

Protection upgraded



# Sustainability Report 2019



## Foreword by the Management Board

With our 2019 Sustainability Report, we are looking to create greater transparency. We want to demonstrate how we harmonise our business processes with the needs and requirements of society and the environment, and that sustainable activity is possible within the business environment of the chemical industry. Responsible conduct forms an integral part of our corporate identity and is compulsory for all our companies and partners worldwide. Way back when our company was founded in 1993, we committed ourselves to the development of environmentally friendly products, and to date this has not changed. On the contrary – in all our decision-making we 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, SurTec cultivates a culture which, characterised by a spirit of research and the pursuit of innovative solutions, 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 be more successful.

**Dr. Karsten Grünke**  
CEO

The goal of our strategy is to provide innovative solutions that enable our customers to achieve their goals while saving resources. Along the value chain, this affects our footprint, i.e. the effects on the environment and resources associated with the procurement, processing and delivery of our raw materials. This also relates to the positive effects that our customers can achieve through using our products (we call this our "handprint") and disposing of our products. The main aspects of the SurTec approach to minimise the footprint and maximise the handprint are described in the chapters starting on page 7 of this report.

This first report documents the development of our sustainability programme to date. This also includes our orientation towards the "Sustainable Development Goals" of the United Nations. For 2018, we also set ourselves the goal of increasing our share of electricity from renewable sources such as wind and sun to 50 percent by 2025.

Bensheim, August 2020

**Dr. Fulvio Lamberti**  
CFO

# A responsible approach to doing business

The SurTec Group is a leading supplier of chemical specialities 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.

new procedures, but we also take responsibility in our business approach. Specialist corporate functions take care of environmental and health protection, occupational health and safety, chemicals legislation, sustainability, quality, socially responsible and at the same time economically viable operations and long-term orientation.

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. 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 interested parties,

- 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, and
- to give top priority to the health and safety of all colleagues in the workplace and plant safety.



## Statement of the management on corporate policy and risk mission

During the time since it was established more than 25 years ago, SurTec has developed numerous high-quality chemical specialities 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, advanced and sustainable processes and



### Sustainability goals apply to the entire Group without restriction

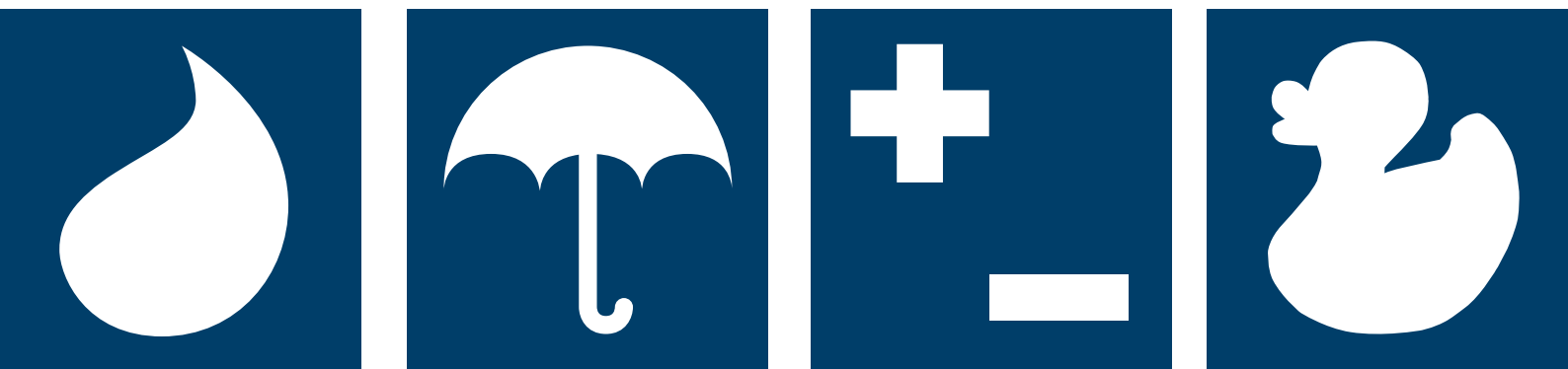
As part of the Freudenberg family business, we want to make our contribution to achieving greater sustainability. Our parent company, the Freudenberg Group, has developed special programmes and initiatives that meet our corporate and social responsibility and overriding sustainability goals. These goals and the obligations resulting from them also apply to us without restriction.

Corresponding examples can be found here: <https://www.freudenberg.com/company/responsibility/>



We ourselves implement a large number of measures as part of our sustainability strategy. SurTec Deutschland GmbH in Zwingenberg, our largest location worldwide, was built in 2000 to the Passive House standard. High-quality structural thermal insulation, thermal insulation glazing, ventilation with heat recovery, ensuring there are no leaks and no thermal bridges in the façade and other measures have all significantly improved the energy balance and simultaneously reduced operating costs. In addition, over the past few decades, we have repeatedly succeeded in setting standards in our industry in developing more environmentally friendly solutions for chemical surface treatment. Recyclable cleaning agents or chromium(VI)-free passivation processes are just a few examples. This report provides an overview of our activities and the resulting initiatives for greater sustainability.

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



## SurTec at a glance

SurTec develops, manufactures and distributes chemical specialities for surface treatment. With its four Fields of Application – Industrial Parts Cleaning, Metal Pre-treatment, Functional and Decorative Electroplating – SurTec covers the entire portfolio in this field. SurTec is a supplier for almost all branches of the surface treatment industry with applications in the Automotive, Transportation, Construction, Electronics & Electrical and Healthcare & Lifestyle sectors.

The SurTec Group, headquartered in Bensheim, Germany, is represented by its own companies in 22 countries and by partner companies in more than 20 countries. Our approximately 400 employees worldwide are responsible for research and development, the manufacture of our products 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 and quality control analysis of each and every single product batch as well as review of the finished products through to loading and delivery.

SurTec is a division of Freudenberg Chemical Specialities SE & Co. KG, Munich, Germany, which in turn is a wholly owned subsidiary of Freudenberg SE,

based in Weinheim, Germany. Freudenberg is a global family 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, OHSAS 18001 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, environmental compatibility 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.

## Broadening our horizons

Many of the raw materials we use come from all over the world, and we also supply our products all over the world. Therefore we do not limit our responsibility to the immediate surroundings of our company sites. Through our parent company, Freudenberg, we are a signatory to the UN Global Compact and are thus committed to the protection of human rights, freedom of association, the abolition of forced and child labour and other standards.



*Freudenberg – and thus SurTec too – has committed itself to the principles of the United Nations Global Compact*

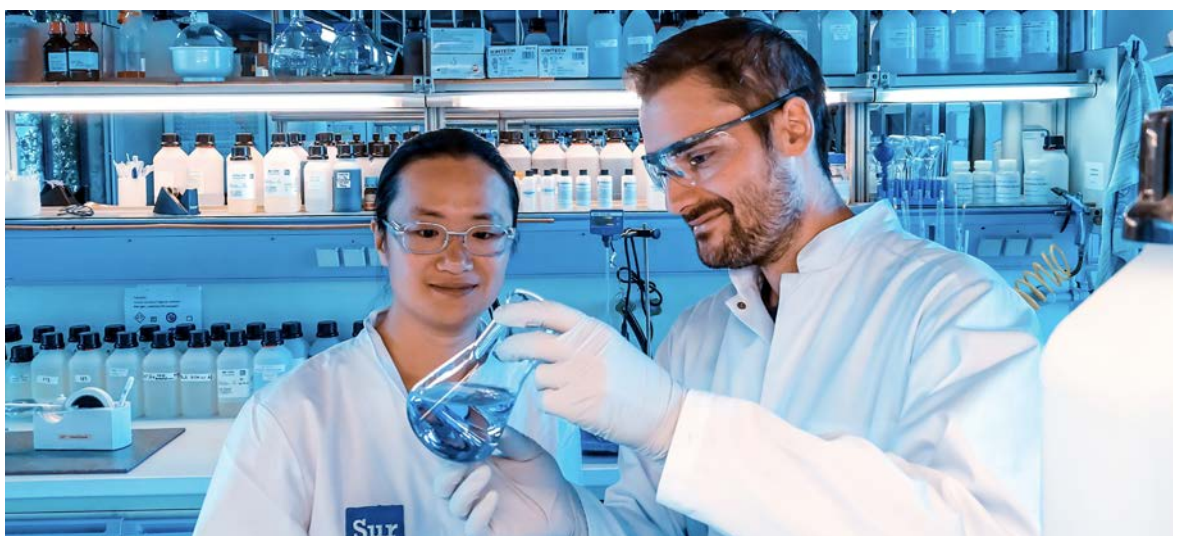
We consistently apply our own code of conduct and a dedicated supplier selection system with clear guidelines for ethical and legal compliance. Compliance with the regulatory requirements applicable to our industry is compulsory for us – as are basic ethical values.

### 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 look at our entire value chain in order to be able to improve processes that contribute, for example, to the conservation of resources or environmental compatibility.

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 respective 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**.

i.e. the direct impact of our business activities on the availability of resources, the environment and indirectly on society, too. Supporting our customers and applicators with regard to their own sustainable activities is another important goal. We help them to produce more efficiently and reduce the negative impact of their own business activities on the environment. This is what we call our "handprint".

We have defined a total of six categories, within 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.



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**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








## What we strive for: To reduce our footprint and handprint

Our goal is to minimise the possible negative effects of our activities in the context of internal value creation. We define this as the "footprint",

# Reducing our footprint over the long-term

SurTec examines as many of the factors relevant to value creation as possible, not just in terms of their economic impact but also in terms of sustainability aspects. Even aspects that are currently outside our direct sphere of influence are intended to be covered over the long term by our sustainability programme and in collaboration with our suppliers. However, the reliable data available is used to determine our footprint. This includes data on the use of raw materials, water consumption, energy consumption, waste, emissions, etc. – all of which are closely related to our value creation. Our initiatives to reduce our own footprint – in some cases involving significant investment – are aimed at:

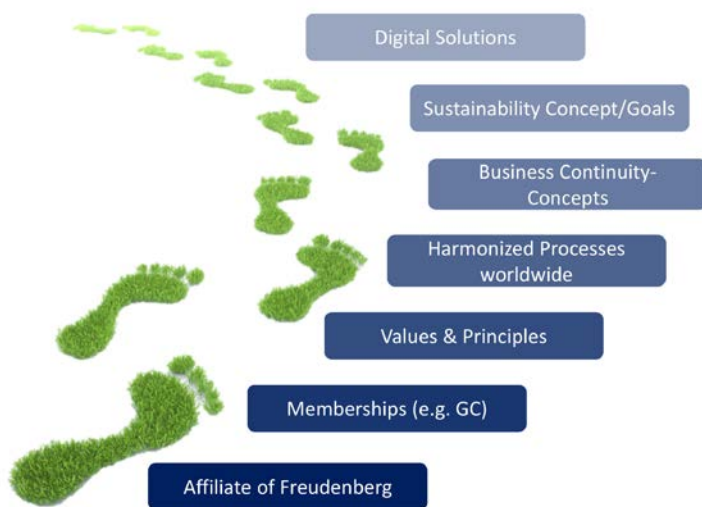
- reducing energy consumption and increasing the share of renewable energies with the goal of reducing CO<sub>2</sub> emissions,
- lowering emissions through closed production processes and exhaust air purification through efficient filter systems,
- replacing and/or reducing the volume of hazardous raw materials,
- reducing process waste water through improved, water-saving cleaning processes,
- pre-treatment of the waste water by special treatment systems, some of which have been developed in-house,
- reducing waste and strict separation of production waste,
- efficient insulation of buildings,
- monitoring production sites according to GRI standards (GRI = Global Reporting Initiative, a globally recognised system for monitoring sustainability) and
- local procurement, where possible, to shorten transport distances.

SURTEC'S COMMITMENT Actions regarding SurTec's Footprint						
	2020	2021	2022	...	Targets*	
<b>Energy usage</b> <small>(direct &amp; indirect energy)</small>	 Harvesting „low hanging fruits“ (LEDs, motion detectors, etc.)	Energy Assessments	Increase process efficiency	Apply building standards for low energy buildings	-2%/a <small>(energy/sales)</small>	
<b>CO<sub>2</sub> Emissions</b> <small>(GHG scope 1 &amp; 2, w/o fleet)</small>	 Sourcing renewable energy	Assessing options for own renewable energy generation	Harvesting own renewable energy	Compensate intelligent & wisely	-5%/a <small>(CO<sub>2</sub>[t]/sales)</small>	
<b>Waste Reduction</b>	 Project Sustainable packaging (less plastic waste, less costs)	Increase process efficiency (e.g. in rinsing & upscaling)	Assessing options for own waste water treatment		-3%/a <small>(hazardous waste[t]/sales)</small>	
<b>Raw Materials</b>	 Increase process efficiency (e.g. in rinsing & upscaling)	Implement BSC for new products	Implement strategy for portfolio analyses	Ethical sourcing (e.g. Co, conflict minerals)	- <small>(t.b.d. in 2021)</small>	
<b>Water Usage</b>	 Increase process efficiency (e.g. in rinsing & upscaling)		Evaluate options to use rain water for sanitary purposes		- <small>(t.b.d. in 2021)</small>	
<b>Health &amp; Gender</b>	 Reduce absence rate	Increase Gender Diversity non management all levels	Constantly substitute CRM and acute toxic substances in portfolio		- <small>(t.b.d. in 2021)</small>	

\*Target base: 2019

SurTec has developed a well-founded and far-reaching catalogue of measures to permanently reduce the footprint





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 serves 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 remove from our products step by step. 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 their use. 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 and
- production of concentrates for the reduction of water as a solvent.

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 not only a positive thing when it comes to 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 of products that prolong their life reduces the ecological footprint of the applicator. If we extend the 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 surface treatment 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 and biodegradable

Many of our cleaning systems are recyclable, i.e. they can be reprocessed and reused after application, which considerably reduces the amount of materials consumed. These include, for example, recyclable surfactant components or surfactants for spray and immersion applications.

When it comes to facilitated disposal, we provide our customers with biodegradable defoamers, for example.

In order to avoid critical ingredients at the applicator's site, 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 offer the applicator a whole range of additional advantages. These include a significantly extended service life of the cleaning baths with correspondingly optimised production cycles, reduced maintenance requirements and significantly reduced waste water volumes with correspondingly lower process costs, which are reduced by up to 25% per year.

### 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 waste water 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 in which the application temperature can be significantly reduced compared to the standard process, thus saving energy and process costs.



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

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

SurTec is a world leader in the avoidance of hexavalent chromium for Decorative and Functional Electroplating and has done pioneering work in this field. Trivalent chromium technologies from SurTec were the first to be brought to market maturity and have established themselves as standard processes in many areas of electroplating technology. One example among many other technologies is the world's first chromium(III)-based passivation,

which SurTec introduced to the market in 1996 and has been the market leader in this field ever since. As chromium(III) is non-toxic, this makes a significant contribution to occupational health and safety for both us and the applicator, as well as for the environment. The customer also saves up to 20% of waste water treatment costs and 30 to 50% of rectifier electricity costs 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!

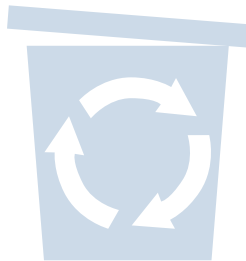
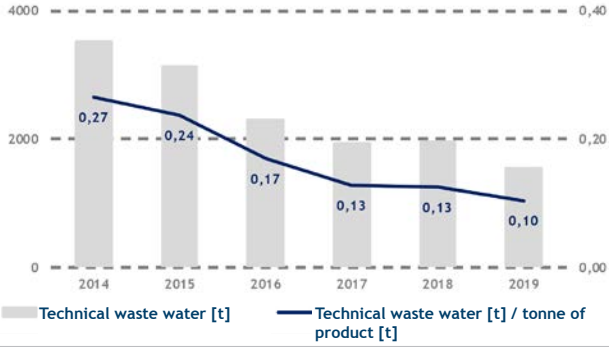
Other key areas in electroplating technology are the elimination of certain metals that were previously indispensable, but are now considered critical from a health or environmental point of view. For example, SurTec has developed various high-performance passivation processes that contain no carcinogenic cobalt salts.

SurTec recently reached a milestone in the development of more compatible solutions for cathodic corrosion protection, for which zinc/nickel alloys have been widely used to date. Zinc/nickel alloys were long considered irreplaceable due to their high performance. However, nickel is highly allergenic and its dusts are also carcinogenic. The new zinc/iron or zinc/iron/manganese alloys, which SurTec developed in collaboration with a customer, are not only comparable to zinc/nickel products in terms of their effectiveness, but more importantly, are harmless to health.



# SurTec's key figures

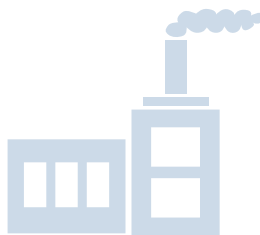
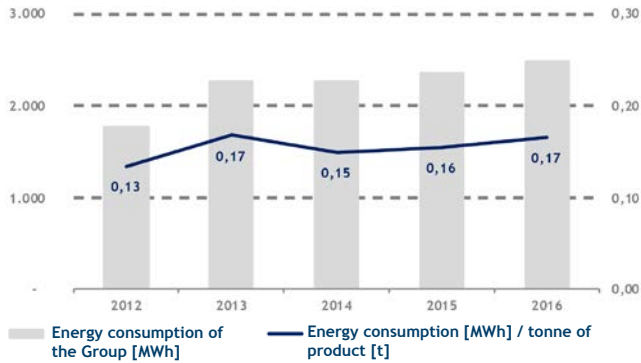
Quantity of technical waste water



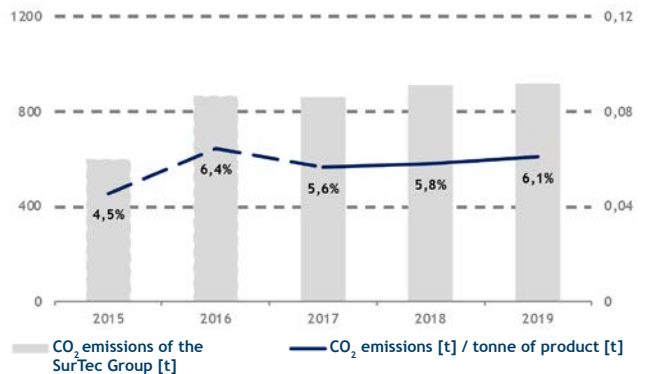
Total solid hazardous waste



Energy consumption



CO<sub>2</sub> emissions





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

For many years, we have maintained a distinct 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. Modern, closed manufacturing processes, supplemented by the latest safety equipment for our employees, are our focus. This also includes raising awareness and, above all, training managers and employees in HSE issues. We do not see this as a temporary or selective task, but as an ongoing process – HSE is part of our culture, our values and our DNA as a company.

As part of the Freudenberg "We all take care" programme, we take measures to promote health and safety, environmental protection and site safety. Our "Zero Accident" initiative sets itself an ambitious goal: to completely avoid accidents at work. Our employees' workstations are designed with ergonomic aspects in mind and are checked 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.

In addition, the SurTec Group has its own OHM programme (OHM = Occupational Health Management), which systematically develops occupational health and safety.



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