burning of natural gas.
	CO_2e from district heating	625 t 0.0042 t/t 0.0038 t/*	668 t 0,0046 t/t 0.0041 t/*	511 t 0.0034 t/t 0.0031 t/*	413 t 0.0029 t/t 0.0026 t/*	Market-based approach (Carnot method): The emissions are calculated based on the worksheet FW 309-6 (As of 12/2014, valid until 04/2027) from district heating supplier. The emission factor is 0.092 kg per kWh.
	CO_2e from district heating	0 t 0.0000 t/t 0.0000 t/*	o t 0.0000 t/t 0.0000 t/*	o t 0.0000 t/t 0.0000 t/*	o t 0.0000 t/t 0.0000 t/*	Market-based approach (Energy Credit method): The emissions are calculated based on the worksheet FW 309-1 (As of 2020, valid until 04/2027) from the district heating supplier with an emission factor of 0,00 kg per kWh.
	CO_2e from district heating	1,753 t 0.0118 t/t 0.0107 t/*	1,873 t 0.0129 t/t 0.0116 t/*	1,434 t 0.0097 t/t 0.0087 t/*	1,158 t 0.0080 t/t 0.0073 t/*	Location-based approach: The emissions are calculated on the basis of the emission factor of the district hearing mix in the network on which the consumer is found. It is specified at 0.258 kg per kWh.
	PM	0 kg 0.0000 kg/t 0.0000 kg/*	0 kg 0.0000 kg/t 0.0000 kg/*	0 kg 0.0000 kg/t 0.0000 kg/*	0 kg 0.0000 kg/t 0.0000 kg/*	No Particulate Matter (PM) emissions.

11. Environmental Program

The corporate policy of the Werner & Mertz Group, which includes environmental, energy and quality policies, is the foundation of our activities in Environmental and Energy Management. It covers all operational areas and specifies environmental and energy-related principles for action. The companies in the Werner & Mertz Group use the policy as the basis for measurable goals in their efforts to continuously improve and promote environmental protection and energy efficiency.

Environmental Program 2023 fot Mainz

Includes Action Plans for Energy Management

Company	Type of Goal	Goal	Year	Status
Werner & Mertz GmbH, Erdal Rex GmbH, Tana-Chemie GmbH	Environment	**Use of sustainable, Cradle-to-Cradle-certified printing inks for the entire Consumer and Professional product portfolio.**	2023	**Goal not achieved.** Decision was put on hold to leave time for many other ongoing projects within the Recyclate Initiative.
Werner & Mertz GmbH	Energy	**Draft a concept for leakage management of compressed air in Production in order to decrease energy consumption continuously.**	2023	**Goal achieved.** Concept was written. Implementation will take place in a trainee project. A new process is to be established.
Werner & Mertz GmbH	Energy	**Draft a concept for optimized lighting on factory grounds in order to decrease energy consumption continuously.**	2023	**Goal achieved.** DConcept for Administration building K8 is complete. Some lamps were replaced.
Werner & Mertz GmbH	Energy	**Draft a concept for a measuring and counting concept to optimize data capture of key indicators.**	2023	**Goal achieved.** Concept written. Implementation takes place in 2024 with focus on electricity.
Werner & Mertz GmbH	Energy	**Reduction of natural gas consumption of 500,000 kWh and about 30 % compared to 2021 by converting formulas.**	2023	**Goal achieved.** Natural gas consumption in 2023 was reduced in comparison to 2021 by 32% and 590,424 kWh.
Werner & Mertz GmbH	Energy	**Draft a concept for the use of waste heat from air compressers in building F6 (boiler building).**	2023	**Goal postponed.** The concept will be written in 2024 as part of an trainee project.

11. Environmental Program

Company	Type of Goal	Goal	Year	Status
Werner & Mertz GmbH	Energy	**Reduction (15 %) of adjusted district heating consumption at Mainz site compared to 2021.**	2023	**Goal achieved.** The adjusted district heating consumption 2023 was reduced by 28.8% in comparison to 2021.
Werner & Mertz GmbH	Environment	**Carry out a project on Greenhouse Gas accounting for the production sites in Mainz and Hallein.**	2023	**Goal achieved.** For the first time in 2023, Werner & Mertz and Öko-Institut e. V. worked out a complete, scientifically sound Corporate Carbon Footprint (CCF) for both production sites.
Werner & Mertz GmbH	Environment	**Put into operation a new production line in Hallein with related reduction of 51,000 kilometers by truck and avoidance of 11,500 t CO_2e compared to 2022.**	2023	**Goal postponed.** The multi-line system was put into operation in Hallein in 2023. The pending production transfer is planned for 2024.
Werner & Mertz GmbH	Energy	**Carry out three new trainee projects on energy efficiency and resource conservation.**	2023	**Goal achieved.** In 2023 three trainee projects on lighting, environmentally friendly lubricants and the capture of inhouse weather data were carried out and completed.
Werner & Mertz GmbH	Environment	**Increase the cycle of sustainability reporting according to DNK from every two years to every year.**	2023	**Goal postponed.** For reasons related to internal preparation for the Corporate Sustainability Reporting Directive (CSRD) and the still unclear direction of DNK regarding reporting, the goal was put off until 2024.
Werner & Mertz GmbH, Service & Logistik GmbH	Energy	**Lighting conversion in building L3 (ground and first floors) and high-bay warehouse L2.**	2023	**Goal postponed.** Offers were received. Implementation is planned for 2024.
Werner & Mertz GmbH, Service & Logistik GmbH	Environment	**Expansion of logistics sustainability study with Fraunhofer Institut on purchasing logistics.**	2023	**Goal achieved.** Purchasing logistics was taken into consideration for the Corporate Carbon Footprint in Scope 3.

11. Environmental Program

Company	Type of Goal	Goal	Year	Status
Tana-Chemie GmbH	Energy	**Avoidance of a minimum of 400 kg CO_2e emissions over 2019 by doing without the use of at least two external service providers at the CMS trade fair.**	2023	**Goal achieved.** For the CMS trade fair, the company did without the services of two external service providers, which reduced CO_2 emissions by 400 kg, compared to 2019.
Tana-Chemie GmbH	Environment	**Conversion of product portfolio to Green Care Professional as part of Go Green campaign. Increase the share of Green Care Professional products to 50% oft he entire portfolio (based on net net sales).**	2023	**Goal achieved.** Fifty-three (53) percent of the entire Green Care product portfolio has been converted (based on net net sales).
Erdal Rex GmbH	Energy	**Reduction of 49% CO_2e consumption for custsomer visits and 2.6 t CO_2e compared to 2019.**	2023	**Goal achieved.** Compared to 2019, CO_2 emissions for customer visits in 2023 were reduced by 60% (3.1 tonnes of CO_2).
Erdal Rex GmbH	Environment	**Increase of 3% net sales per kilometer driven (from 81 to 83 EUR).**	2023	**Goal achieved.** Net sales per kilometer traveled in 2023 increased by 4% (from 81 to 85 EUR).
Frosch Sales Team	Energy	**Reduction of CO_2e consumption for travel to meetings and 5.2 metric tons CO_2e compared to 2022.**	2023	**Goal achieved.** Compared to 2019, theCO_2 emissions for customer meetings decreased by 47% or 5.2 tonnes of CO_2 in 2023.
BNS International GmbH	Energy	**Reduce fuel consumption in BNS fleet (entire) by 5% compared to 2022.**	2023	**Goal not achieved.** The BNS fleet consumption (entire) was reduced by only 4% compared to 2022.
BNS International GmbH	Environment	**Increase order amount (piece) by 5% per package in Germany compared to 2022 to achieve reduction in CO_2 emissions.**	2023	**Goal not achieved.** The order amount (piece) per package was increased only 2.2% compared to 2022.

11. Environmental Program

Company	Type of Goal	Goal	Year	Status
BNS International GmbH	Environment	**Increase the recyclate proportion in plastic containers to 65% (+ 19% over 2022) or 45% (+ 6% over 2022) based on the number of pieces.**	2023	**Goal achieved.** The recyclate proportion in plastic containers was increased to 65% or 51% based on number of pieces.
ECC Ecological Cleaning and Care GmbH	Energy	**Travel to 80% of business appointments by public transportation.**	2023	**Goal achieved.** Public transportation was used for travel to 82% of business appointments in 2023.

Umweltprogramm 2024 Standort Mainz

Inkl. der Aktionspläne zum Energiemanagement

Company	Type of Goal	Goal	Year	Status
Werner & Mertz GmbH	Energy	**Draft a PPA (Power Purchase Agreement) concept for purchase of regional energy from renewable sources.**	2024	In process.
Werner & Mertz GmbH	Energy	**Implementation of a measuring and quantifying concept with focus on electricity to optimize the capture of key indicators.**	2024	In process.
Werner & Mertz GmbH	Energy	**Draft a concept on using heat waste from air compressors in boiler building F6.**	2024	In process.
Werner & Mertz GmbH	Energy	**Implementation of leakage management concept of compressed air in Production aimed at decreasing energy consumption continuously.**	2024	In process.

11. Environmental Program

Company	Type of Goal	Goal	Year	Status
Werner & Mertz GmbH	Environment	**Update of Corporate Carbon Footprint for production sites in Mainz and Hallein.**	2024	In process.
Werner & Mertz GmbH	Environment	**Establish a collection system for printer ink cartridges in Mainz to increase recycling rates.**	2024	In process.
Werner & Mertz GmbH	Environment	**Voluntary risk analysis based on ecological and social criteria of all essential business partners in direct and indirect purchasing in accordance with LkSG requirements.**	2024	In process.
Werner & Mertz GmbH	Environment	**Increase the frequency of DNK sustainability reporting from every two years to every year.**	2024	In process.
Werner & Mertz GmbH	Environment	**Carry out three new trainee projects on the subjects of energy efficiency and resource conservation.**	2024	In process.
Werner & Mertz Service & Logistik GmbH	Energy	**Draft a concept on energy optimization of the ventilation system in building C8.**	2024	In process.
Werner & Mertz Service & Logistik GmbH	Energy	**Conversion of lighting in the logistics and loading bays L2, L3 and C9 to realize a calculated reduction of 150 MWh per year.**	2024	In process.
Tana-Chemie GmbH	Energy	**Reduction in natural gas consumption by about 3,000 kWh, compared to 2023, by converting three fabric softener formulas.**	2024	In process.

11. Environmental Program

Company	Type of Goal	Goal	Year	Status
Tana-Chemie GmbH	Environment	**Conversion of product portfolio to Green Care Professional as part of Go Green campaign. Increase the share of Green Care Professional products to 54% of the entire portfolio (based on net net sales).**	2024	In process.
BNS International GmbH	Environment	**Increase the recyclate proportion in plastic containers to 70% (+ 5% over 2023) or 55% (+ 4% over 2023) based on the number of pieces.**	2024	In process.
BNS International GmbH	Environment	**Switch packaging for sole inserts (excluding gel soles) for Bergal brand from virgin fiber to secondary fiberboard carton (GD2).**	2024	In process.
BNS International GmbH	Energy	**Kilometers traveled by car per field service rep should be reduced from 67.1 km per customer visit (including training on site) to 58 km (- 13.6%) in order to reduce fuel consumption and CO_2 emissions.**	2024	In process.
Frosch Sales Team	Environment	**Cease printing of sales folders and convert to digital sales folders. That would lead to acalculated annual reduction of 1.64 tonnes of CO_2.**	2024	In process.
Erdal Rex GmbH	Environment	**Cease printing of sales folders and convert to digital sales folders. That would lead to a calculated annual reduction of 410 kg of CO_2.**	2024	In process.
Erdal Rex GmbH	Energieziel	**Increase of newly listed articles from Werner & Mertz per company per employee per 100 km from 4.8 to 5.1 (+ 6 %) and increase of number of second 'placements per employee per 100 km from 5.5 to 5.7 (+ 3 %). This leads to a reduction in fuel consumption and CO_2.**	2024	In process.

12. Communication

Internal Communication

Our employees are our greatest good. Their engagement, conviction and creativity are a driving force behind our jointly achieved success. Our communication with employees, therefore, is a very important matter. We practice and encourage respectful interaction within the team and promote community, trustworthy communication and learning from one another.

We routinely post articles on environment and energy-related topics in our employee newspaper and on our info monitors in Mainz and Hallein. As part of regularly held training sessions, we inform all employees of sustainability subjects such as environmental protection and energy conservation measures. All employees are obliged to take part in annual online training on the Integrated Management System. During their initiation, new employees attend Welcome Day on which Sustainability Management is presented. If the job function requires, a personal discussion on the subject may be held with a new employee. For our employees we have created an internal glossary in which key terminology for sustainability is explained by our experts in a way everyone can understand. Every glossary entry is accompanied by an explanation of our company's position on the subject.

Employee Involvement

When employees begin working at Werner & Mertz, they are introduced to and integrated in our sustainability philosophy. With Idea Management, we have a way for all employees to propose potential improvements for how we work. In a pre-defined process, suggestions are evaluated by experts in the affected area and if they are implemented successfully, the employee is awarded a bonus.

At regularly scheduled sustainability meetings, discussions are held on topical sustainability issues of interest to the company. Meeting participants represent all specialized departments of Production, Research & Development, Marketing, Logistics, Sales, Personnel, Corporate Communications, Compliance, Legal Affairs, Purchasing and Corporate Affairs. For the operation work related to the Environment and Energy Management Systems, an environment or energy team meets every quarter to initiate projects, review key indicators and define goals.

12. Communication

External Communication

When we provide information to our external stakeholders, we clearly emphasize and transparently communicate the virtues of our corporate sustainability philosophy and the benefits of our products.

DNK: The Sustainability Code is a cross-sector transparency standard for reporting corporate sustainability practices and performance. There we file a complete report on our compliance with DNK criteria and non-financial Global Reporting Initiative (GRI) indicators.

deutscher-nachhaltigkeitskodex.de

Integrally sustainable: On our integrally sustainable portal we inform visitors of our sustainability strategy and how it contributes to meeting Sustainable Development Goals.

integrally-sustainable.com

Initiative Frosch: With the Initiative Frosch Werner & Mertz paves the way for forward-thinking, sustainable solutions. It shows that recycling plastic is sensible, feasible and necessary. The ingredients for cleaning products should be powerful and as environmentally friendly as possible. In addition, they should be based on European oil-producing plants.

initiative-frosch.de

Recyclate-Initiative: To advance the circular economy, Werner & Mertz established the Recyclate Initiative in 2012. The goal is to obtain used plastic from European household waste collections like the Yellow Bag and reprocess it for high-quality reuse.

wir-fuer-recyclat.de

Circular Success: With its new Circular Success sustainability campaign and the related Internet site, the Professional Division of Werner & Mertz takes a strong stance against climate greenwashing.

circular-success.com

12. Communication

Press Center: On the Werner & Mertz news platform, we bundle information about the company, our brands, initiatives and campaigns.

news.werner-mertz.de

Green Care Academy: The Green Care Academy is an innovative continuing education offering for cleaning staff. It conveys practical, easy-to-understand information for everyday work so that cleaning staff, armed with expert knowledge, can master their jobs.

green-care-academy.com

Lobby register Germany/Europe: With an entry in the lobby register, Reinhard Schneider and Timothy Glaz are permitted to represent the interests of our medium-sized family company in all relevant subjects related to the sustainable transformation of the German and European economy for effective climate protection, the circular economy and biodiversity conservation.

lobbyregister.bundestag.de

VNU: In the Association for European Sustainability and Eco-Management Professionals, we engage with other EMAS-validated companies in pursuit of overall, systematic environmental protection

vnu-ev.de

B.A.U.M.: Our company is member of the German Environmental Management Association network that promotes the core topic, i.e., a liveable future made possible by sustainable business within planetary boundaries.

baumev.de

Biodiversity in Good Company Initiative: We are a member in the initiative Biodiversity in Good Company for the purpose of regularly exchanging information with other companies and experts in the field of biodiversity. Protection of the biosphere and thus biological diversity is an important element in the integrally sustainable orientation of our company.

business-and-biodiversity.de

Social Media: On social media channels of Werner & Mertz and the Initiative Frosch, we post information about our work and about circular economy topics.

12. Communication

The following contact persons are available to answer your questions or provide you with **more information**:

Sustainability Management
Addresses for e-mail and post
Werner & Mertz GmbH
Rheinallee 96
D-55120 Mainz

e-mail: Nachhaltigkeit@werner-mertz.com

Yannic von Raesfeld
Head of Sustainability Management
Werner & Mertz GmbH
Rheinallee 96
D-55120 Mainz

e-mail: YvonRaesfeld@werner-mertz.com

13. Validation

The Environmental Statement is updated every year.

The next consolidated Environmental Statement will be submitted for validation by 22 May 2027.

<u>Contracted as environmental auditor/environmental audit organization:</u>

Dr. Ing. Norbert Hiller
(Registration Nr.: DV0021)
INTECHNICA Cert GmbH
(Registration Nr.: DV0279)
Ostendstr. 181, D90482 Nuremberg

14. Assurance Statement

With this Environmental Statement, we inform our employees, customers, the interested public and other stakeholders about the environmental performance of our company. We confirm the veracity of the information presented and hereby release the Environmental Statement for publication. Management is responsible for the release of the environmental statement.

The undersigned, Dr. Norbert Hiller, EMAS Environmental Auditor with Registration Number DE-V-0021, accredited or approved for Region 20 (NACE-Code Rev. 2), confirms that he has checked whether the site / the entire organization of Werner & Mertz GmbH, ERDAL-REX GmbH, Tana-Chemie GmbH, Werner & Mertz Service & Logis-tik GmbH und BNS International GmbH at Rheinallee 96 55120 Mainz, as given in the consolidated Environmental Statement (with registration number DE-152-00013), fulfills all requirements of Regulation (EC) Nr. 1221/2009 of the European Parliament and the Council of 25 November 2009 and its amendments Commission Regulation 2017-1505 from 28 August 2017 and Commission Regulation 2018/2026 from 19 December 2018 regarding organizations' voluntary participation in the Community Eco Management and Audit Scheme (EMAS).

Nuremberg, June 4, 2024 signed Dr. N. Hiller

Dr.-Ing. Norbert Hiller
(Environmental auditor)