ENVIRONMENTAL STATEMENT 2023

Werner & Mertz GmbH

ERDAL-REX GmbH

Tana-Chemie GmbH

Werner & Mertz Service & Logistik GmbH

BNS International GmbH

Rheinallee 96

D-55120 Mainz

As of: 15 May 2023

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. 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 personal 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. This year we celebrate our 20th year of reporting. That's a long time during which 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 seek companies which 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 future challenges.

Reinhard Schneider

Chairman of the Management Board

2. Major Changes since Environmental Statement 2022

Structural:

- Construction begins on energy-efficient production building H26
- Construction begins on new Recycling Center F36
- Construction begins on new factory gate F37 with new Incoming Goods area
- Dismantling of building complexes B and E completed
- Sale of old factory section and leaseback of separate buildings

Organizational:

- First-time EMAS validation of joint venture with Aneks Polska
- Project kick-off for restructuring the Integrated Management System
- Required structures set up for implementation of Supply Chain Act (Corporate Due Diligence Obligations in Supply Chains)
- Restructuring of Energy Team and establishment of cyclical schedule for regular energy meetings
- Since 2022, Werner & Mertz job trainees conduct their own sustainability project from idea to implementation in addition to the biodiversity project with NABU, which began in 2021.
- Complete design relaunch of the Frosch brand
- Development of a completely recyclable spray head produced with post-consumer recyclate in its mechanical components

Technical:

- Converted soap-based formulas to reduce natural gas use
- Reduced district heating consumption by optimizing and modifying heating management system
- Concept developed for photovoltaic expansion on Mainz and Hallein sites

3. Our Company

Werner & Mertz, a Mainz-based family company in 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, 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 care 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 is here and here it will stay. 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 abd Werner & Mertz Service & Logistik GmbH in the core business areas which include Product Developpment, 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 special care 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.

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 for 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.

This link takes you to our Corporate Policy: Link

5. Our Environmental Management System

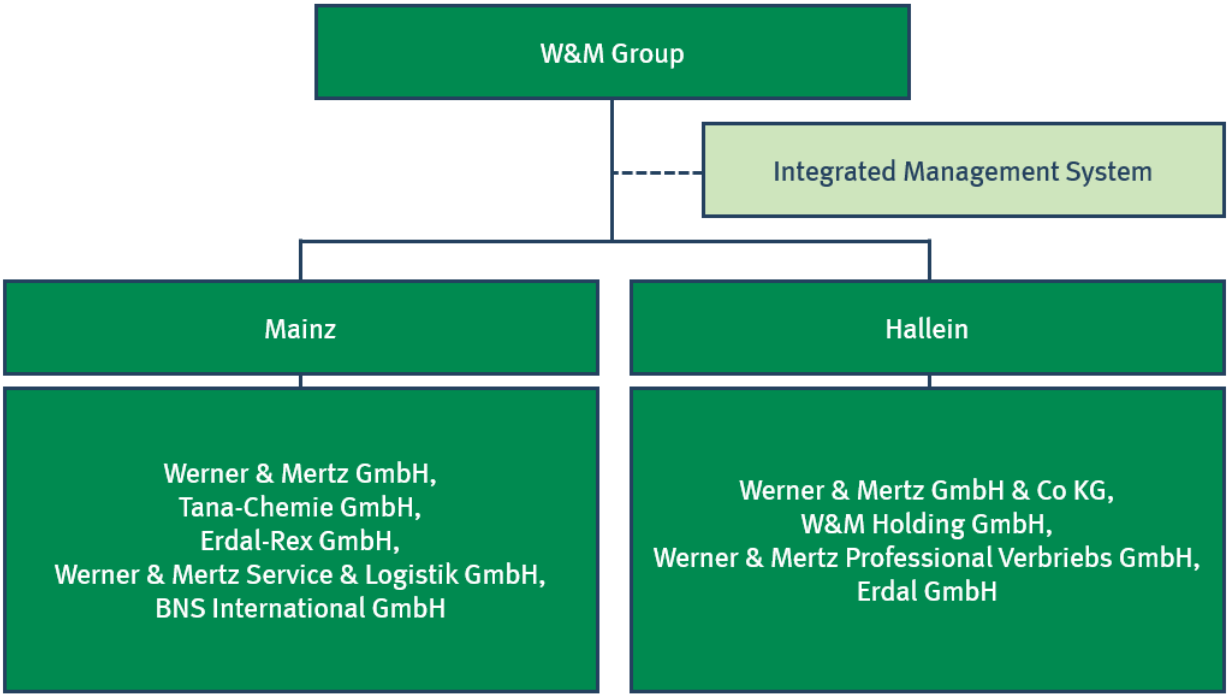
The success story of the Werner & Mertz Group is based on the highest standards for sustainability and quality and the ensuing consumer trust in our products and brands.

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 IMS supports the Werner & Mertz Group with planned, uniform implementation of the requirements from norms and standards and helps to create synergies among environmental, energy and quality management processes. It thus contributes to the improvement of environmental performance and energy efficiency and guarantees the product quality agreed to with the customer. The services and the functionality of the IMS are subject to annual company audits (on-site inspections and internal audits) by internal auditors.

In 2020 Werner & Mertz went a step further and put together Sustainability, Organization and Quality Management in the administrative unit Integrated Management with the goal of making close interdisciplinary cooperation even better.

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



Interrelationships with Integrated Management System

Norms and Standards Summarized in IMS

EMAS: 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 celebrate 20 years of EMAS validation in Mainz.

ISO 14001 & ISO 50001: 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.

ISO 9001: 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.

IFS HPC: 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 so special?

- Highest environmental standards based on the stictest 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

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 pre-treatment 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.
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.
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 pre-treatment 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 works on creating 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 optimized for energy efficiency.
2015	At the Mainz site, an online measuring device was installed in the wastewater pre-treatment 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.
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 pre-treatment 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 pre-treatment 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.

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 company regularly updates the assessment of its environmental impact and consistently follows up with feasible measures.

7.1 Direct Environmental Impact

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

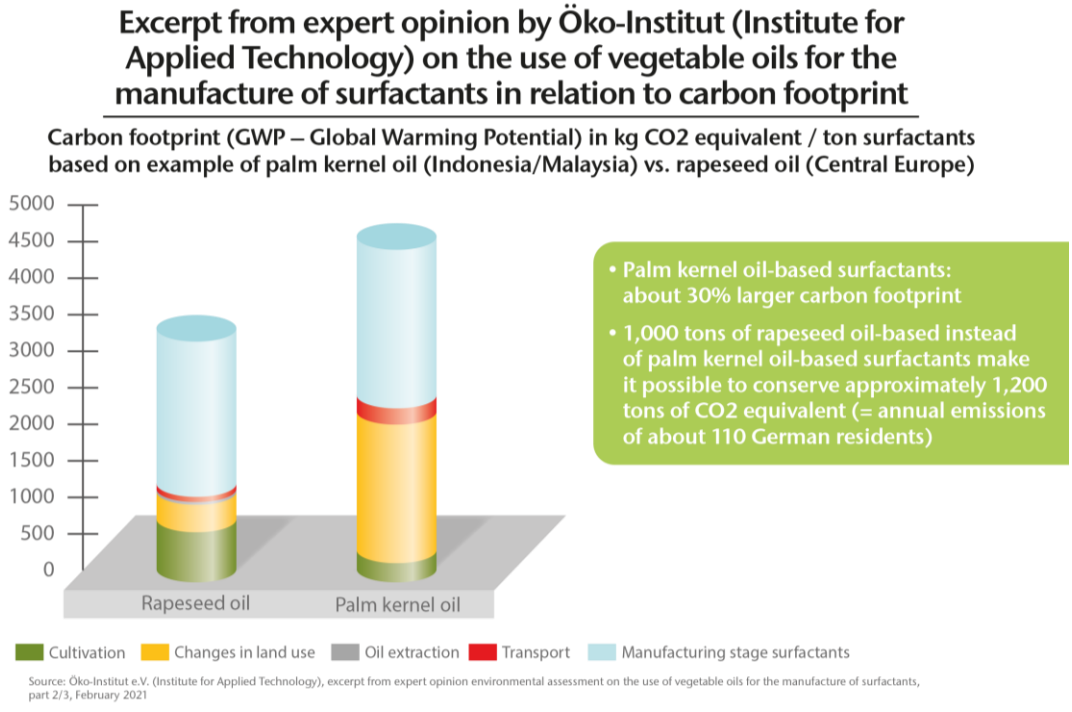
Composition of the Product Portfolio

Our company with the Frosch works according to 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 the in-house area of Research & Development, which is made up of several groups, including the departments Formula Development, Packaging Development, and Research & New Technologies. In addition to 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. Our goal is sustainable development of the raw materials portfolio 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 wash-active 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, non-sustainable 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 project 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 our long-term goal, i.e., obtaining all surfactants from European oil-producing plants.

Link: Website European Surfactants Initiative

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.

Link: The Cradle-to-Cradle Principle

Packaging

Werner & Mertz long ago began working on a functional circular economy. For the concept of sustainability cannot be limited to the product itself, but has to consider the packaging too. That's why Werner & Mertz established 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, 50 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 wrap-around 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.

Link: Recyclat-Chronology

Link: Website We for Recyclate

Vehicular Fleet

As a rule, vehicles for our sales companies are replaced every three years or upon exceeding a pre-defined number of kilometers. We use vehicles with environmentally friendly technologies which have lower CO_2 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 patterns. 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 manuafactured 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 operated with an energy and runtime-optimized charging management system.

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. During construction the use of recycled building material was supported and the sustainability concept of Werner & Mertz was taken into account for the interior equipment of the building. 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.

Biodiversity

Protecting, preserving and promoting biological diversity is a matter of concern for us. 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.

Intraregional 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. In 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.

7.2 Indirect Environmental Impact:

We can influence indirect environmental impact to a limited extent only as 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 make available 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 driven). The findings give us a good overall view of our logistical structures and a solid basis for decisions about corrective measures.

Since 2008, CO_2 e 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%. We are currently working on expanding the study to include procurement logistics. The goal of the new study is a systemic approach that creates more transparency and helps to prevent unnecessary transport. The calculation process should be simplified too. Results of the new study are expected at the end of 2023.

8. Input-Output Assessment

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

In consultation with the environmental auditor, certain data were corrected retroactively for the years 2019 to 2021. We made the changes because we wanted to generate a better 1:1 relationship for input and output. From now on, we will report the amount of product produced instead of the amount sold in the year shown.

Input					
Indicator	**Unit**	**2019**	**2020**	**2021**	**2022**
Water					
Total consumption	m^3	372,025	413,208	383,587	365,784
Well water	m^3	335,578	385,980	346,890	284,392
Municipal water	m^3	36,447	27,228	36,697	81,392

Input					
Indicator	**Unit**	**2019**	**2020**	**2021**	**2022**
Energy					
Total consumption	kWh	17,701,840	17,532,912	17,768,022	16,022,372
Electricity*	kWh	8,503,560	8,747,991	8,639,859	9,042,696
Natural gas	kWh	2,405,926	1,989,578	1,867,540	1,422,146
District heating	kWh	6,792,354	6,795,343	7,260,623	5,557,530

* The electricity comes from 100% renewable energy sources.

Input					
Indicator	**Unit**	**2019**	**2020**	**2021**	**2022**
Raw Materials					
Total of all raw materials	t	30,577	37,178	34,848	33,306
Surfactants and detergents	t	17,003	18,563	17,316	16,289
Acids, lyes and salts	t	10,321	10,533	10,265	9,933
Solvents	t	3,678	4,143	3,689	3,843
Other raw materials	t	2,235	3,939	3,578	3,241

Input					
Indicator	**Unit**	**2019**	**2020**	**2021**	**2022**
Packaging					
Packaging (bottle, pouch, canister, caps)	piece	296,776,248	357,905,139	342,577,347	356,998,928
Cartons	piece	18,272,965	21,746,378	20,587,561	21,692,882
Labels	piece	285,646,101	353,801,725	351,608,490	319,901,709

Output					
Indicator	**Unit**	**2019**	**2020**	**2021**	**2022**
Products					
Cleaning and care products	t	132,252	148,366	144,853	148,296
Cleaning and care products	piece	139,226,265	164,349,457	161,330,698	164,928,948

Output					
Indicator	**Unit**	**2019**	**2020**	**2021**	**2022**
Water					
Direct discharge (Rhine)	m^3	208,528	245,835	203,909	188,038
Indirect discharge (municipal treatment plant)	m^3	55,570	50,917	66,982	51,890

Output					
Indicator	**Unit**	**2019**	**2020**	**2021**	**2022**
Waste					
Total waste	t	2,648	2,533	2,750	2,687
Non-hazardous Waste					
Industrial waste (residual waste)	t	127	130	120	134
Plastic sheets	t	41	41	39	47
Filter cakes	t	1,161	1,279	1,412	1,152
Backing paper (for labels)	t	129	195	215	199
Cardboard and paper	t	547	448	437	454
Wood waste	t	68	73	96	56
Green waste	t	3	19	12	10
Metal scrap	t	35	40	28	32
Hazardous Waste					
Production and laboratory waste	t	104	15	83	142
Rinsing water	t	433	293	308	461

Output					
Indicator	**Unit**	**2019**	**2020**	**2021**	**2022**
Emissions					
Total CO_2e emissions	kg	1,217,116	1,124,311	1,140,567	874,312
Scope 1					
CO_2e emissions from natural gas	kg	591,858	489,436	459,415	349,848
CO_2e emissions from refrigerant losses	kg	0	9,405	12,895	12,958
CO_2e emissions from SO_2	kg	16	13	12	9
CO_2e emissions from NO_x	kg	345	285	268	204
Scope 2					
CO_2e emissions from electricity	kg	0	0	0	0
CO_2e emissions from district heating	kg	624,897	625,172	667,977	511,293
Other Emissions					
Particulate matter	kg	0	0	0	0
VOC emissions	kg	0	0	0	0

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. Although we offset the resulting emissions, 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.

Electricity: The emissions are calculated on the basis of the energy mix and the electricity origin labelling of the provider with 0 kg CO_2 per kWh.

District heating: The specific CO_2 emission factor, as per GEG 2020, is zero gram CO2e per kWh of district heating according to FW 309-1. We consider this value unrealistic and therefore corrected it retroactively. Instead, we use the specific emission factor for district heating from the worksheet FW 309-6 (92 gram CO_2 per kWh). We cannot determine the actual CO_2 emissions (according to the Carnot Method) more exactly because we need data from third parties for this purpose.

9. Environmental Performance Figures for 2022

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 effectiveness of the Environmental and Energy Management System.

The core indicators make possible:

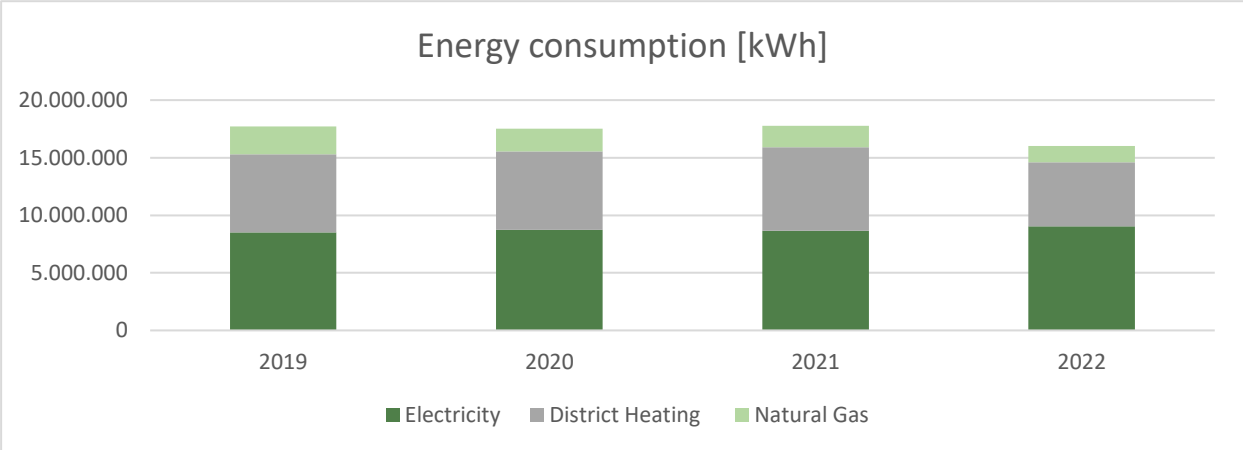
- an environmental accounting of the actual state of the system
- environment-oriented and energy-efficient planning and steering
- regular checks of improvement in environmental performance

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

Energy

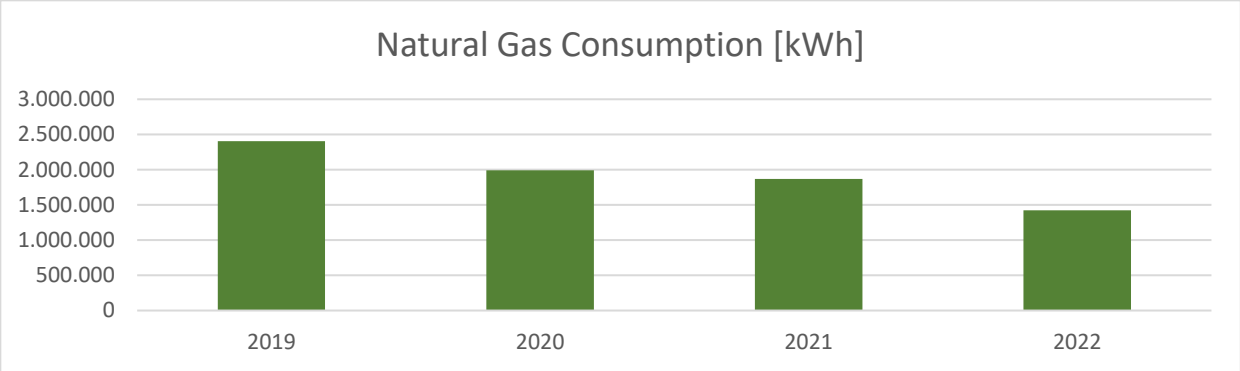
The responsible use of energy is an important element of sustainability. For purposes of monitoring and optimizing energy use, we implemented an energy management system in compliance with ISO 50001 in 2013. By means of targeted energy data capture, we can determine in detail the consumption of electricity, natural gas, district heating and compressed air. With the findings, we can 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.



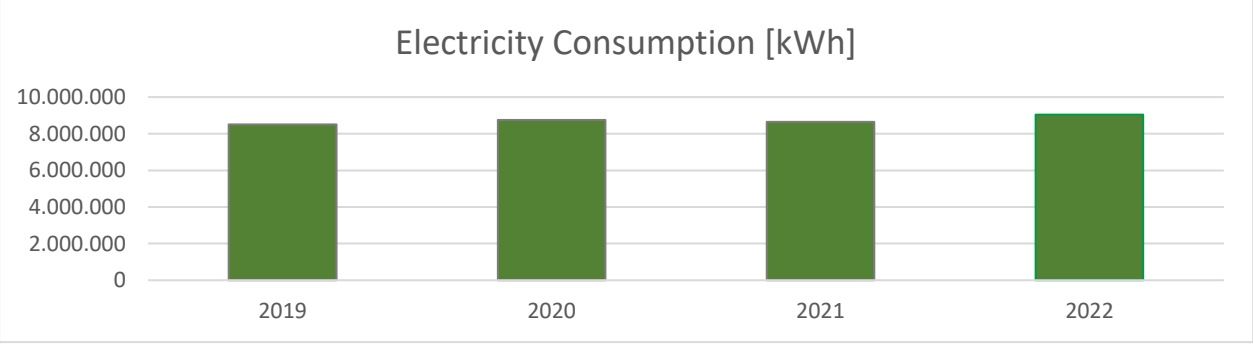
Natural gas is used on the Mainz site only to generate process steam for the manufacturing of a few product groups. In the past, the heating systems for production buildings and warehouses run on natural gas and the heat chambers for frost-sensitive raw materials were converted to district heating one 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. In 2023 formula conversions are to be expanded further. This plan has been incorporated as a goal in the Environmental Program. We will be able to decrease our annual natural gas requirement by about 10 percent.



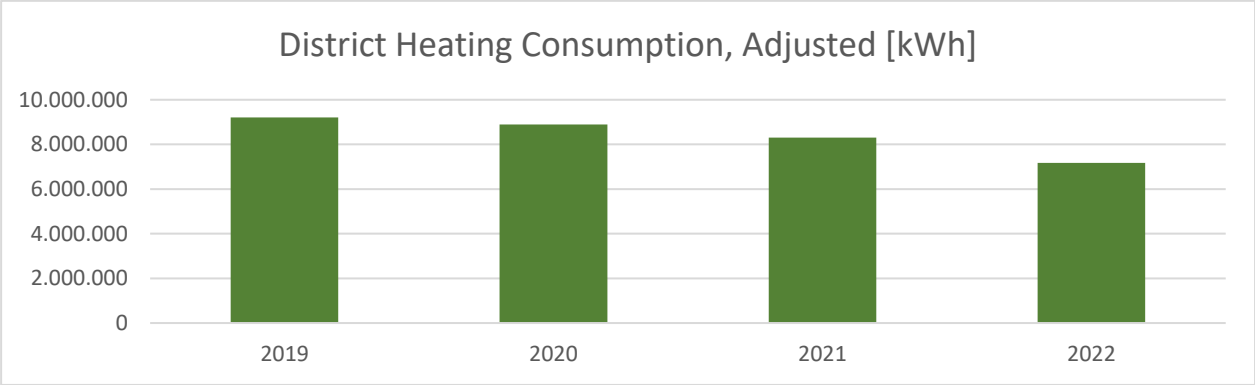
Werner & Mertz uses green electricity only. Furthermore, Werner & Mertz GmbH generates electricity from renewable energies, mainly from photovoltaic modules on building rooftops. In 2022 the generated energy equaled 108,000 kWh.

Compared to 2021, the electricity consumption at the Mainz site increased by 4.7 % in 2022. The rise is attributable to construction and demolition on the factory grounds. Additional electricity expenditures are for water treatment. Given the low level of the Rhine in Mainz, more water has to be drawn from the deep well and it requires more intense treatment than water from bank filtrate wells.

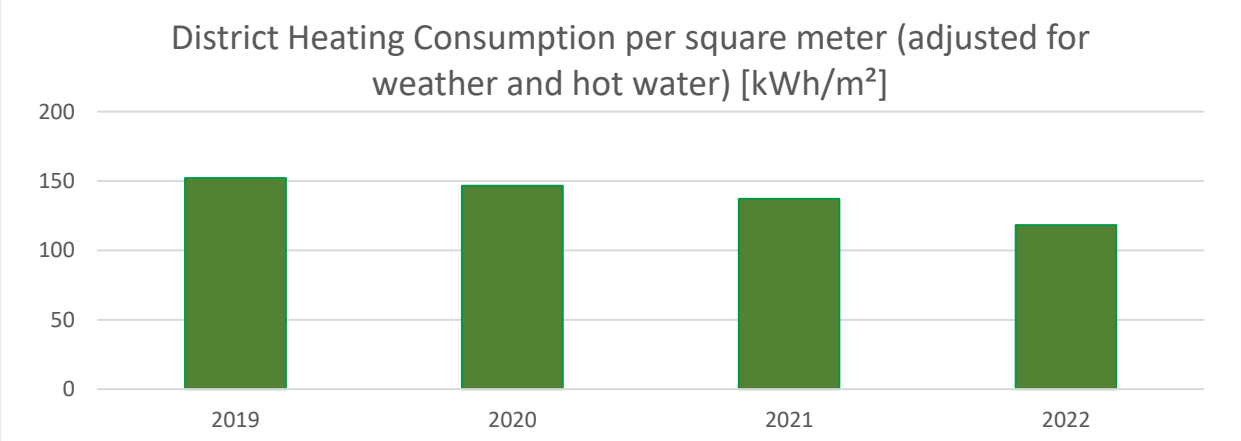


District heating is required on the Mainz site to heat buildings and hot water. On our factory grounds we have 13 decentralized heat transfer stations that transfer the heat as needed to the buildings.

The unadjusted district heating consumption sank 24% in 2022 compared to prior 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. Overall, the adjusted district heating savings in 2022 were 13.7% compared to prior year. Reduced consumption is attributed to the optimization of heating management, including lower room temperatures.

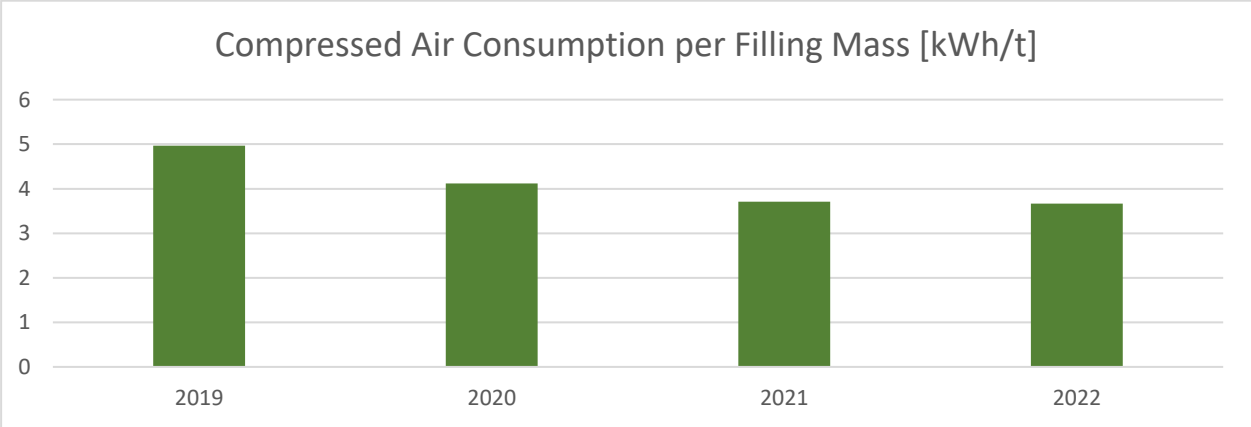


District heating consumption per square meter, adjusted for weather conditions and hot water heating, is shown in the following chart. As a result of the sale of old factory buildings, the underlying heated areas will be reduced in future environmental statements.



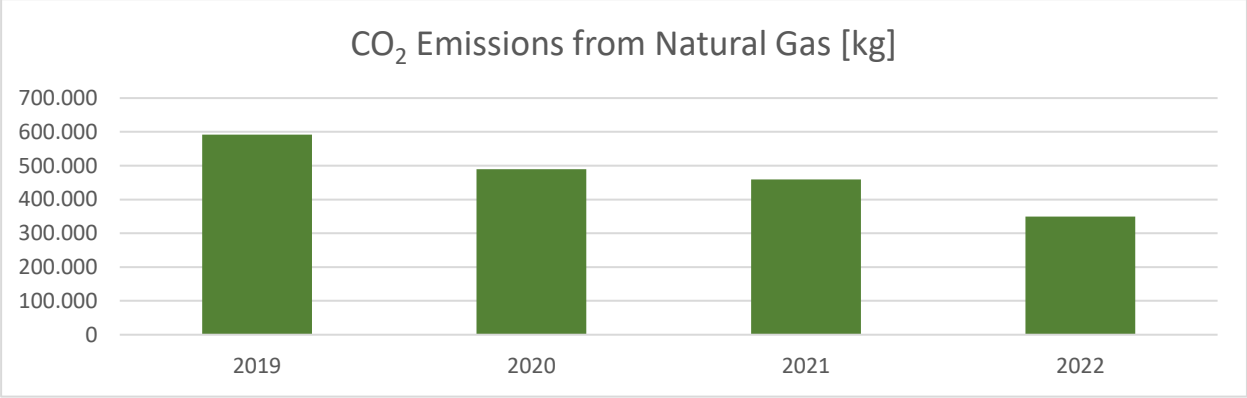
Compressed Air

Compressed air is used on the Mainz site primarily in production processes, e.g., filling stand-up pouches. The compressed air usage in 2022 remains the same as in prior year. A concept is to be drafted in 2023 on exploiting the previously unused heat potential of the compressor station in the boiler building F6. The waste heat potential of the compressor station in production building L8 is already being fed into the local supply network.

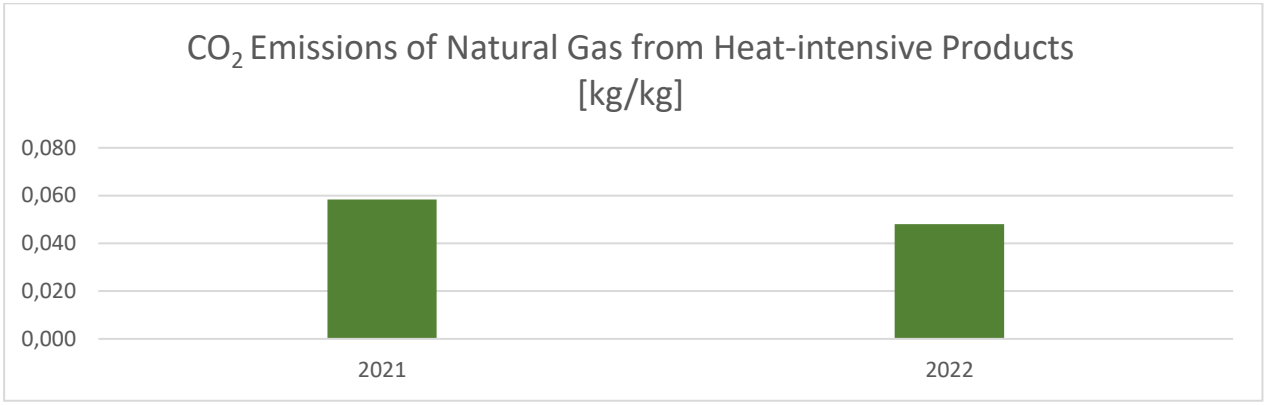


Emissions

We capture or assess our CO_2e emissions from our Scope 1 and Scope 2. In 2023 a project will be carried out on holistic greenhouse gas accounting for the production sites in Mainz and Hallein. Emissions from natural gas within Scope 1 fell by 41% in 2022 compared to 2019, 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. With targeted conversions of formulas, we were able to reduce the indicator by 18% in 2022 compared to 2021.



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.

Water

In close consultation with the responsible authorities, we draw water from two wells on the Mainz site.

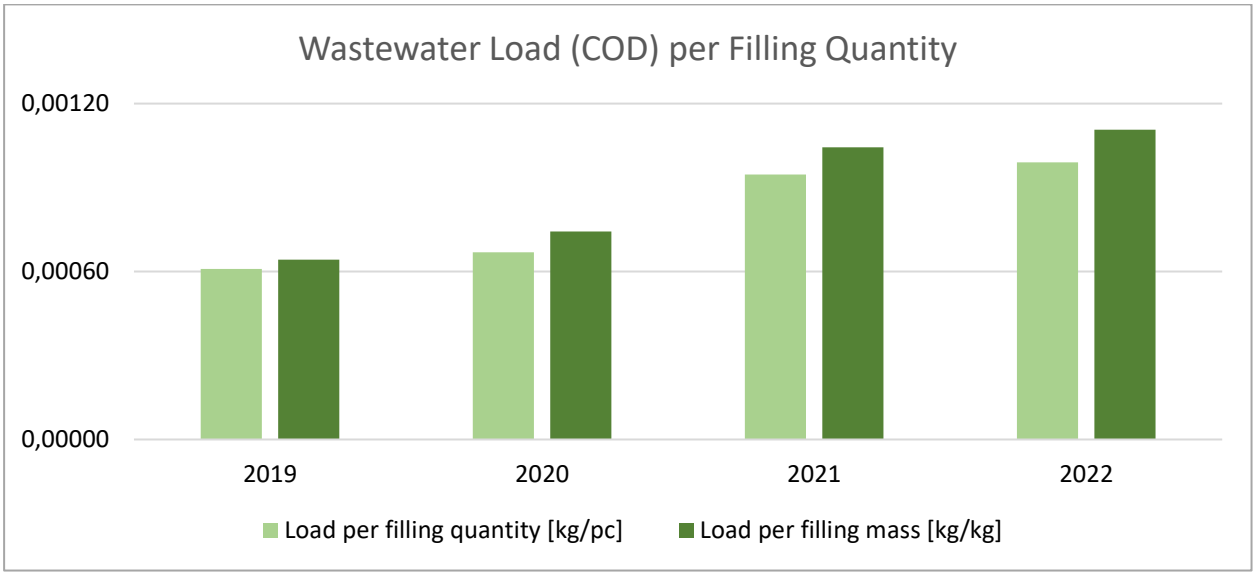
A portion of the extracted well water is used by the geothermal energy system to cool and heat the administration building. Afterwards, the water is fed either as a direct discharge into the receiving waters of the Rhine or is treated for product manufacturing in our factory's own Water Center equipped 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.

Because the Rhine had a low water level for an extended period in 2022, the ratio of city water to well water changed. The water drawn from the wells decreased in 2022 by 18% compared to 2021. In 2022 the water drawn from the municipal system increased by 122% over 2021. However, the increase was caused in part by a broken water pipe in the shaft of the municipal water meter which allowed water to seep into the ground.

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. With modifications to production processes and changes to formulas for laundry detergents, Production required less cooling water in 2022.

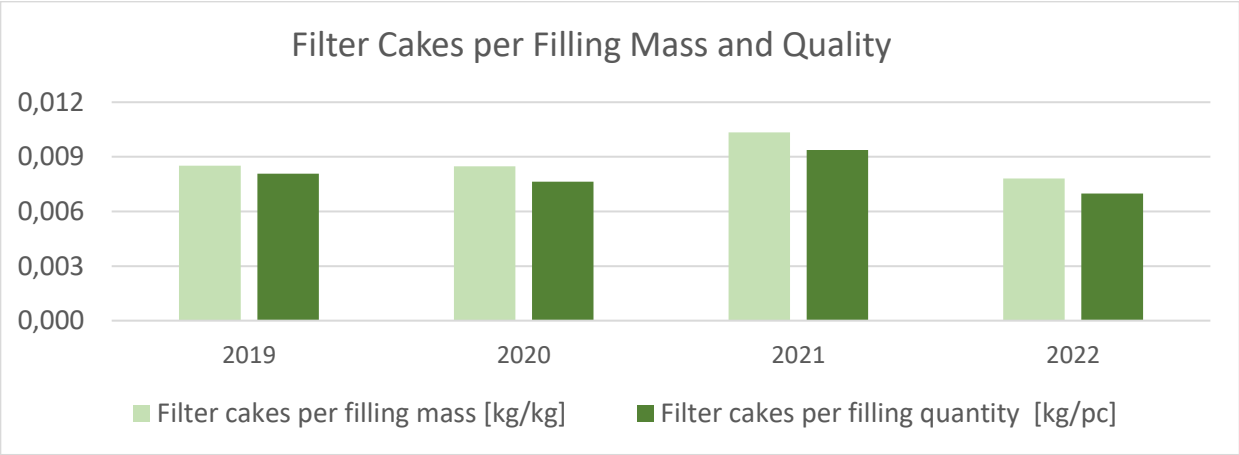
The partial flows in the direct discharge have varied regulatory limits. We monitor and measure them in a self-monitoring process and submit a discharge monitoring report every year. The authorities have the right to check the values at any time. During the year, unannounced random sampling takes place.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



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. Our backing paper for labels, for example, is reused. In 2022, by means of the completely closed system, 48.9 metric tons of used backing paper were recycled, which corresponds to avoidance of about 93 metric tons of CO_2. The use of dispensers for recyclable paper towels led to avoidance of residual waste of 5.6 metric tons in 2022. 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. The change led to a decrease in filter cakes in 2022.

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 that show 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.

Core Indicators

Directive (EC) Nr. 1221/2009 (EMAS III)

Core Indicators per Year		2019	2020	2021	2022	*Comments*
Figure B 1		132.252 t	148.366 t	144.853 t	148.296 t	
Figure B 2		139.226 *	164.349 *	161.331 *	164.929 *	*(* = 1000 pieces)*
Energy Efficiency						
Total direct energy consumption:	*Figure A*	17,702 MWh	17,533 MWh	17,768 MWh	16,022 MWh	Direct energy consumption includes use of electricity, natural gas and district heating.
	Figure R 1	0.1338 MWh/t	0.1182 MWh/t	0.1227 MWh/t	0.1080 MWh/t	
	Figure R 2	0.1271 MWh/*	0.1067 MWh/*	0.1101 MWh/*	0.0971 MWh/*	
Total use of renewable energies:		8,504 MWh	8,748 MWh	8,640 MWh	9,043 MWh	We use only (100 %) green electricity.
		0.0643 MWh/t	0.0590 MWh/t	0.0596 MWh/t	0.0610 MWh/t	
		0.0611 MWh/*	0.0532 MWh/*	0.0536 MWh/*	0.0548 MWh/*	
Material Efficiency						
Total of all raw materials additives and operating supplies:		30,577 t	37,178 t	34,848 t	33,306 t	See Input-Output Assessment for details.
		0.2312 t/t	0.2506 t/t	0.2406 t/t	0.2246 t/t	
		0.2196 t/*	0.2262 t/*	0.2160 t/*	0.2019 t/*	
Water						
Total annual water use:		372,025 m³	413,208 m³	383,587 m³	365,784 m³	Water use includes water drawn from municpal water system and from wells.
		2.813 m³/t	2.785 m³/t	2.648 m³/t	2.467 m³/t	
		2.672 m³/*	2.514 m³/*	2.378 m³/*	2.218 m³/*	
Waste						
Total annual waste generation:		2,648 t	2,533 t	2,750 t	2,687 t	See Input-Output Assessment for details.
		0.0200 t/t	0.0171 t/t	0.0190 t/t	0.0181 t/t	
		0.0190 t/*	0.0154 t/*	0.0170 t/*	0.0163 t/*	
Total annual hazardous waste generation:		537 t	308 t	391 t	603 t	See Input-Output Assessment for details.
		0.0041 t/t	0.0021 t/t	0.0027 t/t	0.0041 t/t	
		0.0039 t/*	0.0019 t/*	0.0024 t/*	0.0037 t/*	
Biological Divesity						
Total area used (property site):		94,661 m²	94,661 m²	94,661 m²	94,661 m²	An architectual firm determined the area of sealed and unsealed surfaces.
Total sealed surface area:		86,315 m²	86,315 m²	86,315 m²	86,315 m²	
Total near-natural area:		7,709 m²	7,709 m²	7,709 m²	7,709 m²	
Proportion of sealed surfaces:		91.18 %	91.18 %	91.18 %	91.18 %	

Emissions						
Total annual emissions:	CO_2e from natural gas	**592 t** **0.0045 t/t** 0.0043 t/*	**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/*	The emissions are calculated on the basis of Gemis 4.7, in which CO_2 emissions corre-spond to 0.246 kg per kWh of natural gas. Although we offset the resulting emissions, we report them here for reasons of transparency.
	CO_2e from electricity	**0 t** **0.0000 t/t** 0.0000 t/*	**0 t** **0.0000 t/t** 0.0000 t/*	**0 t** **0.0000 t/t** 0.0000 t/*	**0 t** **0.0000 t/t** 0.0000 t/*	The emissions are calculated on the basis of the energy mix and the electricity origin labelling of the provider with 0 kg CO_2 per kWh.
	CO_2e from district heating	**625 t** **0.0047 t/t** 0.0045 t/*	**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/*	The specific CO_2 emission factor according to GEG 2020 is zero gram CO_2e per kWh of district heating according to FW 309-1. We consider this value unrealistic and therefore corrected it retroactively. Instead, we use the specific emission factor for district heating from the worksheet FW 309-6 (92 gram CO_2 per kWh). We cannot determine the actual CO_2 emissions (according to the Carnot Method) more exactly because we need data from third parties for this purpose.
	CO_2e from SO_2	**16 kg** **0.0001 kg/t** 0.0001 kg/*	**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/*	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	**345 kg** **0.0026 kg/t** 0.0025 kg/*	**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/*	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.
	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.

Legende:

Figure A: Total annual input/impact in specified environmental area

Figure B: Overall annual output of the organization (**in metric tons (B_1)**; 1000 pieces (B_2))

Figure R: Ratio of A/B (metric tons **(R_1)**; to 1000 pieces (R_2))

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 2022 for Mainz Includes Action Plans for Energy Management				
Company	**Type of Goal**	**Goal**	**Year**	**Status**
Werner & Mertz GmbH	Environment	Reduce trucking by 4,200 km per year and reach 11 t CO_2e with acquisition of a baler for PET bottles.	2022	Goal achieved: The baler was acquired and put into operation. Avoided 4,000 km for trucking and 10.7 t CO_2e compared to 2021.
Werner & Mertz GmbH	Environment	Reduce cooling water needs by changing formulas that contain soap.	2022	Goal achieved: In 2022, 11 formulas containing soap were converted. Resulted in saving about 450,000 liters of cooling water.
Werner & Mertz GmbH	Environment	Increase European surfactants in laundry detergent formulas (liquid and powder) by at least 15%.	2022	Goal achieved: In detergent formulas (liquid and powder), use of European surfactants was increased by 15% in 2022.
Werner & Mertz GmbH, Werner & Mertz Service & Logistik GmbH	Environment	Active support of the city of Mainz as one of the leading hydrogen regions in Germany.	2022	Goal achieved: Approval of support for the construction of a hydrogen filling station by the state of Rheinland-Palatinate is still open. Payment of our subsidy will take place after the application is approved.

Company	Type of Goal	Goal	Year	Status
Werner & Mertz Service & Logistik GmbH	Environment	Planning of pallet conversion of new pallets to B-pallets.	2022	Goal achieved: Production can now handle both new pallets and B-pallets.
Werner & Mertz Service & Logistik GmbH	Energy	Reduce the electrical power needs for lighting in warehouse LZ 4 by 60% by switching to LED lighting.	2022	Goal achieved: Conversion is complete. The intermediate meter reading fell within the expected range.
BNS International GmbH	Environment	Increase the order value per package by 10% in Germany, compared to 2019, to reduce CO_2e emissions.	2022	Goal achieved: The order value per package was increased by 14% over 2019.
BNS International GmbH	Energy	Conduct sustainablity driver training in 2022 for all field sales reps and company car drivers.	2022	Goal achieved: Driver training was conducted for all field sales reps and company car drivers.
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 44% of the entire portfolio (based on net net sales).	2022	Goal achieved: Forty-seven percent (47%) of the entire portfolio is now Green Care Professional products (based on net net sales).
Tana-Chemie GmbH	Energy	Conduct sustainablity driver training in 2022 for 50 % of field sales reps in Germany.	2022	Goal achieved: Driver training was conducted for all (100 %) field sales reps in Germany.
ERDAL-REX GmbH	Environment	Increase net sales by 5 % for every kilometer driven (from 81 Euro to 85 Euro)	2022	Goal not achieved: An increase of only 1 % per kilometer driven (80.73 EUR to 81.15 EUR) was achieved.

Company	Type of Goal	Goal	Year	Status
ERDAL-REX GmbH	Energy	Reduction of CO_2 emissions for customer visits by 11 % (14.8 t) compared to 2020.	2022	Goal achieved: CO_2e emissions for customer visits was reduced by 11% (14.8 t) compared to 2020.
Frosch Sales Team GmbH	Energy	Reduction of CO_2 emissions for customer visits by 11 % (14.8 t) compared to 2020.	2022	Goal achieved: CO_2e emissions for customer visits were reduced by 11 % (14.8 t) compared to 2020.
ECC Ecological Cleaning and Care GmbH	Energy	Make 50 % of visits to customer sites by public transportation.	2022	Goal achieved: Seventy-three percent (73 %) of visits were made by public transportation.

Environmental Program 2023 for 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	In process.
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	The new production line should go into operation by the middle of the year. The focus is on regional delivery for the southern Europe customer group so that transport routes can be reduced.

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	The district heating consumption is to be reduced by optimizing the heating curve, including decreasing the room temperature.
Werner & Mertz GmbH	Energy	Draft a concept for leakage management of compressed air in Production in order to decrease energy consumption continuously.	2023	In process.
Werner & Mertz GmbH	Energy	Draft a concept for optimized lighting on factory grounds in order to decrease energy consumption continuously.	2023	In process.
Werner & Mertz GmbH	Energy	Draft a concept for a measuring and counting concept to optimize data capture of key indicators.	2023	In process.
Werner & Mertz GmbH	Energy	Reduction of natural gas consumption of 500,000 kWh and about 30 % compared to 2021 by converting formulas.	2023	In 2022, 11 formulas were converted. Another 18 will follow in 2018.
Werner & Mertz GmbH	Energy	Draft a concept for the use of waste heat from air compressers in building F6 (boiler building).	2023	In process.
Werner & Mertz GmbH	Environment	Carry out three new trainee projects on energy efficiency and resource conservation.	2023	Since 2021, trainees at Werner & Mertz have been conducting a biodiversity project with NABU. In addition, they have been working on their own sustainability project, from idea development to implementation.

Company	Type of Goal	Goal	Year	Status
Werner & Mertz GmbH	Environment	Increase the cycle of sustainability reporting according to DNK from every two years to every year.	2023	In process.
Werner & Mertz GmbH	Environment	Carry out a project on Greenhouse Gas accounting for the production sites in Mainz and Hallein.	2023	In process.
Werner & Mertz Service & Logistik GmbH	Energy	Lighting conversion in building L3 (ground and first floors) and high-bay warehouse L2.	2023	Measures were begun in 2022 and will be completed in 2023.
Werner & Mertz Service & Logistik GmbH	Environment	Expansion of logistics sustainability study with Fraunhofer Institut on purchasing logistics.	2023	In process.
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 % of the entire portfolio (based on net net sales).	2023	In 2022, 47 % of the entire product portfolio was converted to Green Care (based on net net sales).
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	In process.
ERDAL-REX GmbH	Energy	Reduction of 49 % CO_2e consumption for custsomer visits and 2.6 t CO_2e compared to 2019.	2023	In process.

Company	Type of Goal	Goal	Year	Status
ERDAL-REX GmbH	Environment	Increase of 3 % net sales per kilometer driven (from 81 to 83 EUR).	2023	In 2022 net sales per kilometer driven was increased to 81.15 EUR.
Frosch Sales Team GmbH	Energy	Reduction of CO_2e consumption for travel to meetings and 5.2 metric tons CO_2e compared to 2022.	2023	In process.
BNS International GmbH	Energy	Reduce fuel consumption in BNS fleet (entire) by 5 % compared to 2022.	2023	All field service reps and company car drivers have received sustainability driver training.
BNS International GmbH	Environment	Increase order value (unit) per package in Germany compared to 2022 in order to reduce CO_2e emissions.	2023	In process.
BNS International GmbH	Environment	Increase recyclate share in plastic containers to 65 % or 45 % per number of units.	2023	In process.
ECC Ecological Cleaning and Care GmbH	Energy	Travel to 80 % of business appointments by public transportation.	2023	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 sustainabilty 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.

External Communication

When we provide information to our external stakeholders, we clearly emphasize and transparently communicate the virtue 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.

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

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.

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.

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.

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

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.

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.

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.

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.

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

Our Sustainability Management is available to answer your questions or provide you with more information:

Sustainability and Organizational Management
Werner & Mertz GmbH
Rheinallee 96
D-55120 Mainz
e-mail: Nachhaltigkeit@werner-mertz.com

Yannic von Raesfeld
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 2024.

Contracted as environmental auditor/environmental audit organization:

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 & Logistik 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).

CERTIFICATE

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

Site
Rheinallee 96
55120 Mainz

Registration-No.: DE-152-00013

Date of first registration
1st July 2003

This certificate is valid until
22nd May 2024

This organisation has established an environmental management system according to EU-Regulation 1221/2009 and EN ISO 14001:2015 section 4 to promote the continual improvement of environmental performance, publishes an environmental statement, has the environmental management system verified and the environmental statement validated by a verifier, is registered under EMAS (www.emas-register.de) and therefore is entitled to use the EMAS-Logo.

EMAS
VERIFIED ENVIRONMENTAL MANAGEMENT

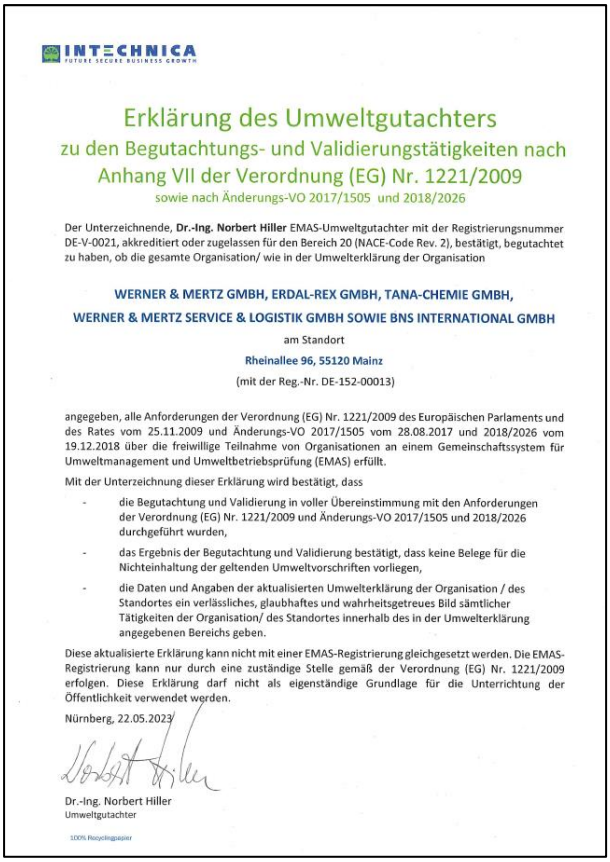
IHK Chambers of Industry and Commerce of the German State Rheinland-Pfalz

Registerführende Stelle im Gemeinschaftssystem für das Umweltmanagement und die Umweltprüfung

The Chambers of Industry and Commerce of the German State Rheinland-Pfalz as common Competent Body in the Community eco-management and audit scheme (EMAS).
24.06.2021

Albrecht Hornbach
Präsident

Dr. Tibor Müller
Hauptgeschäftsführer



INTECHNICA

Erklärung des Umweltgutachters
zu den Begutachtungs- und Validierungstätigkeiten nach Anhang VII der Verordnung (EG) Nr. 1221/2009
sowie nach Änderungs-VO 2017/1505 und 2018/2026

Der Unterzeichnende, **Dr.-Ing. Norbert Hiller** EMAS-Umweltgutachter mit der Registrierungsnummer DE-V-0021, akkreditiert oder zugelassen für den Bereich 20 (NACE-Code Rev. 2), bestätigt, begutachtet zu haben, ob die gesamte Organisation/ wie in der Umwelterklärung der Organisation

WERNER & MERTZ GMBH, ERDAL-REX GMBH, TANA-CHEMIE GMBH,
WERNER & MERTZ SERVICE & LOGISTIK GMBH SOWIE BNS INTERNATIONAL GMBH

am Standort

Rheinallee 96, 55120 Mainz

(mit der Reg.-Nr. DE-152-00013)

angegeben, alle Anforderungen der Verordnung (EG) Nr. 1221/2009 des Europäischen Parlaments und des Rates vom 25.11.2009 und Änderungs-VO 2017/1505 vom 28.08.2017 und 2018/2026 vom 19.12.2018 über die freiwillige Teilnahme von Organisationen an einem Gemeinschaftssystem für Umweltmanagement und Umweltbetriebsprüfung (EMAS) erfüllt.

Mit der Unterzeichnung dieser Erklärung wird bestätigt, dass

- die Begutachtung und Validierung in voller Übereinstimmung mit den Anforderungen der Verordnung (EG) Nr. 1221/2009 und Änderungs-VO 2017/1505 und 2018/2026 durchgeführt wurden,
- das Ergebnis der Begutachtung und Validierung bestätigt, dass keine Belege für die Nichteinhaltung der geltenden Umweltvorschriften vorliegen,
- die Daten und Angaben der aktualisierten Umwelterklärung der Organisation / des Standortes ein verlässliches, glaubhaftes und wahrheitsgetreues Bild sämtlicher Tätigkeiten der Organisation/ des Standortes innerhalb des in der Umwelterklärung angegebenen Bereichs geben.

Diese aktualisierte Erklärung kann nicht mit einer EMAS-Registrierung gleichgesetzt werden. Die EMAS-Registrierung kann nur durch eine zuständige Stelle gemäß der Verordnung (EG) Nr. 1221/2009 erfolgen. Diese Erklärung darf nicht als eigenständige Grundlage für die Unterrichtung der Öffentlichkeit verwendet werden.

Nürnberg, 22.05.2021

Dr.-Ing. Norbert Hiller
Umweltgutachter

100% Recyclingpapier