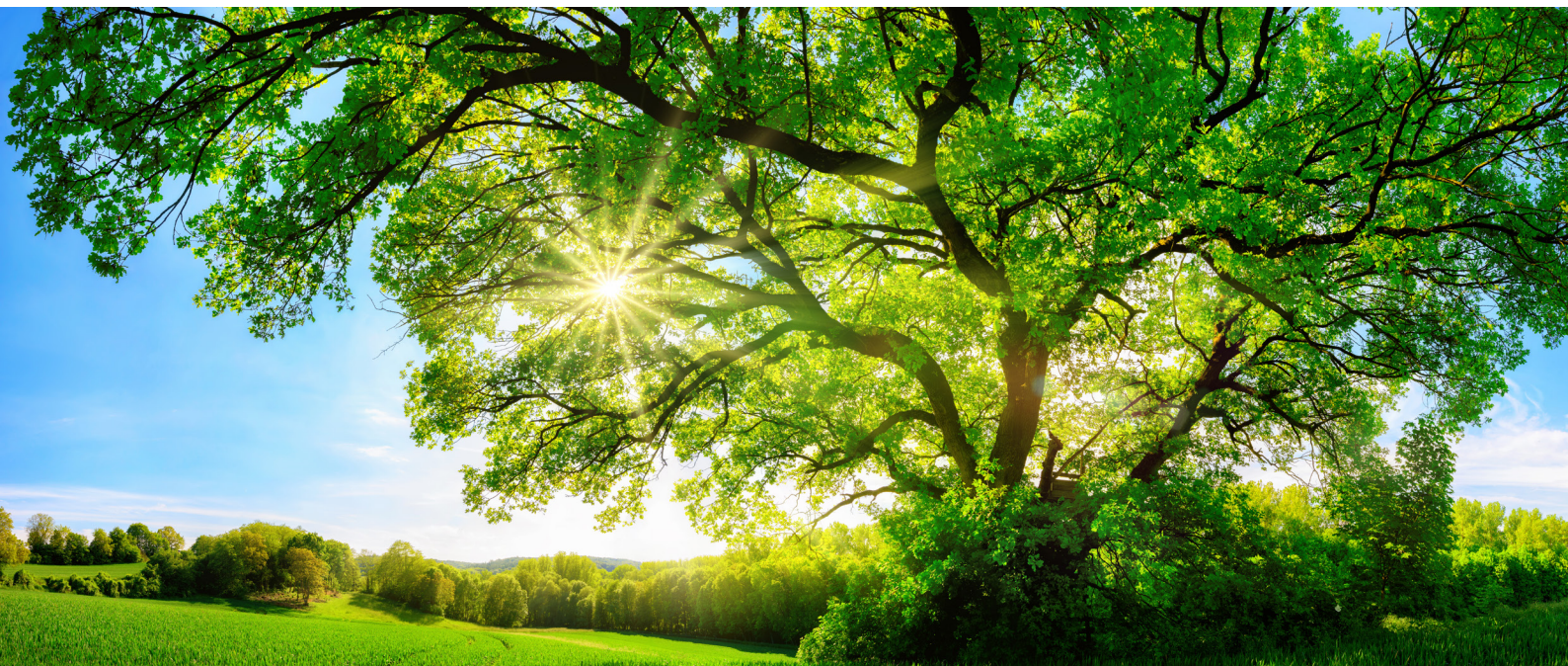


Protection upgraded



# Sustainability Report 2021



## Foreword by the Management Board

Now in its third edition, our global Sustainability Report 2021 offers you insights into our sustainability strategy and the milestones we have achieved. We demonstrate how we harmonise our business processes with the needs and requirements of society and the environment, and show that sustainability is possible in the chemical industry. Responsible conduct forms an integral part of our corporate identity and is compulsory for all our affiliates and partners worldwide. Way back when our company was founded in 1993, we made a commitment to the development of environmentally friendly products, and to the present day this has not changed. On the contrary - in our decision-making we always pay particular attention to the issue of sustainability, so we always make sure that our business activities have the least possible impact on the environment.

As an expert in tailor-made surface treatment chemicals, the SurTec Group cultivates a culture characterised by a spirit of research and the pursuit of innovative solutions that takes into account not only the technological aspects of production, but also the resulting long-term effects on people, society and the ecosystems of our planet. Our mission is to find solutions for the future that help our customers to become more successful.

The goal of our strategy is to provide innovative solutions that enable our customers to achieve their goals while conserving resources. Along the value chain, this has an impact on our footprint, i.e. the effects on the environment and resources associated with the procurement, processing and delivery of our raw materials. It also influences the positive effects that our customers can achieve through using our products (our "handprint") and the disposal of our products.

This report documents the development of our sustainability programme to date. This also includes our orientation towards the "Sustainable Development Goals" of the United Nations. In 2018, we set ourselves the additional goal of increasing our share of electricity from renewable sources such as wind and sun to 50 percent by 2025. In 2021, as in previous years, we made significant progress towards achieving our goal. When confronted by political, pandemic and economic turbulence, we have adopted a flexible approach, in order to ensure that we can maintain our delivery capabilities as usual, while also pursuing our sustainability goals with the urgency required.

Bensheim, July 2022

**Dr. Karsten Grünke**  
Chief Executive Officer

**Dr. Fulvio Lamberti**  
Chief Financial Officer



# A responsible approach to doing business

The SurTec Group is a leading supplier of speciality chemicals for surface treatment. We are unique because we offer solutions for all areas of surface treatment, namely Industrial Parts Cleaning, Metal Pre-treatment and Electroplating, worldwide.

Specialised corporate functions collaborate closely in order to address topics such as environmental protection, occupational health and safety, chemicals legislation, sustainability, quality and socially responsible business, while at the same time ensuring economically viable operations and operational excellence.

We sell our products directly all over the world and offer an excellent technical service. Our products and processes guarantee economic advantages based on excellent value for money and are characterised by minimal environmental impact.

## Corporate policy and mission

“We are convinced that economic performance, social responsibility, concern for the health and safety of our employees and protection of the environment are all inextricably linked” (excerpt from our HSEQ Mission & Policy Statement). We are therefore committed to responsible corporate governance, since we believe this forms the basis for the entrepreneurial success and long-term existence of the SurTec Group.

Likewise, all managers and employees at our company are required, in the interests of our customers and other stakeholders,

- to work to a consistently high quality with products that are as sustainable and environmentally friendly as possible
- to ensure safe and sustainable transport and storage
- to reduce the consumption of resources such as water, energy and auxiliary chemicals as far as possible in the manufacture of products
- to give top priority to the health and safety of all colleagues in the workplace and to plant safety.



## Statement of the management on corporate policy and mission

Since SurTec was established nearly 30 years ago, we have developed numerous high-quality speciality chemicals and processes that meet the requirements of our customers, are used for material and surface protection and make chemical surface treatment processes simpler, more reliable and more efficient. As a partner to our customers, we strive for technical innovation, for development of advanced and sustainable processes and new technologies, but we also accept responsibility for our business approach.



### Group-wide sustainability goals

The Freudenberg Group and SurTec implement a wide range of measures as part of the sustainability strategy.

Specifically, the entire Freudenberg Group aims to become climate-neutral by 2045. Therefore an initial goal for SurTec and the Group is to reduce relative CO<sub>2</sub> emissions by 25 percent by 2025. This will be achieved through a mix of energy conservation and electrification, as well as the purchase and in-house production of green electricity (since early 2020, our largest production site in Zwingenberg has been supplied with CO<sub>2</sub>-neutral electricity from a hydroelectric power plant in Sweden) and the compensation of CO<sub>2</sub> emissions. This enables us to comply with the Greenhouse Gas Protocols Scope 1 and Scope 2 emissions.



SurTec Deutschland GmbH in Zwingenberg, our largest location worldwide, was built in 2000 to the Passive House Standard. High-quality structural thermal insulation, thermally insulating glass, ventilation with heat recovery, façades without leaks and thermal bridges, as well as other measures have all significantly improved the energy balance while simultaneously reducing operating costs. In addition, over the past few decades, we have repeatedly succeeded in setting standards in our industry by developing more environmentally friendly solutions for chemical surface treatment. Recyclable cleaning agents or chromium(VI)-free passivation processes are just a few examples.

We started in 1996 as a "trivalent" company that was able to replace chromium(VI) with chromium(III) for various applications using many patented processes. Since then, we have come ever closer to our goal of becoming the market leader in sustainable speciality chemicals for surface treatment.

For more examples of sustainability, please go to: <https://www.freudenberg.com/company/responsibility>





## SurTec at a glance

SurTec develops, manufactures and distributes speciality chemicals for surface treatment. With its four fields of application - Industrial Parts Cleaning, Metal Pre-treatment, Functional and Decorative Electroplating - SurTec covers the entire spectrum of the portfolio in this area. SurTec is a supplier for almost all branches of the surface treatment industry with applications in the Automotive, Transport, Construction, Electronics & Electrical and Healthcare & Lifestyle sectors.

The SurTec Group, headquartered in Bensheim, Germany, is represented by its own affiliates in over 40 countries plus a global partner network. Our approximately 400 employees worldwide are responsible for successful research and development, for manufacturing our products, for ensuring legal compliance and supporting and supplying our customers.

In order to ensure a consistently high product quality irrespective of the place of manufacture, all plants throughout the world work to the same internationally recognised standards. Quality controls are carried out at every stage of the production process, starting with checks of the raw materials, their further processing, inspection of the finished products through to loading and delivery.

SurTec is a division of Freudenberg Chemical Specialities GmbH, Munich, Germany, which in turn is a wholly owned subsidiary of Freudenberg SE, based in Weinheim, Germany. Freudenberg is a global family-run enterprise founded over 170 years ago by Carl Johann Freudenberg.

### Certified quality, environmental and occupational health and safety management

The close integration of in-house development and production enables SurTec to quickly transform new technologies into market-ready products. We demonstrate this competence time and again by developing high-performance products for almost all areas of application in our industry.

SurTec's quality, environmental and occupational health and safety management are certified according to various standards, including DIN ISO 9001, DIN ISO 14001 and ISO 45001. This means that we are regularly audited by external bodies to ensure that we are achieving our corporate goals in terms of occupational health and safety, minimisation of environmental impacts and resource conservation.

Our customers and also our sales partners have access to comprehensive documentation on product safety and product features. Our Material Compliance Management (MCM) ensures compliance with all standards and legal requirements in this area.

## Keeping an eye on global developments

Through the responsible use of raw and other materials, Freudenberg is able to demonstrate and compare its excellence and sustainability in quantifiable terms. Our success is also determined by how sustainable we are. In this context, the Freudenberg Group monitors global crises extremely closely and steps in to provide support; our sense of responsibility extends far beyond our company sites. Through our parent company Freudenberg, SurTec is a signatory to the UN Global Compact and is thus committed to protecting human rights, ensuring freedom of association, eliminating forced and child labour and other requirements.



*Freudenberg - and thus SurTec too - has made a commitment to the principles of the United Nations Global Compact*

We consistently apply our own code of conduct and a dedicated supplier selection system with clear guidelines for ethical and legal compliance. Compliance with the regulatory requirements applicable to our industry is compulsory for us - as are basic ethical values.

### Strong focus on safety

For us, safety is a key concept in the design of our processes and the development of our products. Safety refers to the protection of the people working for SurTec or with SurTec products or those who use them subsequently.

However, safety also refers to the possible environmental effects that arise during the manufacture or use of our products. Therefore we examine our entire value chain in order to be able to improve processes that contribute, for example, to the conservation of resources or minimisation of environmental impacts.

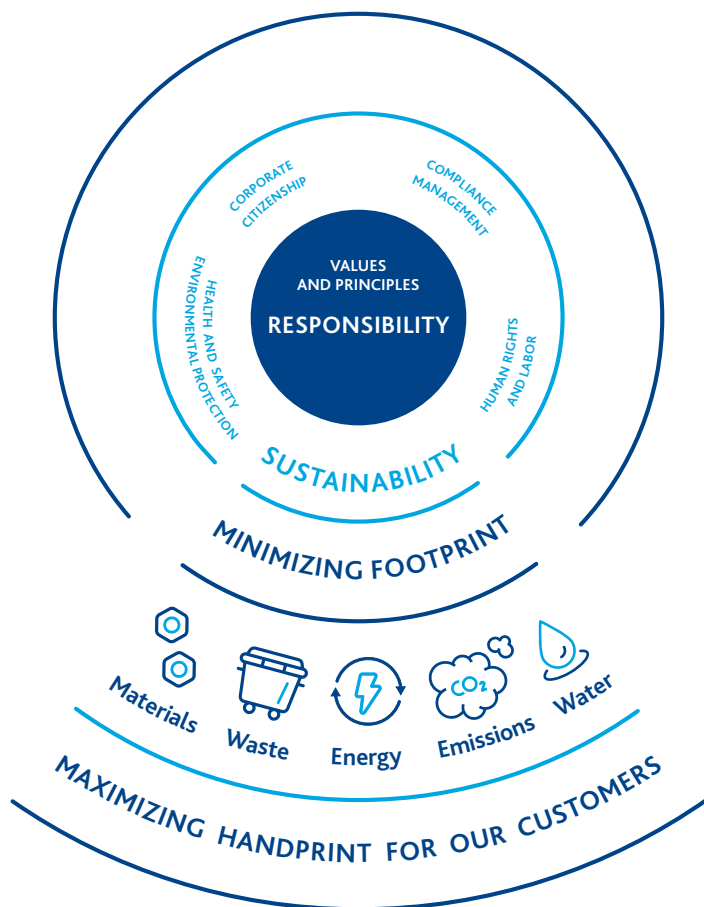
The same applies when it comes to our customers. Our goal is to help them achieve their own sustainability goals through using our products and processes: by saving energy, reducing emissions, reducing waste, optimising the life of galvanic baths or cleaning equipment, increasing productivity and improving resource efficiency, etc.





# Sustainability at SurTec

Our sustainability concept is based on the sustainability strategy of our parent company, the Freudenberg Group. It defines sustainability in the context of its corporate culture and aligns its values and principles accordingly, taking into account the essential factors in the economic and social environment, including the value chain. Within our direct sphere of influence, we recognise the demands of all relevant stakeholders, such as employees, shareholders, customers, society, neighbours and others. Our focus is on the values and principles of the Freudenberg Group: added value for the customer, innovation, leadership, people, long-term orientation, with the key message, in the context of greater sustainability, being: **responsibility**.



## What we strive for:

### Reducing our footprint & maximising our handprint

In our business activities, we always focus on two things: on reducing our "footprint", in other words using as few resources as possible in our operations, and on increasing our "handprint", i.e. offering our customers solutions which enable them to use fewer resources in their manufacturing processes, thus making them efficient and sustainable.

We have defined a total of six categories, for which we regularly collect data and derive corresponding targets: energy, emissions, waste, materials, water and health. Within these six areas, we have identified four specific fields of activity with the greatest potential for optimisation: material efficiency, energy efficiency, emissions and waste reduction. We record relevant developments to measure relevant changes and also notify Freudenberg about these for Group-wide reporting.



#### Materials

Material efficiency  
Recycled, renewable and alternative materials  
End-of-Life (EOL) handling of products



#### Waste

Waste treatment



#### Energy

Energy efficiency  
Renewable energy



#### Emissions

Air pollution/air emissions



#### Water

Water pollution  
Water consumption

### Commitment to and support for the UN Sustainable Development Goals

In order to design, manage and report on our strategies, goals and activities and thus reap the associated benefits, SurTec will employ the UN Sustainable Development Goals (UN-SDGs) and the principles of the European Green Deal over the next few years

- to identify future business opportunities
  - to utilise innovative technologies such as AI and digitalisation to increase efficiency
  - to continuously strive to replace hazardous and particularly concerning substances in our products. By paying increasing attention to
- aspects of sustainability in the management of our portfolio, we will meet the needs of the market for products and services that improve the handprint as well as the lives of users
  - to contribute to increased use of recyclable packaging materials through careful evaluation of the options
  - to improve our position in the “war for talent”
  - to strengthen our relationships with stakeholders and keep pace with political developments
  - to utilise new laws, regulations or price mechanisms to support our strategy.



*The UN Sustainable Development Goals*





For SurTec, the following ten Sustainability Development Goals out of a total of 17 are at the heart of our corporate activities. For each of these goals, we have defined the contribution we are striving to make in our everyday work.



Health and well-being

Health services are provided to our employees as a matter of course. In addition to the prevention of common ailments, healthy nutrition and the mental health of our employees are also of utmost importance to us. Our activities include vaccination campaigns, the provision of masks and a reduction in the use of critical substances.



High-quality education

Demographic change in Europe makes shortages of skilled workers likely in the future. Other continents have predominantly young populations. To address both situations, we rely on viable training opportunities. We promote lifelong learning for our employees by providing numerous educational and training courses.



Gender equality

At SurTec, we care about equal treatment of the genders and gender identities both in legal terms and with regard to personal and professional development potential (equal opportunities). Our goal is to enable our employees to fulfil their own individual life choices.



Clean water and sanitation

The water used in SurTec's special chemical products requires high purity and low hardness. In order to be able to use the local municipal tap water, we operate efficient filtration and softening units. In this way, we avoid the transportation of demineralised water by truck, which is detrimental from an ecological and economic point of view.



Affordable and clean energy

We aim to secure access to reliable, modern and affordable energy for all our sites. The conditions for procuring clean energy vary widely around the world. Where possible, we enter into long-term contracts that guarantee us a supply of clean energy.



### Humane working conditions and economic growth

We have a social obligation to all our employees. However, this also depends on the laws, customs, needs and opportunities available in the countries concerned. Discrimination and the marginalisation of vulnerable persons have no place anywhere in the company.



### Sustainable consumption and production

In our business, we limit our use of resources so that they remain available for future generations. The use of recycled materials and recyclable raw and other materials takes priority, as does the elimination of plastic packaging. In our companies, employees are trained to internalise sustainable work practices and assess them based on key performance indicators.



### Industry, innovation and infrastructure

The value of a resilient infrastructure to an industrial company is obvious. We promote sustainable industrialisation with ongoing investments in existing and new plants. Our products are used in large infrastructure projects.



### Climate action

The industrial sector accounts for a high proportion of global greenhouse gas emissions. SurTec is in the process of reducing its CO<sub>2</sub> emissions relative to sales by 25 percent by 2025. By 2045 at the latest, we would like to be climate-neutral in terms of Scope 1 and 2, and we are adopting key measures to achieve this: Firstly, we are maximising energy efficiency and reducing our energy consumption. Secondly, we are electrifying our energy supply. Thirdly, we are using green electricity. Fourthly, we are offsetting the CO<sub>2</sub> emissions that remain unavoidable.

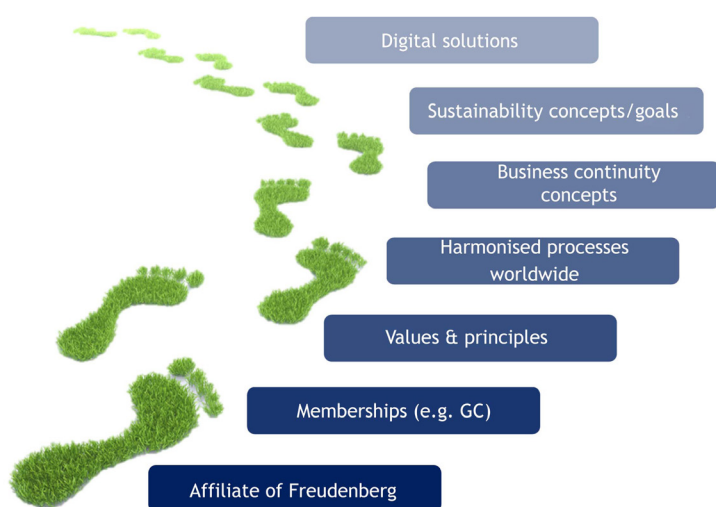


### Less inequality

Diversity is anchored in the Group's values and principles. Through a range of initiatives, SurTec promotes a working environment where everyone is valued, respected and heard. Particular attention is paid to achieving a balanced gender distribution, in which women can pursue targeted career development leading to top leadership positions.







*Cornerstones on the road to success*

### Gradual elimination of substances of concern from our products

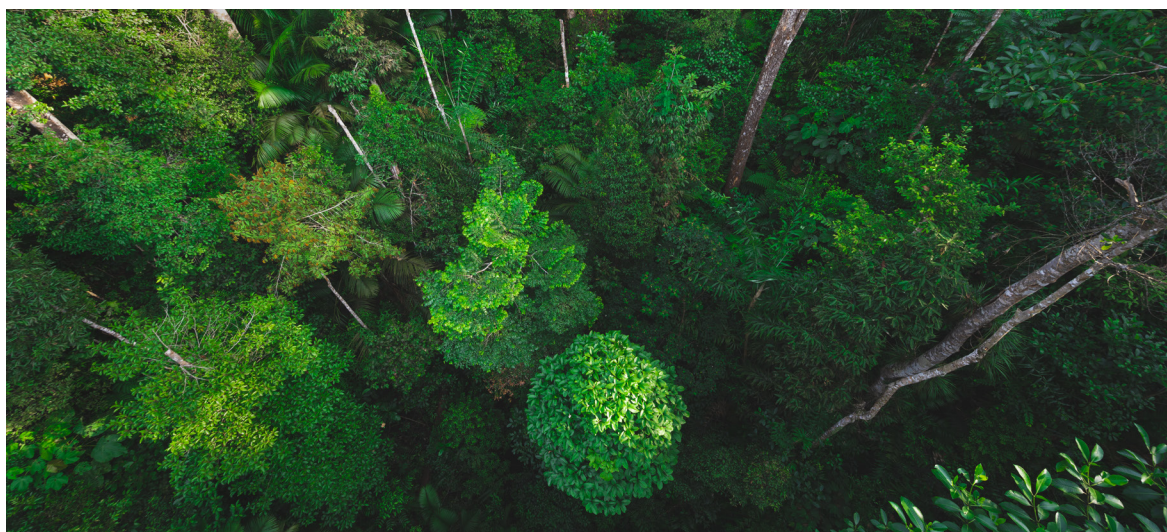
In chemical surface treatment, numerous materials are used which are subject to mandatory labelling and/or are considered hazardous substances. For decades, we have consistently pressed ahead with the avoidance of hazardous raw materials and ingredients in our products in order to improve the protection of our employees as well as that of the applicators and their employees. We are also working on a strategic product portfolio analysis, which will serve as a guideline for the development of new product formulations. We pay particular attention to questionable raw materials and auxiliary materials, which we aim to gradually eliminate from our products. These include heavy

metals and aromatic or halogenated organic compounds. In recent years, SurTec has developed an impressive product portfolio that also meets the increasing demands for greater sustainability.

When it comes to our products, synthetic raw materials are often essential for performance. Nevertheless, we are pursuing a strategy of resource efficiency in order to find alternatives or reduce use of these synthetic materials. We pursue this goal in various ways:

- reduced use of resources, e.g. through new product formulations that significantly reduce the amount of a required ingredient
- saving energy in operational processes through energy-efficient systems and machines
- conservation of resources through the use of renewable raw materials
- use of water instead of organic or other solvents
- production of concentrates for the reduction of water consumption.

This results in a reduction of our own footprint, but at the same time brings advantages for the handprint too - i.e. the sustainability goals of our customers.







## Optimising the handprint - increasing customer benefits

Conservation of resources is positive not only in terms of our own footprint, but also when it comes to that of our customers. The use of water instead of organic solvents as a carrier substance or the use of products that prolong their service life reduces the user's ecological footprint. If we extend the service life of surface treatment baths, this not only reduces the amount of raw materials used, but also brings tangible economic benefits: A longer operating time also means less frequent bath changes, less material consumption and less waste and waste water. In some cases, our high quality product formulations/technologies can increase bath lifetimes multiple times over.

With our recyclable, modular cleaning processes, we make a significant contribution to higher resource and production efficiency and reduce process costs by up to 25%. Through special formulations, we have also succeeded in significantly reducing sludge formation in baths for treatment technology in certain areas of application. This ensures more stable processes, as well as lower disposal costs for the customer.

Below, we show you some examples of how we can positively influence the handprint of our customers.

### Sustainable cleaning systems - recyclable, biodegradable and energy-efficient

Many of our cleaning systems are recyclable, which significantly reduces the amount of materials used. These include recyclable surfactant components or surfactants for spray and immersion applications.

At SurTec, low-temperature cleaners always achieve the same cleaning effect as standard processes that run at much higher temperatures. The energy cost savings are significant.

In order to avoid critical ingredients, we supply MEA-free cleaning systems (MEA = monoethanolamines), which enable a higher degree of application safety and simplified disposal. The same applies to our chloride-free demulsifiers. Our alkaline, water-based and modular cleaners provide a significantly extended service life of the cleaning baths with correspondingly optimised production cycles, reduced maintenance requirements and significantly reduced waste water volumes, which results in turn in lower process costs, including reductions of up to 25% per year.

SurTec has developed a special cleaner for recycling PET flakes. This is used to remove adhesive and label residues from the flakes and to separate them according to the type of plastic.

We also provide biodegradable defoamers.

### Win-win scenarios for economy and ecology in Metal Pre-treatment

In the field of Metal Pre-treatment, we pursue similar goals for the benefit of our customers: avoidance of critical substances and increased profitability. We have thus succeeded in developing phosphate-free products that eliminate the often undesirable ingredient phosphate from the wastewater stream while maintaining the same level of effectiveness. The quenching baths used in hot-dip galvanising usually contain toxic chromium(VI), which can lead to health risks during application. SurTec has succeeded in replacing the toxic chromium(VI) with the more environmentally friendly chromium(III) - a major contribution, not just when it comes to occupational health and safety. SurTec also develops "low-temperature" products, where the application temperature can be significantly reduced compared to the standard process, thus reducing energy and process costs.



*Insight into SurTec's largest production site worldwide (Zwingenberg, Germany)*

SurTec 650 in combination with a gasket optimally prevents the corrosive infiltration of moisture into a battery compartment and ensures low electrical contact resistance. This technology also provides electromagnetic compatibility (EMC) and is therefore the perfect solution for surface treatment of battery housings and electronic control unit (ECU) housings, for example. Due to its best-in-class bare metal corrosion protection, additional e-coating applications of the battery casing can be considered unnecessary.



### Pioneering work in the field of Decorative and Functional Electroplating

SurTec introduced the world's first chromium(III)-based thick layer passivation in 1996 and has been the market leader in this field ever since. SurTec thus pioneered the avoidance of hexavalent chromium for decorative and functional electroplating. Our trivalent chromium technologies were the first to be ready for the market and have become standard processes in many areas of electroplating.

As chromium(III) is non-toxic, this makes a significant contribution to occupational health and safety for both us and the applicators, as well as for the environment. The customer also saves up to 20% of wastewater treatment costs and 30 to 50% of electricity costs for the rectifier compared with chromium(VI)-based processes, due to lower current densities. SurTec made the strategic decision to no longer market products containing chromium(VI) worldwide from 2017 onwards. We have better alternatives!

Other key areas in electroplating are the elimination of certain metals that were previously indispensable and are considered critical from a health or environmental perspective. For example, SurTec has developed various high-performance passivation processes that contain no cobalt salts, which are hazardous to health.

We are happy to list some more examples from our daily practices:

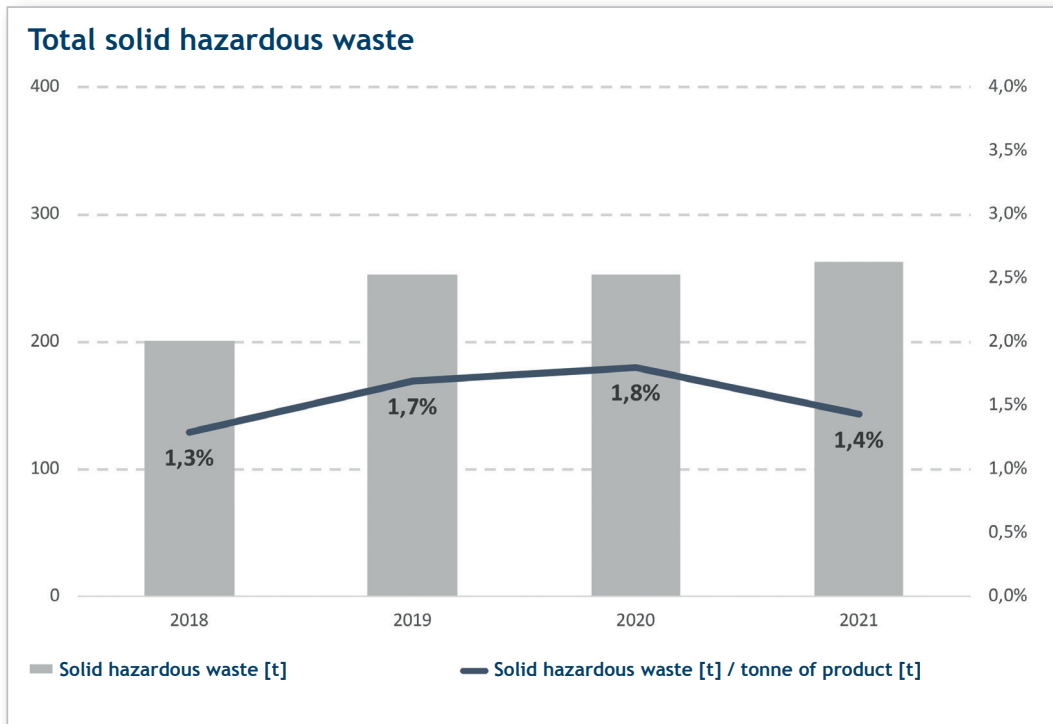
- **Rinsing water recycling:** In the field of functional electroplating, SurTec relies on closed systems that allow the rinsing water to be fed back into the process. An electroplating process consists of up to 10 rinsing steps. In conventional processes, the water used in these steps is disposed of after just one rinse. However, in a closed system, rinsing water is treated if necessary and fed back into the process, i.e. used multiple times. This significantly reduces the customer's water consumption.

- Nickel is the most common contact allergen and is also carcinogenic, especially when inhaled. This is why SurTec is increasingly replacing nickel with high-alloy zinc/iron coatings, for example, thus enabling the substitution of nickel in galvanic applications.
- To protect the health of employees - on the customer's premises as well as at our in-house production facilities - SurTec is replacing chromium(VI) with chromium(III) in the decorative field. This means that the process is 100% chromium(VI)-free - even during pre-treatment.
- We offer alternatives to processes involving ammonium and ammonia, thus limiting the health risks for our employees and our customers.





## SurTec's key figures

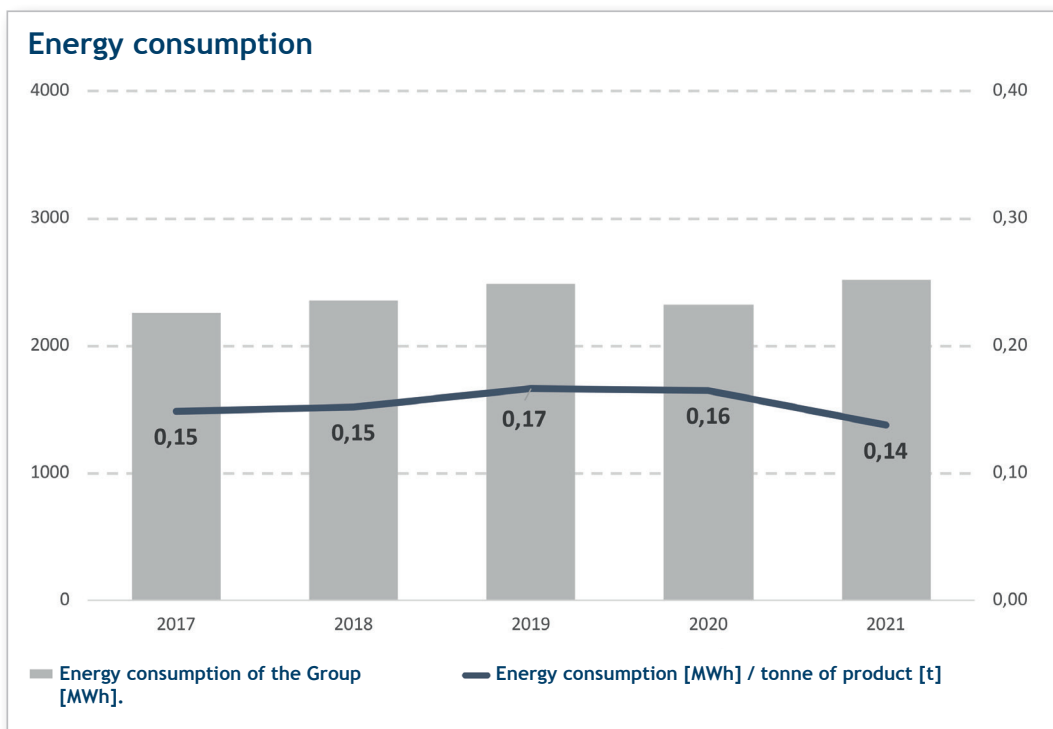


Despite continuous technical improvements, the quantities of hazardous waste have increased in recent years. This is due to the following factors:

- Since 2018, hazardous packaging waste must also be reported and included in internal reporting.
- In parallel, the amount of returned packaging waste has increased significantly in recent years. As a responsible market participant, SurTec has made a commitment to maximise the sustainability of the return process, which has in turn maximised the amount of packaging material that is recycled.

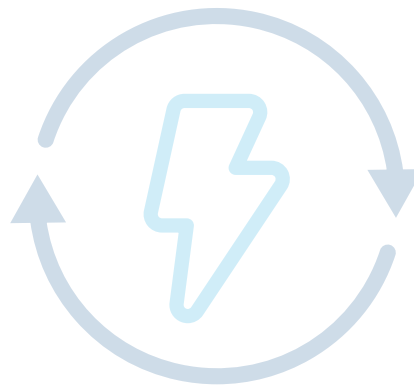
- Finally, increased necessary substitutions of raw materials due to changes in the supply chain as well as legislative requirements also led to increased amounts of solid waste, especially in 2020. With regard to the tonnage produced, a positive trend towards proportionately less waste has emerged in 2021 due to larger production batches and thus the procurement of raw materials in larger containers.

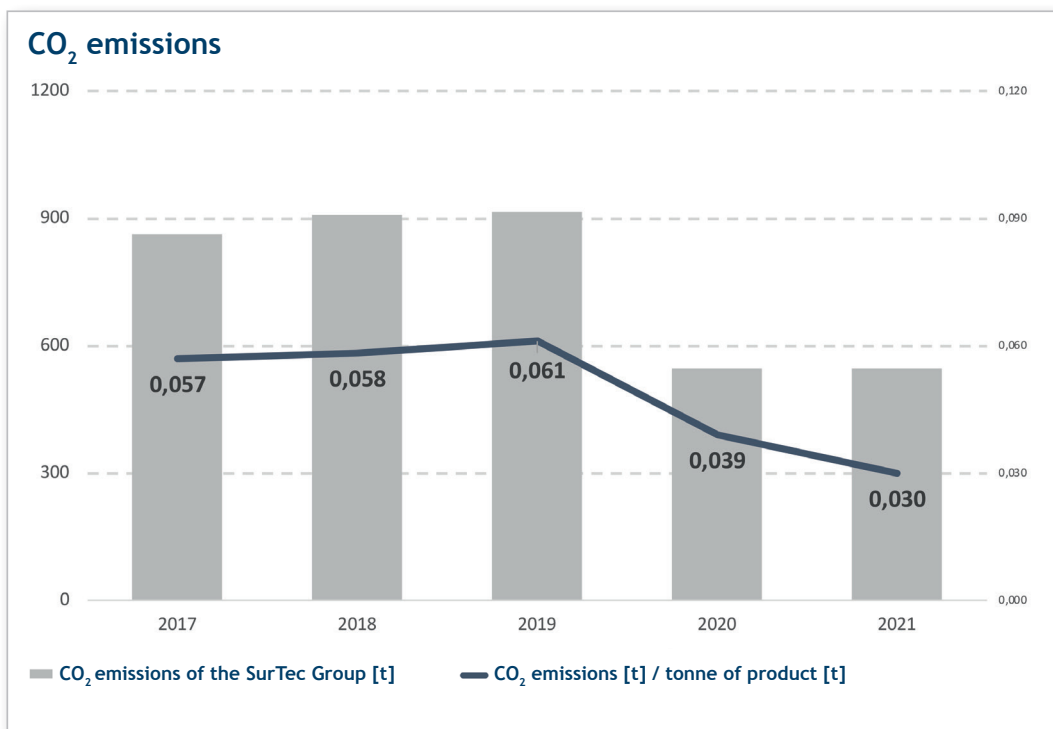




SurTec generally has a very low energy consumption (0.14 MWh/tonne of product produced), which depends heavily on local climate factors and seasonal conditions. Potential improvements are continuously evaluated in the project “Harvesting low hanging fruit” (LEDs, motion detectors, etc.).

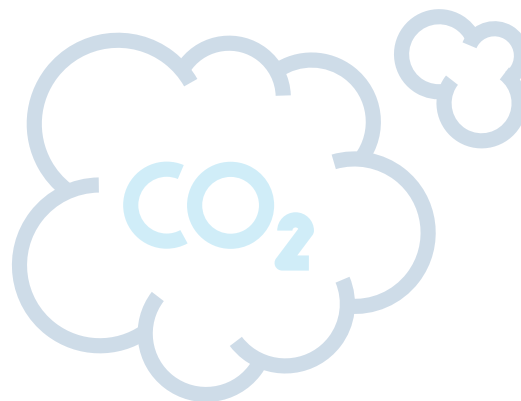
Additional measures will follow based on the insights from audits at affiliated companies. Even as we strive to reduce energy consumption, we also evaluate the potential for procuring renewable energy.



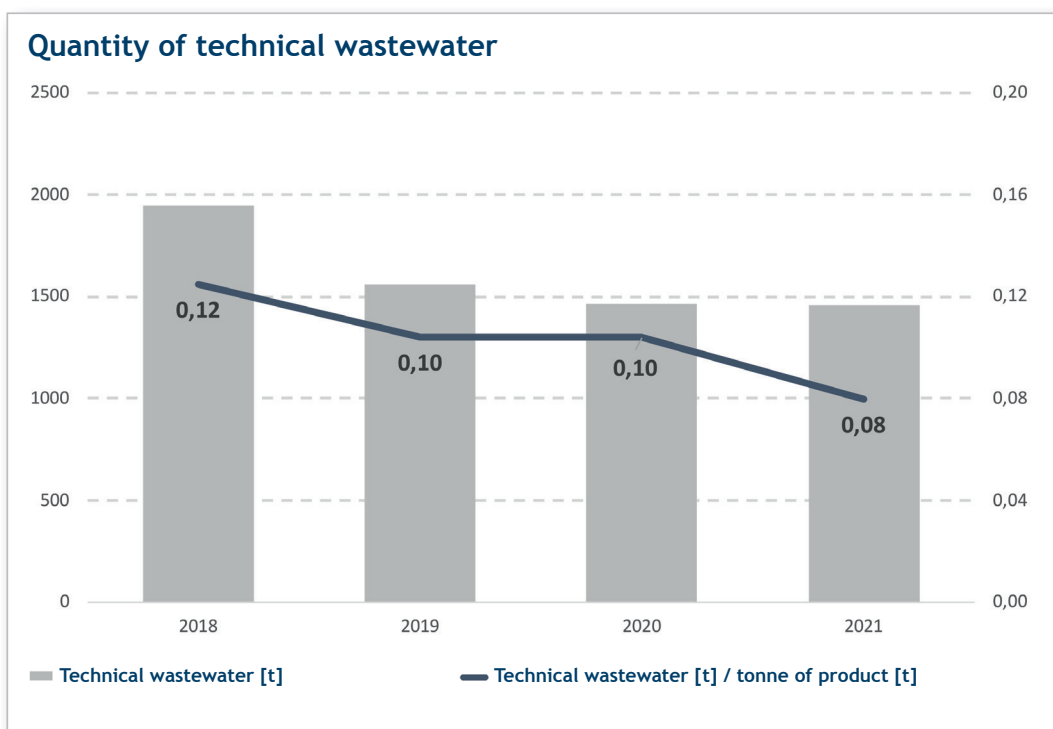


In addition to identifying weaknesses in energy management and reducing energy consumption, SurTec has begun switching over to the procurement of renewable energy. With the support of the Freudenberg Group, SurTec signed a PPA (purchase power agreement) to procure hydropower and solar energy for SurTec Deutschland GmbH, reducing our footprint in the year 2020 by 237 tonnes of CO<sub>2</sub> emissions.

Thanks to this agreement, SurTec increased the share of renewable energy in its global consumption by 14% to reach a total of 33% worldwide. Here too, the ratio to tonnage produced improved once again in 2021 due to a higher proportion of in-house production and an increased average batch size.







Due to owning and continuously improving our own wastewater treatment plants and by optimising the rinsing process in our production facilities, laboratories and pilot plants, we have been able to reduce the amount of chemically contaminated technical wastewater in recent years. Large reductions have been achieved in the last two years in Brazil and China.

In 2021, the installation of an evaporation-based wastewater treatment plant was planned at our factory in China, and this will be completed by mid-2022, resulting in a further reduction in technical waste water in 2022 and the years to follow.





## Health and safety at work in the context of our corporate culture

### Diversity & inclusion

Commonalities and differences between people are part of our daily life. We at SurTec tolerate, support and value diversity in a work environment where all employees are respected and appreciated regardless of their ethnic and cultural background, nationality, gender, religion, age, health/disability or sexual orientation.

For many years, we have maintained a distinctive HSE culture (HSE = Health, Safety & Environment) for occupational health and safety as well as greater environmental compatibility of our operational processes and our products. Technical and organisational measures for safe working conditions and environmental protection form an integral part of our corporate culture and are continuously being developed through extensive investment programmes. These focus on modern, closed manufacturing processes, supplemented by the latest safety equipment for our employees. This also includes raising awareness and, above all, training managers and employees in HSE issues. We do not see this as a temporary or occasional task, but as an ongoing process - HSE is part of our culture, our values and our DNA as a company.

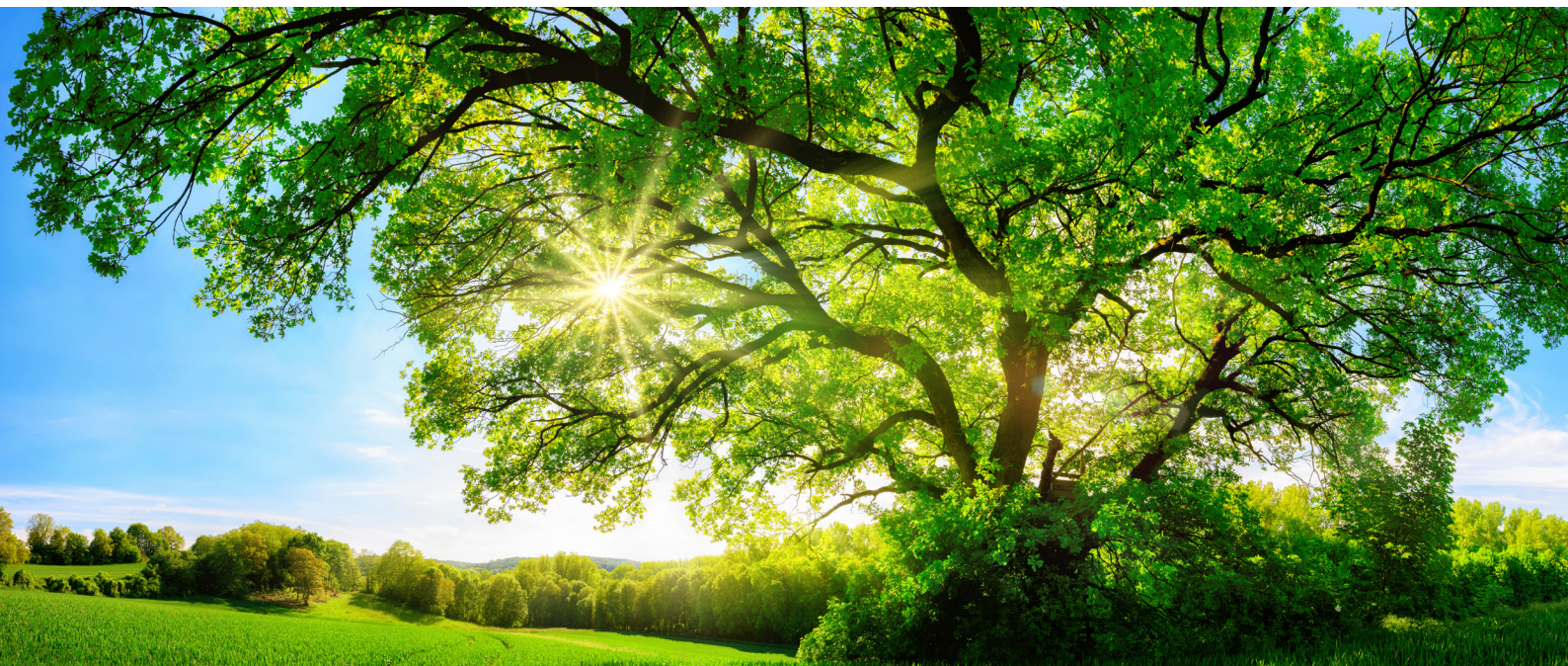
Since its launch in 2002, the global "We all take care" initiative has recognised those employees who go the extra mile to make their work safer, healthier and more environmentally friendly, or who

are committed to social responsibility. Since then, SurTec has regularly participated in the Freudenberg initiative, with numerous successful projects.

Our "Zero Accident" initiative sets an ambitious goal: to completely avoid accidents at work. Our employees' workstations are designed with ergonomic aspects in mind and are inspected regularly, also with regard to the safety of machines and plants. All these measures contribute to an exemplary low accident rate compared with the rest of the industry.

### Occupational health management

Following the exceptional "One-Team-One-Globe" project in 2018, in which over 60% of the employees in the global SurTec family walked around the globe together in six weeks, SurTec launched a special programme for Occupational Health Management (OHM) at the end of 2019, based on a clear framework with many examples. Local OHM teams will collaborate in a global network to initiate and coordinate local actions.



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