



SUSTAINABILITY REPORT 2023

KRAIBURG TPE GmbH & Co. KG, Waldkraiburg site, reporting
period: January 1, 2023 to December 31, 2023

Introduction

KRAIBURG TPE is a leading global manufacturer of customized thermoplastic elastomers (TPE). The family enterprise was established in 2001 as an independent business area of the KRAIBURG Group. Today, it is the industry's competence leader for TPE compounds. Our mission is to supply safe, reliable, and increasingly sustainable products for customer applications in the automotive and consumer goods sectors, the field of industry, and the strictly regulated medical sector. We have more than 660 employees in total at our highly modern production sites in Germany, the USA, and Malaysia. The global executive and management for the EMEA sales region (Europe, the Middle East, and Africa) operate out of our headquarters in Waldkraiburg, Germany. As a team, we set ourselves apart with innovativeness, a global customer focus, tailor-made products, and customized solutions. We therefore place special emphasis on quality and reliability. For us at KRAIBURG TPE, sustainability is crucial for the long-term existence and success of our business. Our market position, innovation rate, productivity, attractiveness as an employer, liquidity, and profitability are the indicators that measure our success. After careful preparation, KRAIBURG TPE designated "Corporate Sustainability" as the sixth core competence in the reporting year alongside "International Network", "Customization and Vision", "Customer Focus", "Specialization and Expertise", and "Consistently High Product Quality". Accordingly, a sustainability mindset and sustainable economic activity are being promoted and demanded since 2023 alongside the existing pillars of the company DNA. We consistently implement these core competencies in cooperation with our employees, customers, suppliers and business partners, public authorities, and shareholders.

Our reporting is guided by the European Sustainability Reporting Standards (ESRS), which are based on the Corporate Sustainability Reporting Directive (CSRD). This delegated legal act defines the content that must be disclosed and sets new standards for mandatory reporting, including the principle of double materiality. For the significant topics that are analyzed, we link our objectives to their respective contribution to the Sustainable Development Goals (SDGs) of the United Nations. We bear responsibility for the environment and society: for us, sustainability is a principle that we put into practice.

Waldkraiburg, 26 June 2024



Dr. Monika Hofmann
Director EMEA



Karl-Heinz Ortmeier
Head of Sustainability Management

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GENERAL INFORMATION

1. Strategy and management

1.1 | Sustainable economic activity as our mission statement

Sustainability is a key topic on KRAIBURG TPE’s agenda (see Figure 1). For the company, this means striving for a balance that puts equal weight on ecological action, social responsibility, and economic success. KRAIBURG TPE assumes responsibility for current actions in view of the future.

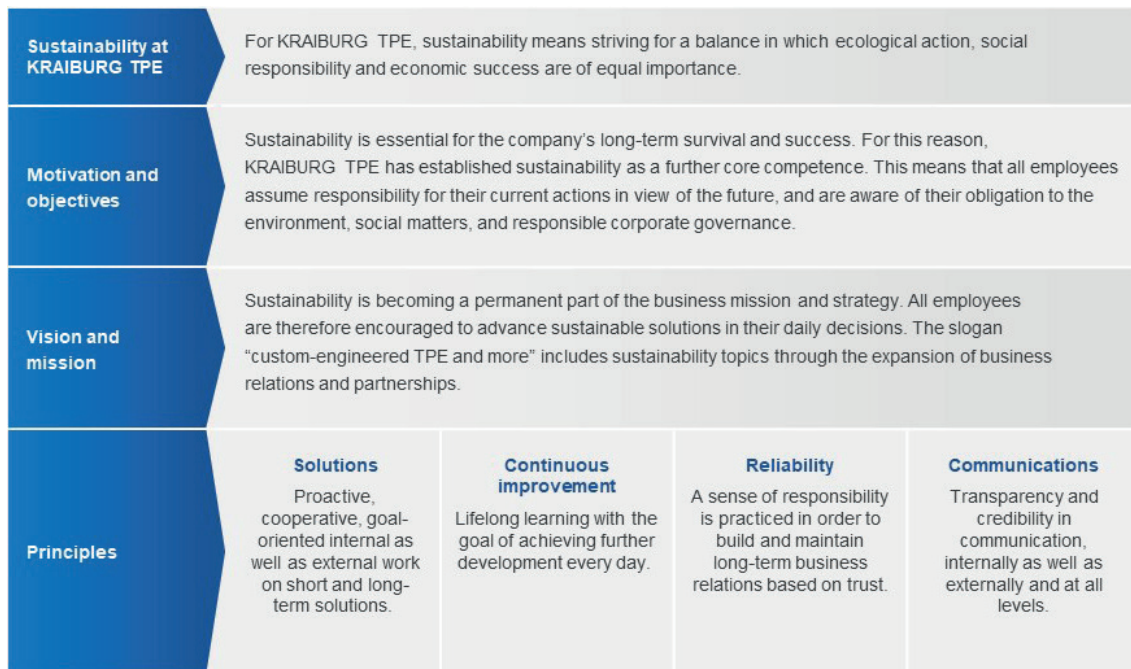


Figure 1: KRAIBURG TPE’s sustainability engagement (source: KRAIBURG TPE)

The welfare of employees, protecting society, the climate, and the environment, and resource conservation were identified as key sustainability topics. Based on the Sustainable Development Goals and the principles of the UN Global Compact, KRAIBURG TPE established ambitious sustainability objectives for itself and defined an action plan to achieve them. Since KRAIBURG TPE as a company is embedded in a framework of laws and official regulations, regulatory compliance is also of the highest priority. Accordingly, employees are required to comply with all relevant provisions. Sustainability is indispensable for KRAIBURG TPE’s future viability. The company intends to help shape the transformation actively and courageously. Therefore, KRAIBURG TPE values transparency, integrity, and a long-term orientation in the implementation of sustainability efforts.

1.2 | Sustainability management and organization

KRAIBURG TPE measures and evaluates sustainability performance on the basis of performance figures, especially in environmental and energy management as well as occupational health and safety, and derives corresponding measures. The respective defined targets and indicators form the basis for a correction, prevention, and improvement process that is practiced in the interest of a learning organization's continuous further development. KRAIBURG TPE obtained its environmental certification for the Waldkraiburg site according to DIN EN ISO 14001:2015 in 2002 and its energy certification according to DIN EN ISO 50001:2018 in 2013. The company also maintains a quality management system according to DIN EN ISO 9001:2015 and KRAIBURG TPE is ISCC PLUS certified. An expanded data acquisition system ensures transparency and permits verification of the integrated management system's effectiveness. Target achievement, risks, and the effectiveness of the management system are evaluated and documented annually in the course of the management review.

The **system and assessment limits** of the environmental and energy management system at the Waldkraiburg site have been established as follows:

1. Plant K

Teplitzer Straße (production building with infrastructure and production facilities – excluding the roller head equipment of the rubber plant KRAIBURG GmbH & Co. KG)

2. Plant T

Friedrich-Schmidt-Straße (land, production and administrative building)

To adequately prioritize corporate sustainability, this area has been declared KRAIBURG TPE's sixth core competency in the reporting year (see Figure 2).



Figure 2: KRAIBURG TPE's core competencies (source: KRAIBURG TPE)

Organizationally, this complex of topics is assigned to the Local Sustainability Boards (LSB) established at all sites around the world. Germany's LSB manages sustainability topics for the Waldkraiburg headquarters and the EMEA sales and business region. Systematic training is conducted and continuing education is promoted to expand the sustainability competence in the company. The Sustainability Management Team (SMT) acts as a driver for sustainability topics. This ensures the transfer of knowledge between sites as well as uniform data acquisition and reporting structures. The team assists the Global Sustainability Management Team (GSMT) with the preparation and further development of the sustainability strategy and the achievement of objectives. KRAIBURG TPE develops a global sustainability strategy that also encompasses a concept and measures with regard to sustainability communication. This content is then adapted for the regions.

New positions with a pronounced focus on sustainability aspects, working closely with the SMT, have been established in the Development, Purchasing, and Sales departments. Other departments are involved for specific topics and projects. Information on various sustainability topics is exchanged between departments in the course of regular coordination.

Organization and structure

KRAIBURG TPE executive

- **Oliver Zintner**, CEO
- **Dr. Monika Hofmann**, Director EMEA

Sustainability Management Team (SMT)

- **Karl-Heinz Ortmeier**, Head of Sustainability Management, Head of Environment and Safety Management EMEA
- **Ines Klemisch**, Environmental Manager EMEA and Climate Manager EMEA
- **Reinhardt Lanzinger**, Safety Manager
- **Romina Specht**, Corporate Sustainability Manager and Circular Economy Manager EMEA
- **Anton Weingartner**, Energy Manager EMEA
- **Dr. Andrea Winterstetter**, Corporate Sustainability Manager and Circular Economy Manager EMEA

Global Sustainability Management Team (GSMT)

- **Ines Klemisch**, Environmental Manager EMEA and Climate Manager EMEA
- **Karl-Heinz Ortmeier**, Head of Sustainability Management, Head of Environment and Safety Management EMEA
- **Amelia Ng Pui Yee**, Senior EHS Executive
- **Nicole Schnitzenbaumer**, Corporate Integrated Management System Manager
- **Rachael See**, QEHS Manager
- **Jonathan Surpris**, EHS Coordinator
- **Romina Specht**, Corporate Sustainability Manager and Circular Economy Manager EMEA
- **Anton Weingartner**, Energy Manager EMEA
- **Daniel Wilson**, Quality, EHS and QA-LAB Senior Manager
- **Dr. Andrea Winterstetter**, Corporate Sustainability Manager and Circular Economy Manager EMEA

Local Sustainability Team (LSB)

- **Dr. Monika Hofmann**, Director EMEA
- **Gerhard Berger**, Director Product Development
- **Winfried Egger**, Director Corporate Purchasing
- **Claudia Empl**, Director Human Resources & Central Services EMEA
- **Rainer Klemisch**, Director Operations EMEA
- **Karl-Heinz Ortmeier**, Head of Sustainability Management
- **Michael Pollmann**, Director Sales & Marketing EMEA

2. Stakeholders, materiality, and objectives

2.1 | Stakeholder involvement

The company's success depends directly on the success of its stakeholders. Stakeholder wishes and expectations must be understood, needs and future problems have to be identified and reliably solved. An open and constructive communication and information culture is therefore maintained along with goal-oriented cooperation. Sustainability is a key focal point for the stakeholders.

KRAIBURG TPE's leading stakeholders are:

- **Employees**
- **Suppliers and cooperation partners**
- **Customers**
- **Neighboring companies, NGOs, and society**
- **Shareholders**
- **Legal authorities**
- **Environment and neighborhood**

Employees

KRAIBURG TPE relies on its employees for the implementation of the planned sustainability objectives and activities. Employees are included in a variety of ways: KRAIBURG TPE employees acquire know-how and expertise, identify potential improvements, and develop innovative approaches for more sustainable solutions within the company and for business activities. Their suggestions are considered in the course of employee appraisal interviews and an annual, anonymous survey.

Suppliers and cooperation partners

Interactions with suppliers and cooperation partners are cooperative, defined by close coordination and mutual respect. Exchanges take place within the framework of industry events, global trade fairs, and conferences with companies in the value chain, including the plastics recycling sector. The company is also an active member of the Plastics Cluster, an initiative to promote development and cooperation in the plastics industry. Shared sustainability benefits are the focal point for business partners.

Customers

KRAIBURG TPE actively maintains partnerships with companies and anticipates the needs of the processing industry, also against the background of sustainability. Aside from providing tailor-made solutions, helping customers achieve their sustainability goals has become another unique selling proposition for KRAIBURG TPE in the meantime. Reliable, future-oriented solutions meet a rising demand and the concrete requirements of industry sectors and legislators by identifying new possibilities for more sustainable TPE compounds early on. Using recycled materials and bio-based raw materials reduces the product carbon footprint (PCF), contributing to reducing the climate footprint of our customers. By delivering products and solutions in the form of more sustainable TPE compounds, KRAIBURG TPE accompanies customers on the road to the circular economy.

Neighboring companies

A working group that enables a quarterly exchange of information was formed with neighboring companies.

At this time, a direct dialog with silent stakeholders including shareholders, NGOs, legal authorities, society, and the environment and neighborhood has not been established yet.

2.2 | Analysis according to the principle of double materiality

Six essential, key topics for KRAIBURG TPE and its stakeholders were identified in the course of a comprehensive materiality analysis in 2023. They are relevant from a financial perspective in terms of business results and the company's position, and against the background of the materiality of their impact on the environment and society.

The following exchange formats were realized in the reporting year within this process: dialog with customers, dealers, and industry associations, the exchange of expertise with universities such as RWTH Aachen, and the annual employee satisfaction survey. The resulting materiality matrix based on that (see Figure 3) was prepared in an extensive workshop at the executive level with the help of the Sustainability Management Team. Each topic was examined from the outside-in perspective according to financial materiality (effects of climate change on the company, for example) and simultaneously the inside-out perspective according to the materiality of the effects (the company's contribution to climate change, for example). For the outside perspective, KRAIBURG TPE identified direct, i.e. physical, and indirect opportunities and risks – associated with laws and market changes, for example – for the company's success. Positive as well as negative effects of the company on the environment and society were analyzed as well. The relevance from the perspective of the various stakeholder groups is reflected by the diameters of the circles in Figure 3.

The following ESRS standards are relevant: E1 Climate change, E2 Pollution, E3 Water and marine resources, E5 Resource use and circular economy, S1 Own workforce, and G1 Business conduct.

Since KRAIBURG TPE only has to submit an ESRS-compliant sustainability report according to the Corporate Sustainability Reporting Directive for the 2025 reporting year, the company is only disclosing the information that is already available at this time. Work for the standard E2 Pollution is currently still ongoing and it will be included in the 2024 reporting year.

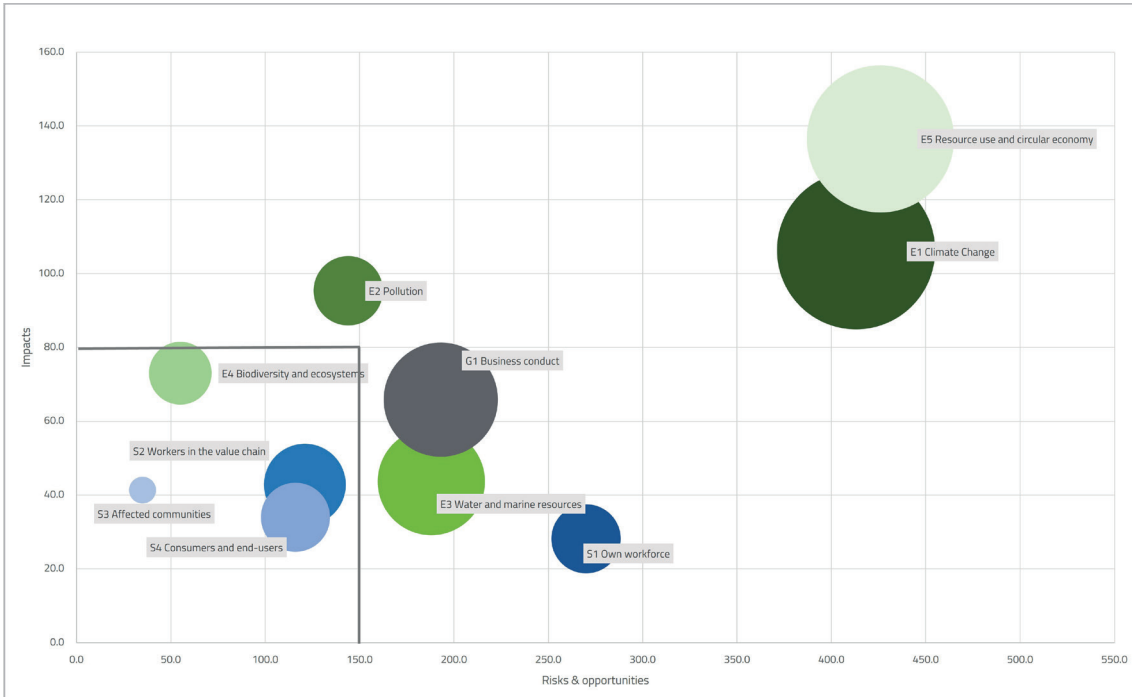


Figure 3: Materiality matrix according to the principle of double materiality for KRAIBURG TPE, Germany, for 2023 (source: KRAIBURG TPE) | * The diameter of the circles corresponds to the stakeholder relevance.

2.3 | Sustainability objectives

KRAIBURG TPE has defined the following key topics for the company based on the materiality analysis and linked them to objectives and measures:

[Climate and energy \(E1 Climate change\)](#)

KRAIBURG TPE contributes to climate protection by identifying and realizing energy saving potential, continuously improving process and energy efficiency, continuing to expand the use of renewable energy, and thus reducing greenhouse gas emissions. KRAIBURG TPE had the climate targets validated by the Science Based Targets Initiative (SBTi) to establish a scientifically substantiated framework.

[Water \(E3 Water and marine resources\)](#)

KRAIBURG TPE conserves valuable water resources by reducing the consumption of fresh water as well as wastewater volumes to the essential minimum.

Circular economy for resource conservation (E5 Resource use and circular economy)

KRAIBURG TPE expands its portfolio with innovative product solutions that support the circular economy. Suppliers and customers are actively included in the circular economy orientation process. Waste and emissions that damage the environment are reduced at the same time.

Responsibility to employees (S1 Own workforce)

KRAIBURG TPE assumes responsibility for its employees, prioritizing their wellbeing. Occupational health and safety standards are met at the highest level and health protection continues to be intensified. The company continues to place great emphasis on the aspects of work conditions, equal opportunities, and equal rights.

Responsible corporate governance (G1 Business conduct)

KRAIBURG TPE assumes economic, ecological, and social responsibility. The company is managed with this awareness under consideration of stakeholder interests. Compliance with the internal code of conduct, legal compliance, and establishing transparency through certifications and by adhering to standards are aspects of special importance.

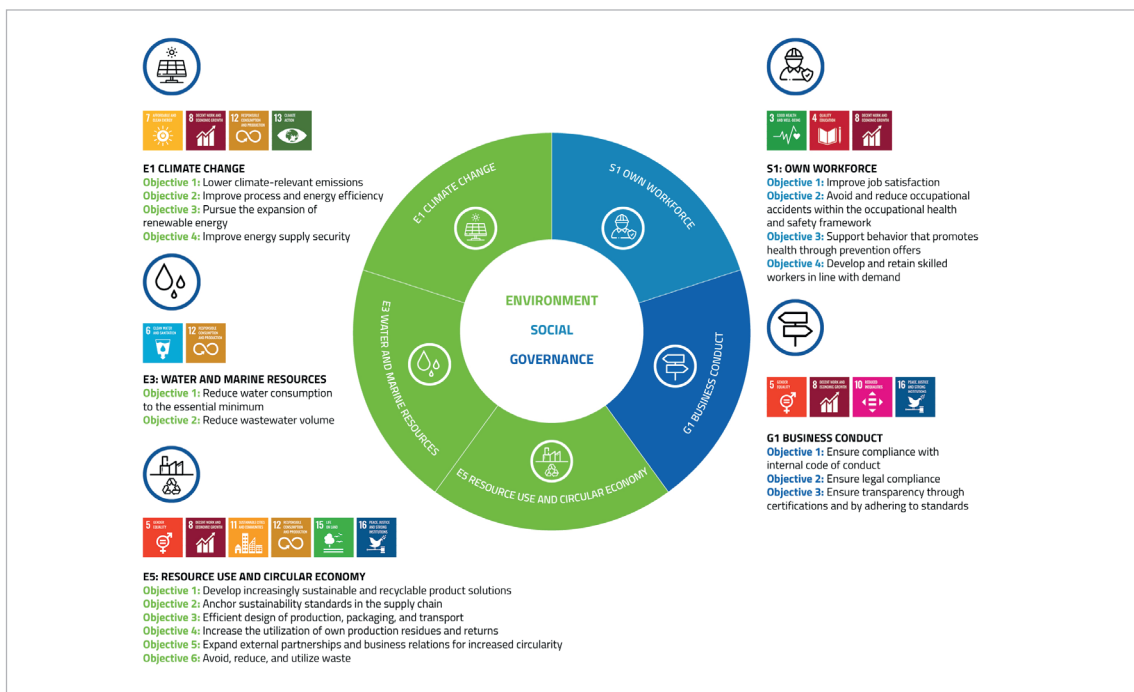


Figure 4: 2023 sustainability objectives of KRAIBURG TPE (source: KRAIBURG TPE)

3. Figures, data, facts

3.1 | Sustainability milestones

KRAIBURG TPE has continuously developed its sustainability performance since the company was founded in 2001. Planned milestones have been established for the coming years as well (see Figure 5).

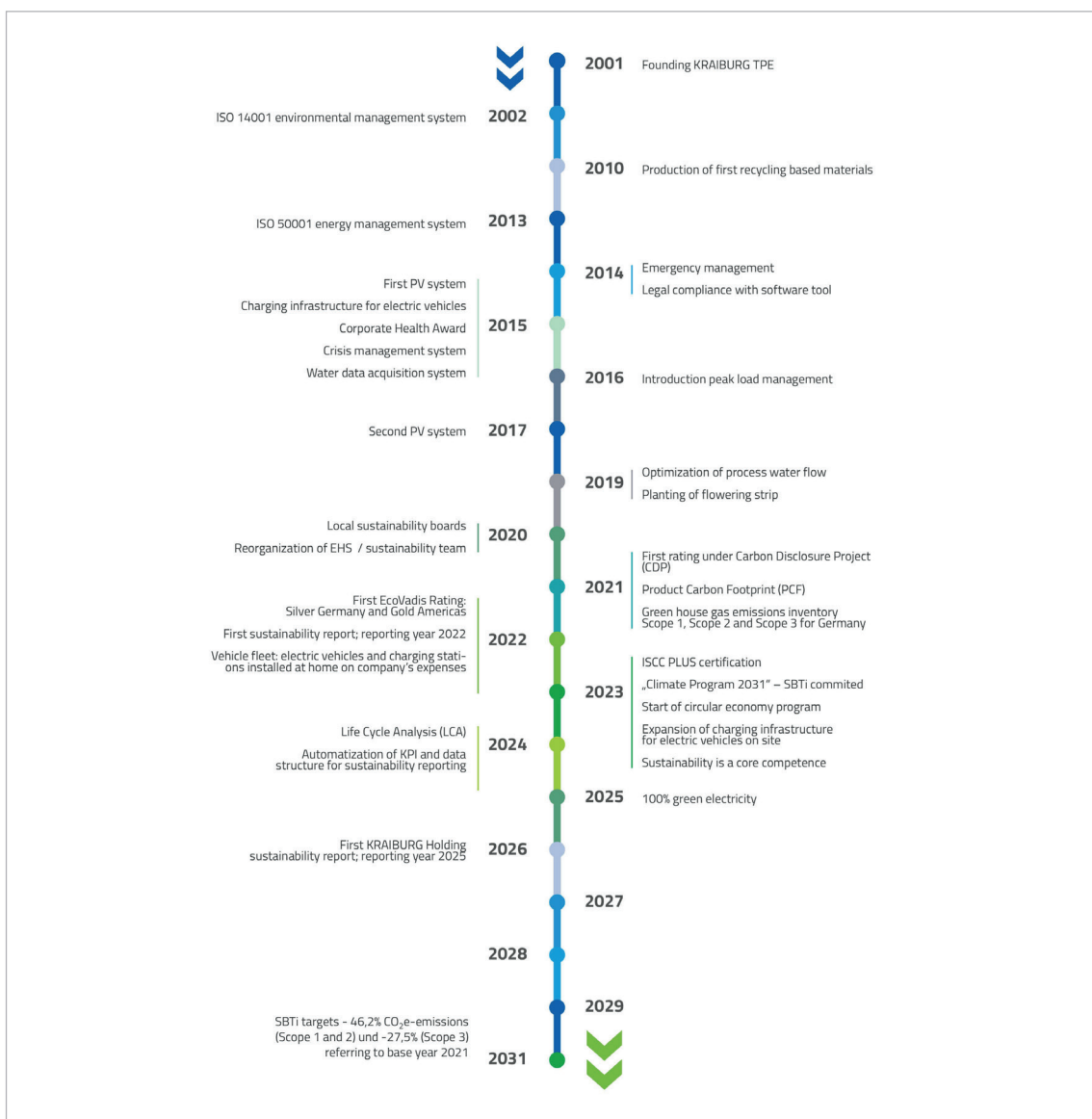


Figure 5: Sustainability milestones at KRAIBURG TPE (source: KRAIBURG TPE)

KRAIBURG TPE has also made important steps in the direction of sustainability at the product level:

- 2010** First production of TPE containing recycled material

- 2017-2019** Initial projects and production of bio-based TPE

- 2021** Product launch: Exterior PIR TPE

- 2022** - Presentation of THERMOLAST® R
 - Product launch: Universal PCR TPE and Interior PIR TPE
 - First qualification process: “Confirmation of the compatibility of KRAIBURG TPE products in the PP and HDPE recycling stream” (Cyclos)

- 2023** - Availability of products with ISCC PLUS certification
 - Product launch: Bio-based TPE and TPE containing recycled material

- 2024** Product launch: TPE containing recycled material for automotive applications

3.2 | Input/output statement

The input/output statement is an element of environmental reports and recommended by DIN EN ISO 14001:2015. It represents the essential parameters of business activities.

Input	Quantity	Unit	Output	Quantity	Unit
Material consumption	30,756	t	Production volume	30,731	t
production					
Energy	12,194	MWh	Waste	394	t
Electricity	10,330	MWh	Non-hazardous waste	328	t
Natural gas	1,864	MWh	Special hazardous waste	50	t
			Luwax hazardous waste	15	t
Water	20,478	m³	Waste water	20,478	m³
Drinking water	7,695	m³	Sewerage	14,113	m³
Fully softened water	12,783	m³	Evaporation	6,365	m³

Table 1: Input/output statement 2023 for plants T and K (source: KRAIBURG TPE)

3.3 | Key indicators and development of environmental performance

Specific key indicators are used for environmental performance monitoring and controlling. They were derived in part from the requirements of the energy, environmental, and occupational health and safety management systems. Developments compared to the prior year of 2022 are as follows.

Indicators	Definition	Unit / Dimension	2023	2022	Progress
Specific material consumption	Production volume (yield) / material consumption (production)	t	1.0	0.948	+ 5.2%
Specific electricity consumption	Electricity / production volume	kWh/t	330	338	- 2.4%
Specific cooling water consumption	Heat of evaporation / production volume	kWh/t	140	151	- 7.3%
Specific water consumption	Fresh water / production volume	l/t	660	790	- 16.5%
Specific heating energy consumption	Heating energy / (daily temperature figure x heated area)	Wh/(m ² a*Kd)	54	51	+ 5.9%
Specific waste volume	Waste / production volume	kg/t	12.56	11.38	+ 10.4%
Accident rate per 1,000 employees	Number of reportable accidents / 1,000 employees	1	26.41	5.09	+ 518.9%
LTIF (Lost Time Injury Frequency)	Frequency of lost time due to accidents / year	1	23.44	7.45	+ 314.6%

Table 2: Development of the key indicators for environmental performance, 2022 to 2023 (source: KRAIBURG TPE)

Information and reasons for the development of the key indicators are found in the respective sections.

3.4 | Aspects of environmental relevance

Environmental protection/occupational health and safety program (UMAS) 2023

KRAIBURG TPE has implemented most of the measures defined for the environmental protection/occupational health and safety program 2023 with 88% realization overall. Ensuring legal compliance, explosion protection measures for plant safety, noise reduction measures for health protection, and sustainability measures were the focal points.

Environmental status

The DIN EN ISO 14001:2015 environmental standard requires the monitoring of environmental status indicators. The objective is to identify changes sooner and respond to them in a timely manner.

Heat waves/hot days

The German Weather Service has statistically defined the term “hot day”. This includes any day with a maximum temperature over 30 degrees Celsius. According to measurements, 18 hot days and 73 summer days were recorded in Mühldorf, Upper Bavaria in 2023 (see Figure 6).

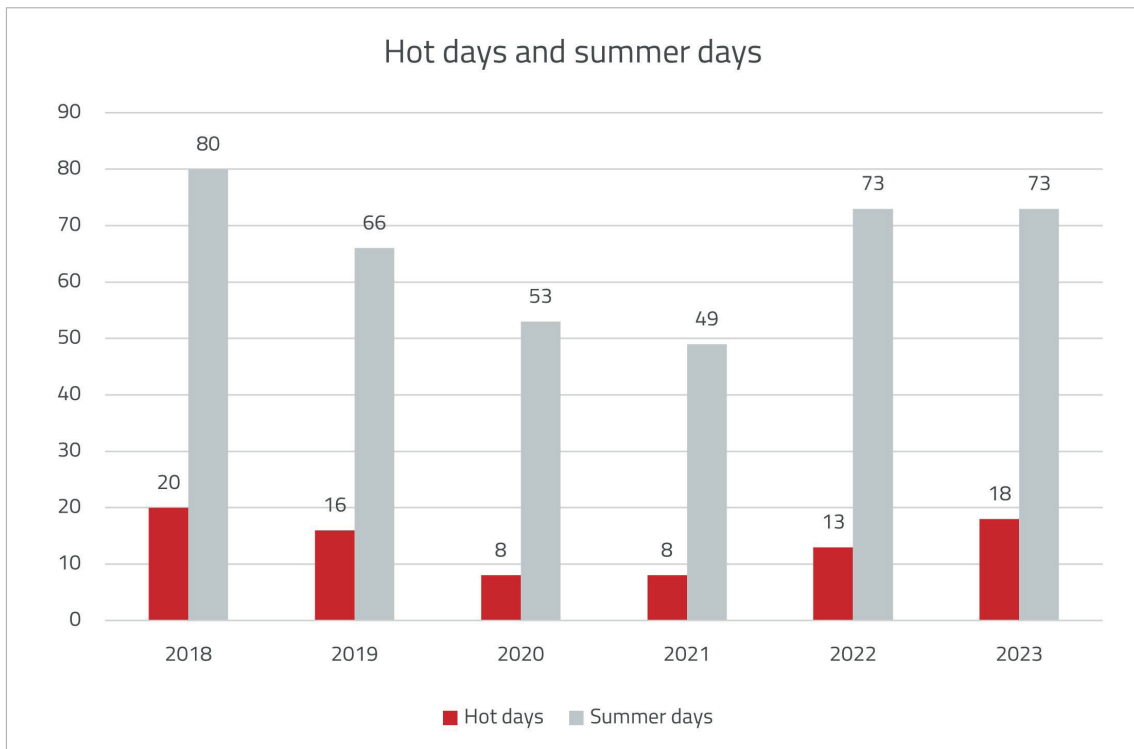


Figure 6: Hot days and summer days in Mühldorf, Upper Bavaria (source: KRAIBURG TPE)

Land use, biological diversity, and nature conservation

The land use indicator identifies changes in the use of space on KRAIBURG TPE’s plots of land. The developed area in relation to the annual production volume in tons increased from 2022 to 2023. This is due to the lower production volume (see Figure 7). KRAIBURG TPE’s stated goal is to minimize the negative impact of business activities on the region’s biodiversity. The company therefore establishes buffer areas.

Land use Friedrich-Schmidt-Straße	2018	2019	2020	2021	2022	2023
Total area in m ²	59,487	61,648	61,648	61,648	61,648	61,648
Green space in m ²	29,668	31,829	31,829	31,829	31,829	31,829
Developed area in m ²	29,819	29,819	29,819	29,819	29,819	29,819
Biodiversity (developed area/ton)	0.89	0.92	0.94	0.85	0.93	0.95

Table 3: Developed area in m² in relation to the annual production volume in t (source: KRAIBURG TPE)

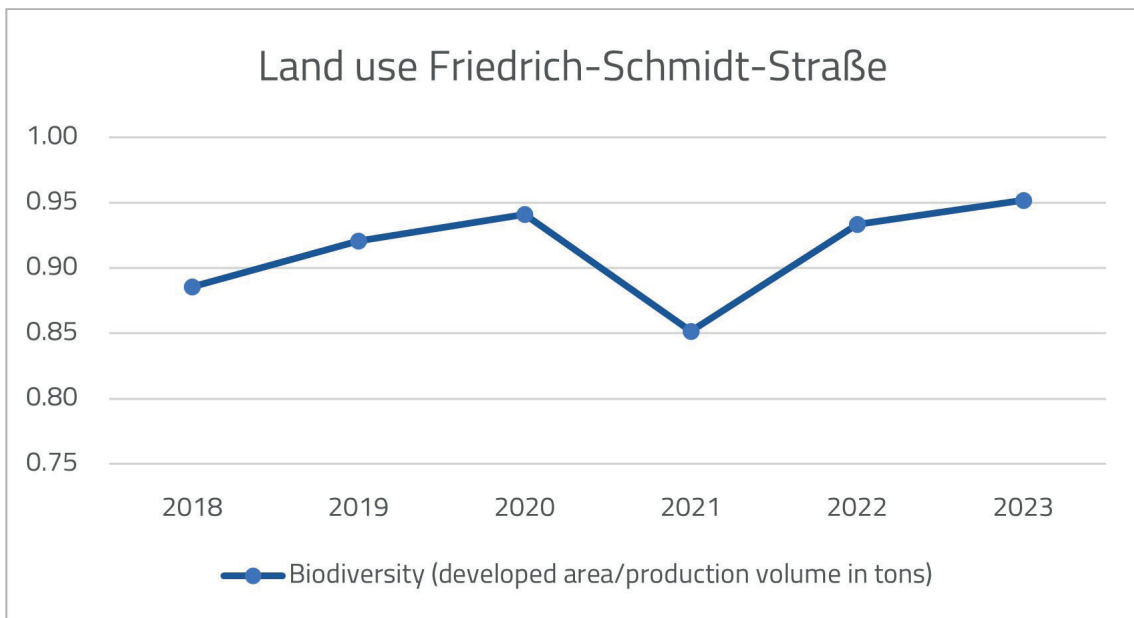
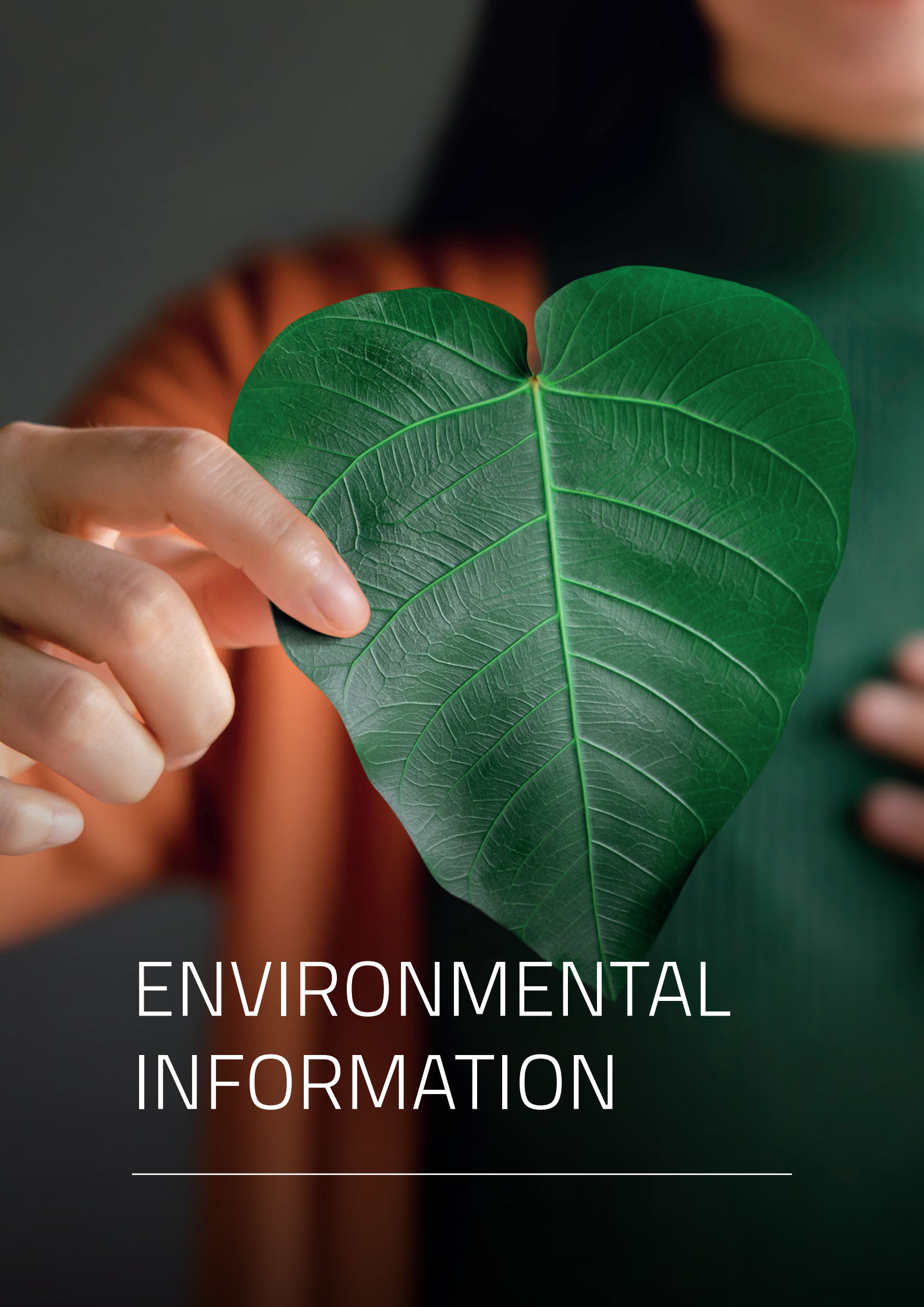


Figure 7: Development of land use in relation to biodiversity (source: KRAIBURG TPE)

Environmental incidents

There were no incidents impacting the environment at KRAIBURG TPE in 2023.



ENVIRONMENTAL INFORMATION

4. Climate and energy (E1: Climate change)

The United Nations negotiated the Paris Agreement at the 2015 UN Climate Change Conference. This master agreement aims to limit global warming to 1.5 °C. In order to achieve this, 196 countries have voluntarily committed to national targets that are continuously tightened. This poses a special challenge for companies as well. Climate policy requires a foundation that takes all pillars of sustainability into account – the economy, ecology, and society. Embedding growth, innovation, cost efficiency, and global competitiveness in the reduction targets along the entire value chain is essential for a successful climate strategy. Energy and resource efficiency continues to be crucial in addition to energy supply security.

KRAIBURG TPE’s own climate targets have been validated by the Science Based Targets Initiative (SBTi) to establish a scientifically substantiated foundation. The “2031 Climate Program”, encompassing ambitious measures, was developed to reach the targets. Scope 1 and 2 reduction targets and energy management activities are incorporated annually into the current climate and energy program. The degree of realization for the reporting year was 98%.



KRAIBURG TPE’s climate and energy objectives:

- **Objective 1:** Lower climate-relevant emissions
- **Objective 2:** Improve process and energy efficiency
- **Objective 3:** Pursue the expansion of renewable energy
- **Objective 4:** Improve energy supply security

4.1 | Opportunities and risks – climate protection and energy

	Evaluation
Physical und transitory risks with relevance to our business	
Achievement of climate targets dependent on third parties (Scope 3)	High
Customer requirements, e.g. greenhouse gas emissions	High
Price disadvantage due to climate-friendly products	High
Security of supply and allocation of electricity and gas	Medium
Increasing energy costs	Medium
Political requirements	Medium
Failures and delays of delivery	Medium
Increased prices due to geopolitical disruptions, e.g. crises, wars, gas supply, pandemic	Medium
Deterioration of the public perception, e.g. production of plastics	Medium
Opportunities	
Competitive advantage thanks to sustainable products	High
Opening up new market potential	Medium
Increasing demand due to sustainability-related requirements of customers	Medium
Credibility through the verification of GHG reduction targets (SBTi)	Medium
Impacts	
Increase transparency and systematics via PCF and CCF	High
Reduction of greenhouse gas emissions through product characteristics	Medium
Reduction of greenhouse gas emissions through recyclability of products	Medium

Table 4: Results of the opportunity and risk analysis for the key topic of "Climate and energy" (source: KRAIBURG TPE)

4.2 | Objective 1: Lower climate-relevant emissions

KRAIBURG TPE has been preparing greenhouse gas emission balances since 2013. This allows conclusions to be drawn regarding adjustments to avoid greenhouse gas emissions. The company's own contribution to climate protection can be monitored as well. KRAIBURG TPE developed a 10-year 2031

Climate Program (base year 2021) to achieve the company’s climate objectives based on the Science Based Targets Initiative (see Figure 8). This corresponds to the commitment of an annual reduction of the scope 1 and 2 emissions by an average of 4.2% and the scope 3 emissions by an average of 2.5%. Resource conservation through the circular economy is a key to reaching climate targets, in particular the reduction of scope 3 emissions (see Section 6).

<p>KRAIBURG TPE sets ambitious targets for the reduction of CO₂e emissions for all its sites worldwide in line with the Science Based Targets Initiative (SBTi).</p>	<p>KRAIBURG TPE commits to reduce absolute CO₂e emissions of Scopes 1 and 2 by 46.2% by 2031, starting from the base year 2021.</p>	<p>KRAIBURG TPE commits to reduce absolute CO₂e emissions of Scopes 3 by 27.5% by 2031, starting from the base year 2021.</p>
<p>KRAIBURG TPE is developing the 2031 Climate Program with various reduction measures to achieve these targets.</p>	<ul style="list-style-type: none"> a) KRAIBURG TPE is permanently striving to optimize energy efficiency at all production sites. b) KRAIBURG TPE continues to push the use of renewable energy sources and the procurement of green electricity. 	<ul style="list-style-type: none"> a) KRAIBURG TPE works in partnership with customers and suppliers to find sustainable solutions that advance all stakeholders. b) KRAIBURG TPE has identified the circular economy as a lever for reducing Scope 3 emissions. c) Recycled and bio-based raw materials from sustainable sources are part of the solution to also meet the strict Scope 3 criteria of the Science Based Targets Initiative.

Figure 8: KRAIBURG TPE’s “2031 Climate Program” (source: KRAIBURG TPE)

At product level, KRAIBURG TPE has been reporting the product carbon footprint since 2021. It provides information about the CO₂e emissions of compounds within the established system limits. The provisions of the Greenhouse Gas Protocol and relevant ISO standards are applied for its calculation.

Since the base year of 2021, the Corporate Carbon Footprint (CCF) is calculated for scopes 1, 2, and 3. Over the past years, the specific CO₂e scope 1 and scope 2 emissions at the Waldkraiburg site were significantly reduced thanks to improved energy efficiency, electricity produced on site using PV systems, and through the conversion to LED lighting (see Figure 9-11).

Greenhouse gas balance in t CO ₂ e	2021	2022	2023	Reduction in %
Total - market based	129,693	114,904	107,262	-17.3
Scope 1 Emissions	692	648	503	-27.3
Scope 2 Emissions - market based	3,205	2,565	2,365	-26.2
Scope 2 Emissions - location based	6,708	6,144	4,495	-33.0
Scope 3 Emissions	125,796	111,691	104,394	-17.0
3.1 - Purchased goods and services	92,802	80,544	77,462	-16.5
3.3 - Fuel- and energy-related emissions	1,652	1,519	1,149	-30.4
3.4 - Upstream transportation and distribution	10,854	11,367	9,373	-13.6
3.5 - Waste generated in operations	584	492	541	-7.4
3.6 - Business travel	19	199	287	+ 1,410.5
3.7 - Employee commuting	324	346	247	-23.8
3.9 - Downstream transportation and distribution	336	403	396	+ 17.9
3.10 - Processing of sold products	19,225	16,821	14,939	-22.3

Figure 9: KRAIBURG TPE's greenhouse gas balance since the base year of 2021 for EMEA (source: KRAIBURG TPE)

Scope 1 includes:

Gas consumption, volatile gases, fuel consumption for company vehicles

Scope 2 includes:

Electricity purchases and own generation using PV systems

Scope 3 includes:

- Purchased goods and services, raw materials, packaging materials, contracts
- Fuel and energy-related emissions, including production emissions of the individual energy sources
- Transport and distribution (upstream), including road haulage, ocean freight, air freight, transport of material and packaging
- Waste: Non-hazardous and hazardous waste
- Business travel: Flights, rental cars, train travel
- Employee commutes
- Transport and distribution (downstream), including ex works transport
- Processing of products sold: Electricity consumption for injection molding

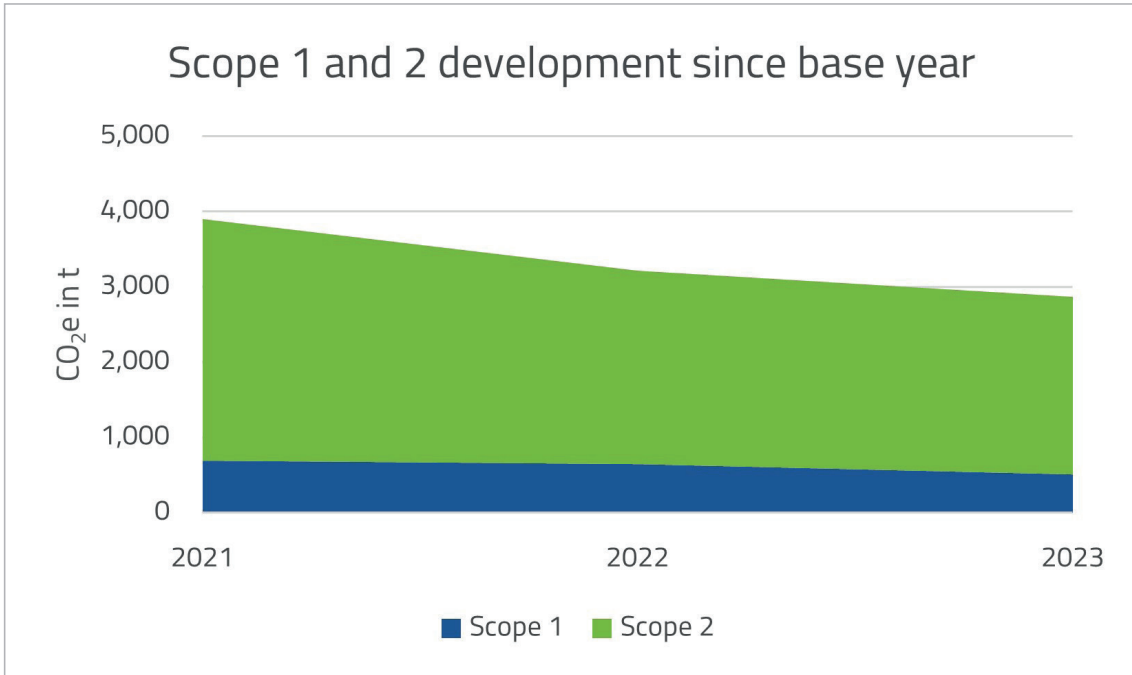


Figure 10: Development of scope 1 and 2 emissions since the base year of 2021 (source: KRAIBURG TPE)

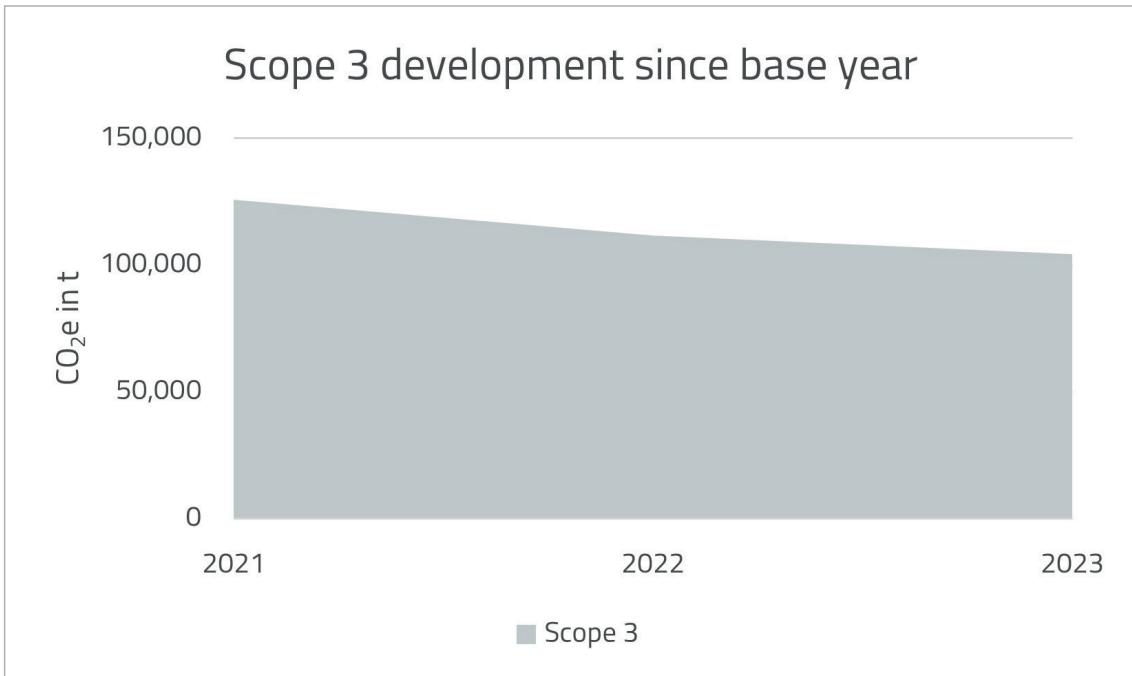


Figure 11: Development of scope 3 emissions since the base year of 2021 (source: KRAIBURG TPE)

4.3 | Objective 2: Improve process and energy efficiency

Improving process and energy efficiency is a central objective for the key topic of climate and energy. This reduces the energy demand over the long term and thus the associated climate-relevant emissions.

KRAIBURG TPE mainly procures energy in the form of electricity and natural gas (see Figure 12). Electricity plays a crucial role in the production process, notably the operation of the extruder lines for manufacturing TPE compounds. It is also used for the supporting infrastructure, plant cooling, the compressed air supply, and ventilation of the operating establishments. Natural gas on the other hand is primarily used to heat the office buildings.

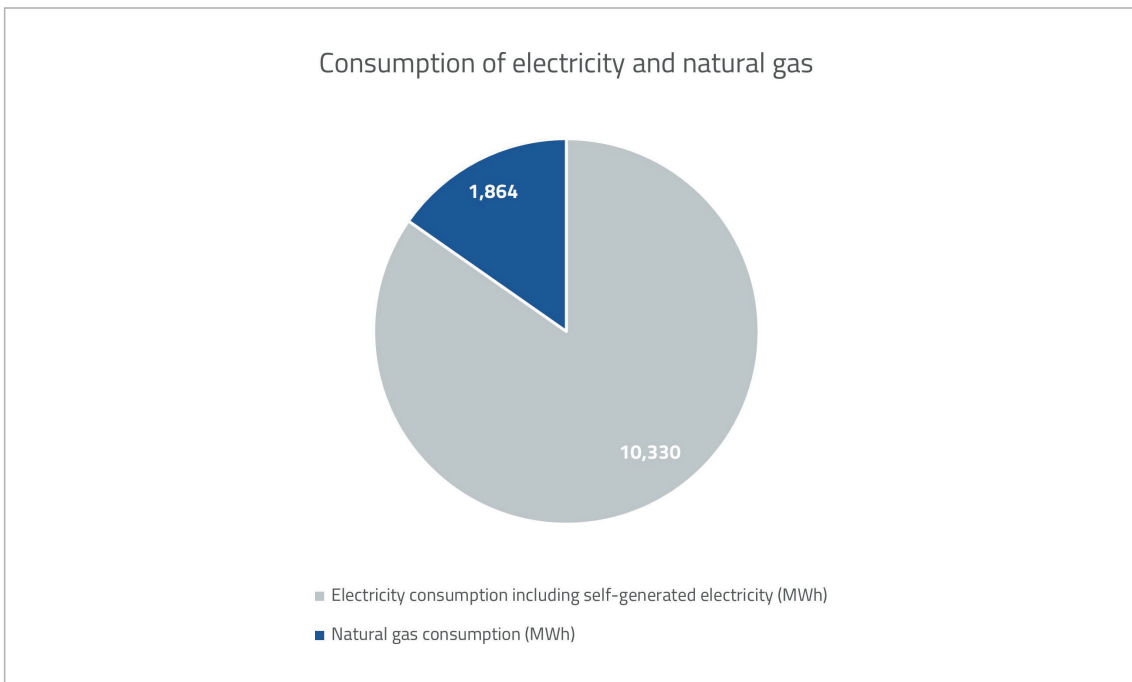


Figure 12: Consumption of electricity and natural gas by KRAIBURG TPE, 2023 (source: KRAIBURG TPE)

Electricity consumption for the two production facilities in Waldkraiburg fell by 4% to 10,330 MWh in 2023. This is due to the 2% reduction in the production volume of TPE compounds and the improvement of specific electricity consumption by 2.4%. **Specific energy consumption**, including both electricity and gas consumption, fell by 0.5% to 395 kWh/t in the reporting year in relation to the annual production volume. Compared to 2022, **specific electricity consumption** fell to 330 kWh per ton of production

volume, corresponding to a difference of 2.4%. Thanks to milder temperatures during the winter months, the consumption of **natural gas** was reduced by 1% to 1,864 MWh in the reporting year. Nevertheless, the **specific natural gas consumption** for 2023 as a whole in relation to production space increased by 5.9% to 54 Wh/(m²a*Kd) (see Figure 13).

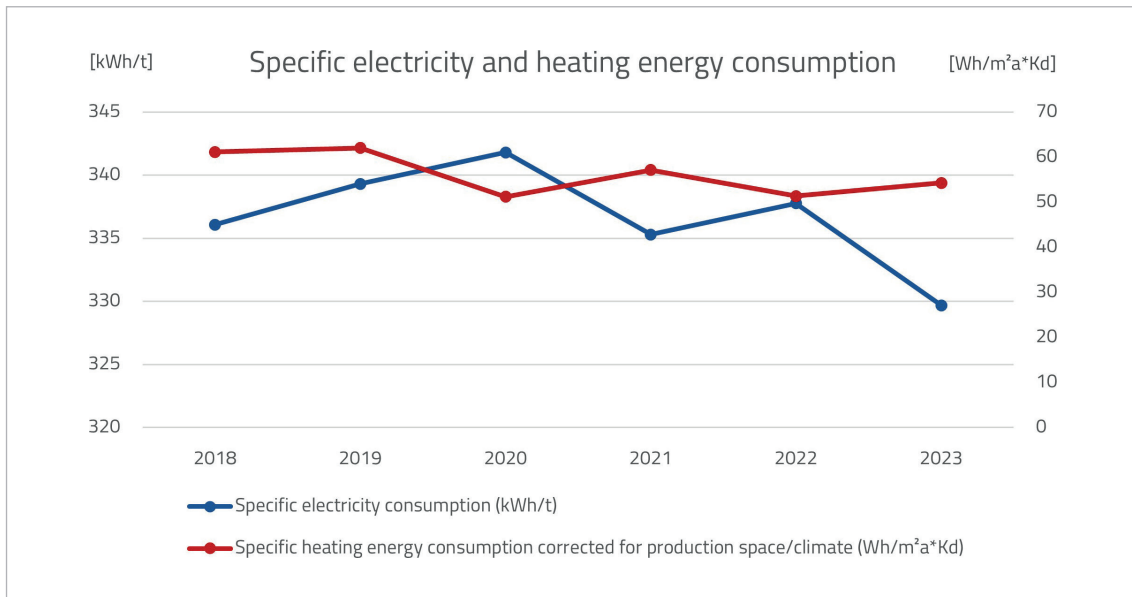


Figure 13: Development of specific electricity and natural gas consumption (source: KRAIBURG TPE)

4.4 | Objective 3: Pursue the expansion of renewable energy

The expansion of company-produced renewable energy contributes to improving our CO₂e footprint, reducing environmental impacts, and decreasing our dependence on external energy sources. Using low-carbon energy sources is an important approach to generating CO₂e-neutral growth. Two on-site PV systems generated a total of 119.5 MWh of solar electricity in the reporting year. A further expansion of the PV systems is in the planning phase.

Only the proportion of electricity that the company cannot produce internally is procured from the public power network. For this purchased electricity, we are incrementally increasing the renewable energy share to 100% by 2025 (see Figure 14).

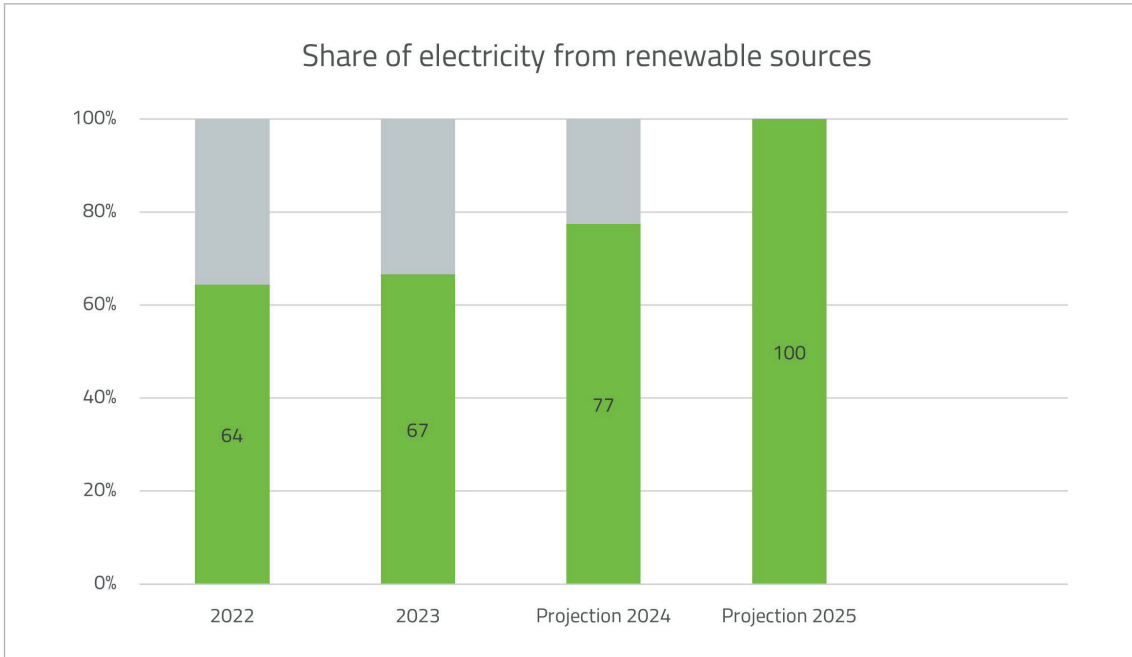


Figure 14: Development of the proportion of electricity from renewable energy sources by 2025 (source: KRAIBURG TPE)

4.5 | Objective 4: Improve energy supply security

Planning of a second electricity transfer station for the Waldkraiburg site is currently in progress. This will ensure a sufficient supply of electricity at all times as the production capacity is expanded. It will also improve our responsiveness to possible electricity supply disruptions, correspondingly improving our delivery reliability.

5. Water (E3: Water and marine resources)

Water is a valuable and increasingly scarce resource. It is of elementary importance for the production of chemicals. The responsible use of this resource is correspondingly anchored in KRAIBURG TPE's policies and covered by the quality, environmental, energy, and occupational health and safety management systems.



KRAIBURG TPE's objectives pertaining to water:

- **Objective 1:** Reduce water consumption to the essential minimum
- **Objective 2:** Reduce wastewater volume

5.1 | Opportunities and risks – water

	Evaluation
Physical und transitory risks with relevance to our business	
Reliable water supply e.g. for the high water consumption in production, in cases of drought and dryness	High
Ban on product lines due to political restrictions, e.g. in cases of drought and dryness	High
Heavy rainfall / flooding	Medium
Opportunities	
Reduction of dependencies in the use of water	High
Increasing demand for sustainable products, e.g. produced in a water-saving way	Medium
Reduction of fresh water consumption	Medium
Impacts	
Increasing the microplastic pollution of water bodies	Medium
High water consumption in production e.g. evaporation cooling towers	Medium

Table 5: Results of the opportunity and risk analysis for the key topic of "Water" (source: KRAIBURG TPE)

5.2 | Objective 1: Reduce water consumption to the essential minimum

Evaporation during cooling processes accounts for the largest water volume at KRAIBURG TPE. Total water consumption was lowered by reducing cooling water consumption in the open cooling circuit (OCC). Abnormal water consumption, including leaks, is quickly identified with the installed water meters (KBR system). Fluctuating water consumption was significantly reduced thanks to short response times. Better root cause analysis is given as well (see Figure 15).

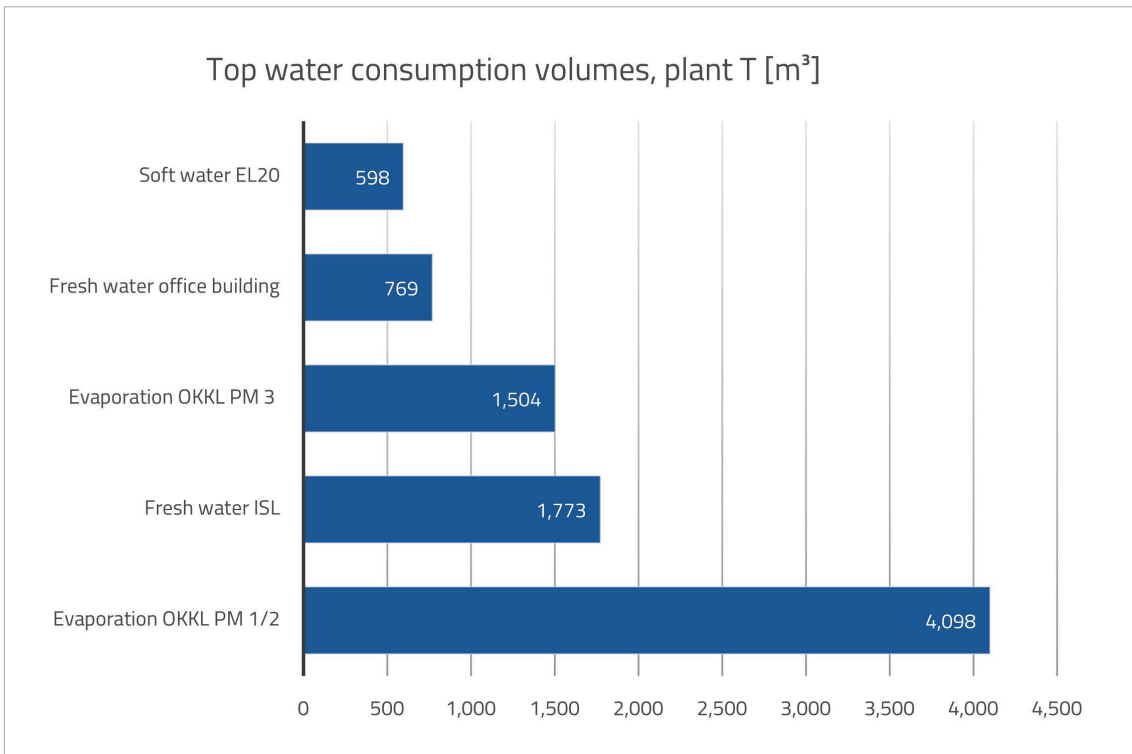


Figure 15: The five biggest water consumers in plant T, 2023 (source: KRAIBURG TPE) EL= extruder line, ISL = maintenance, common areas, and laboratory, PM = production module

Absolute water consumption fell by 7.3% and specific water consumption by 16% in 2023 (see Figure 16). The shutdown of production in plant K was a key reason. Specific water consumption was improved by shifting production to plant T. notwithstanding the higher production volume and a 6% increase in the cooling water demand, specific evaporation remained at the prior-year level thanks to the higher cooling efficiency. Climate effects are most apparent with regard to the cooling systems. The cooling demand placed on the systems increased by 22.5% (+77 m³) compared to 2022 (see Figure 17).

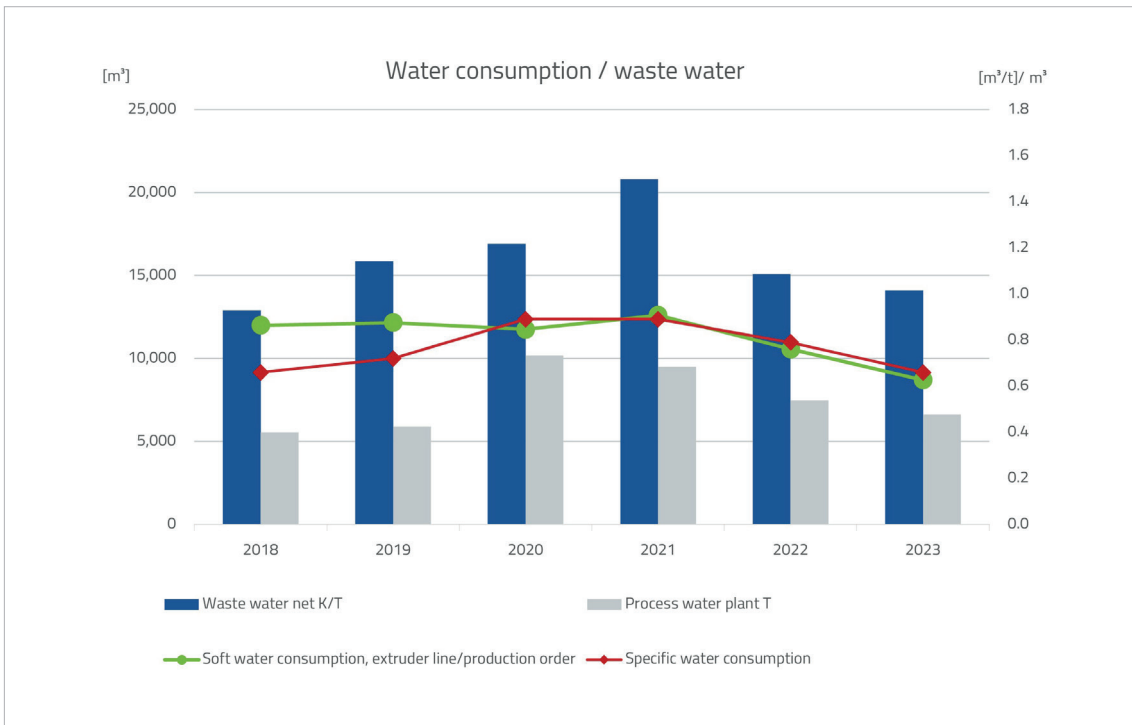


Figure 16: Development of water consumption and wastewater (source: KRAIBURG TPE)

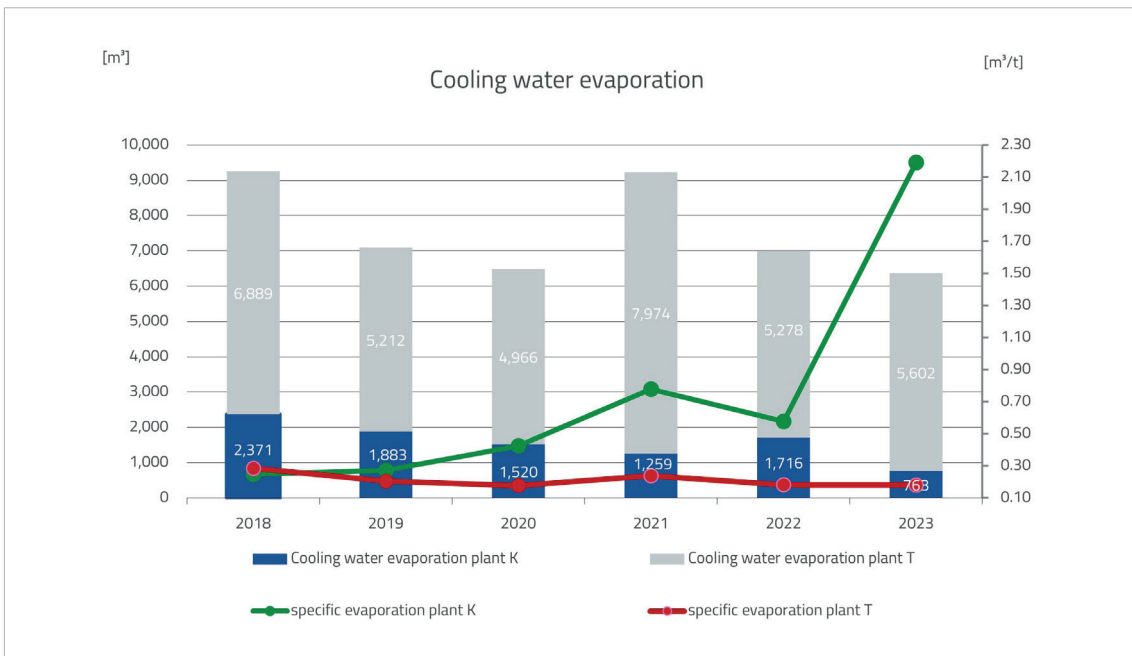


Figure 17: Development of cooling water evaporation and specific evaporation (source: KRAIBURG TPE)

Reducing the water volume to the essential minimum requires consistent and systematic water management that encompasses implementing strategic requirements, continuously determining potential, and deriving appropriate improvement measures.

5.3 | Objective 2: Reduce wastewater volume

KRAIBURG TPE has set a goal of reducing the wastewater volume. The wastewater discharge volume has already been reduced by 6.5% in the reporting year compared to 2022. The specific wastewater volume, which is linked to the cooling water demand, decreased by 5%.

6. Circular economy for resource conservation (E5: Resource use and circular economy)

According to the European Parliament's definition, the circular economy is a system in which existing materials and products are shared, leased, reused, repaired, reprocessed, and recycled for as long as possible. This extends the product life cycle and minimizes waste. It means a transition from a linear economic model to a regenerative system of closed cycles powered by renewable energy. Great emphasis is placed on this topic of the circular economy in the plastics industry and especially at KRAIBURG TPE.

The use of recycled materials and bio-based raw materials as well as the recyclability of materials are increasingly coming into focus. This is driven by a range of European and national legislative proposals as well as customer expectations and demands. How to keep materials in the cycle for longer is increasingly being considered as well, be it through reuse, by using materials of higher quality, or by recycling products and materials. New business models extending from only selling the product all the way to service are also intended to contribute to resource efficiency and decarbonization.

KRAIBURG TPE already has processes, work instructions, and guidelines in place for waste and recycling.



Figure 18: Closing cycles at various levels (source: KRAIBURG TPE)



[KRAIBURG TPE has defined the following objectives with regard to the circular economy for resource conservation:](#)

- **Objective 1:** Develop increasingly sustainable and recyclable product solutions
- **Objective 2:** Anchor sustainability standards in the supply chain
- **Objective 3:** Efficient design of production, packaging, and transport
- **Objective 4:** Increase the utilization of own production residues and returns
- **Objective 5:** Expand external partnerships and business relations for increased circularity
- **Objective 6:** Avoid, reduce, and utilize waste

6.1 | Opportunities and risks – circular economy for resource conservation

	Evaluation
Physical und transitory risks with relevance to our business	
Dependence on the existing business model, e.g. difficult implementation of a circular economy	High
Dependence on materials	High
Political requirements, e.g. in the area of recycling quotas, the EU Directive on end-of-life vehicles, the Law on Closed Cycle Management and Waste, the German Packaging Act and other EU regulations	High
Price disadvantage due to more sustainable products	Medium
Customer requirements, e.g. unfulfillable demands for recycled content in products	Medium
High costs for alternative raw materials	Medium
Limited recycling options e.g. post-consumer products, 2K applications	Medium
Limited availability of raw material and quality of recycled materials	Medium
Public perception as plastics producer	Medium
Opportunities	
Rising demand for sustainable products, e.g. with high recycled content	High
Securing future sales markets	High
Increasing resource efficiency	Medium
Securing future sources of raw materials	Medium
Competitive advantage through already good, sustainable products e.g. recyclability	Medium
Cooperation with external partners (such as recyclers, service providers, customers, suppliers, universities)	Medium
Impacts	
Promoting a circular economy through the recyclability of products	High
Increase the recycling rate through the use of easily recyclable materials	High
Reduced impact on natural raw material sources through recycling	Medium

Table 6: Results of the opportunity and risk analysis for the key topic of "Circular economy for resource conservation" (source: KRAIBURG TPE)

6.2 | Objective 1: Develop increasingly sustainable and recyclable product solutions

Design for sustainability as an extension of “custom-engineered and more”

Design for sustainability considers sustainability issues throughout the product life cycle, from the conceptual design to the selection of materials and production processes to the end of life/use. The concept also includes customer consulting for the selection of TPE materials, product design, processing, in the usage phase, and at the end of the product’s life with end-of-life options for greater sustainability over the entire product life cycle. This results in the development of products and services that meet the needs of the current generation without endangering the ability of future generations to meet their own needs.

In concrete terms, product sustainability at KRAIBURG TPE is based on the use of high-quality materials for long-lived applications, socially and ecologically sustainable production, safety for people and the environment by reducing the impacts of products, and product recyclability. KRAIBURG TPE products are currently available with a proportion of recycled materials, bio-based materials, and mass-balanced bio-circular ISCC PLUS materials. A CO₂e footprint of the product can be provided for all of these variants.



Figure 19: Current options for more sustainable TPE – recycling-based, bio-based, and ISCC PLUS (source: KRAIBURG TPE)

The further development and transformation of the product portfolio within the framework of the sustainability road map according to the needs and requirements of the automotive, industry, consumer, and medical target markets as well as stakeholders and customers was accelerated in 2023. This is achieved through comprehensive innovation projects between Product Development, Sales, Product Management, and Purchasing. The stated goal to develop more sustainable products and innovative material solutions was achieved. KRAIBURG TPE expanded its base of recycled and bio-based raw materials and maximized the respective proportions in the compounds. All materials are part of the THERMOLAST® R product line, which is comprised exclusively of sustainability-optimized compound variants:

- The Universal PCR TPE product was further developed in the consumer market. It is made of up to 79% post-consumer recycled materials.
- Two new product lines were commercialized for the consumer and industry markets, with up to 60% post-consumer recycled materials and up to 54% post-industrial recycled materials. They support adhesion to polyamides and polar thermoplastics.
- A project was launched in the automotive market to create recycled content variants of all successful virgin products, with the highest possible proportion of recycled materials. The counterpart to the virgin Interior variant has already been launched with up to 77% post-consumer and post-industrial recycled materials.
- Three series of materials with bio-based content were launched for the consumer and industry markets. They cover a broad hardness range with adhesion to PP, PC/ABS, or PA and contain up to 71% bio-based materials.
- The possible applications for the aforementioned materials are limited, especially for the strictly regulated food and medical markets. Mass-balanced, ISCC PLUS certified material variants (bio-circular) were used in projects for these fields of application for the first time in 2023.

The influence of polyolefin recycling streams was investigated in 2022 to verify recyclability. According to the latest findings, compatibility in the PP and HDPE stream with numerous KRAIBURG TPE products is confirmed. This unique selling point is being continuously expanded to the product range.

6.3 | Objective 2: Anchor sustainability standards in the supply chain

KRAIBURG TPE sets ambitious sustainable development targets for itself through the use of bio-based, mass-balanced, and recycled raw materials as well as the ongoing identification of more sustainable raw materials. Careful fundamental analyses, collaboration with new partners, and selective supplier development are required to reach these targets. The identification and qualification of alternative materials includes background research and detailed analyses of the product carbon footprint, social compatibility, resource efficiency, product safety, quality, and availability.

[Principles of sustainable procurement](#)

KRAIBURG TPE is committed to sustainable procurement through partnerships with suppliers. This is a key to achieving KRAIBURG TPE's sustainability objectives. Maintaining long-term relationships based on transparency, trust, and integrity is the goal. Shared objectives include building responsible supply chains and reducing the product carbon footprint. KRAIBURG TPE is guided by the Act on Corporate Due Diligence in Supply Chains (LkSG), the UN's Universal Declaration of Human Rights, the UN's Sustainable Development Goals, the UN Global Compact, the principles of the International Labor Organization, and the OECD principles for multinational companies as the basis of values. All suppliers are asked to sign the current version of KRAIBURG TPE's code of conduct and sustainability, and to act in accordance with its principles. Alternatively, partners can present their own, comparable code of conduct. KRAIBURG TPE's business partners are required to exercise one of these options.

The principles of sustainable procurement describe KRAIBURG TPE’s fundamental purchasing practices and apply to all existing and future business relations with suppliers of raw materials, services, equipment, or the like. They provide a transparent overview of the underlying processes, standards, and rules in procurement, safeguarding the following aspects:

- Customer satisfaction
- Responsibility for quality
- Supplier development
- Fairness, transparency, and regulatory compliance
- Environmental awareness and sustainability
- Health and safety
- Internationality
- Equal opportunities, non-discrimination, and respectful treatment
- Process orientation
- Employee development

Requirements for suppliers are derived and communicated on this basis. Supplier management is governed by a corporate standard that encompasses qualification, evaluation, and development. Standardized self-disclosure forms are used to obtain an informative, representative, and comparable data basis regarding the status of the suppliers. Aspects of environmental and sustainability management are integrated into the qualification phase as well as the annual review. KRAIBURG TPE has been assessed according to EcoVadis and is among the top five percent in the “Sustainable Procurement” category. The Waldkraiburg site is also ISCC PLUS certified. This certification mechanism promotes social and environmental standards and ensures continuous monitoring of the supply chain. The company expects comparable performance from suppliers and asks them to also define sustainability objectives and measures. In accordance with the Act on Corporate Due Diligence in Supply Chains (LkSG), KRAIBURG TPE has pledged to continuously monitor and support compliance with social and environmental standards along the entire supply chain.

Material compliance

KRAIBURG TPE complies with all relevant provisions for the materials and substances that are used. These include Regulation 1907/2006/EU concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), Regulation 1272/2008/EU on classification, labeling and packaging of substances and mixtures, Regulation 2019/1021/EU on persistent organic pollutants, Directive 2011/65/EU on the restriction of the use of certain hazardous substances (RoHS), and the chemicals regulation. Communication with customers is realized through various channels in the form of safety data sheets according to Regulation 1907/2006/EU, the automotive industry's IMDS system, and customer-specific individual documents. All relevant provisions and legal requirements are continuously monitored to identify changes in a timely manner and proactively inform customers of necessary changes to the products or their regulatory classification. Existing raw materials that are already in use are also reevaluated and a substitution process is initiated when needed.

6.4 | Objective 3: Efficient design of production, packaging, and transport

KRAIBURG TPE strives to improve the efficiency of production, packaging, and transportation with regard to the consumption of energy, water, and materials as well as production waste and internal recycling. A "water footprint" will be introduced to systematically monitor the minimization of energy and water consumption per compound. The proportion of internal production waste and other off-spec materials, such as returns or quarantine after release, has to be as low as possible. Possible solutions include internal recycling or selling these materials to third parties as recyclate. With regard to packaging, the company was able to reduce the specific quantity of own packaging by 10% in the last three years. Further improvements are achieved through close communication with suppliers.

6.5 | Objective 4: Increase the utilization of own production residues and returns

The company strives to further expand its recycling expertise. Reflecting savings that have been achieved in the future calculations of climate and life cycle assessments is also crucial for customer-oriented communication and attractiveness. Internal recycling, which has been ongoing for decades, is based on the collection and reuse of similar internal waste materials and returns. Instead of discarding them, KRAIBURG TPE recycles nearly 100% of the materials in select compounds, including returns, process start-up materials, and other production waste. Quality control and usage decisions are governed by defined processes. Production residues of similar quality and color can either be returned to the

in-house production processes or sold to third parties. Overall, incoming material has to be minimized to keep stock levels as low as possible while achieving a high recycling rate with reasonable effort. Stock levels were reduced from 241 to 149 tons compared to 2022. This is below the target of a maximum of 180 tons.

6.6 | Objective 5: Expand external partnerships and business relations for increased circularity

Partnerships are essential to achieve the circular economy objectives. KRAIBURG TPE therefore works closely with customers, suppliers, universities, and research institutes. The company assists its customers in their sustainability efforts by resolving the return of production waste and delivering high-quality materials for long-lasting applications. In addition, KRAIBURG TPE uses lightweight materials in the interest of low vehicle emissions in the usage phase and employs sustainable, low-carbon raw materials. KRAIBURG TPE is participating in the CIRCLE project of RWTH Aachen as an active project partner. Membership in the wdk (Wirtschaftsverband der deutschen Kautschukindustrie e.V.) and Plastics Cluster Austria provides access to an extended network of potential cooperation partners.

6.7 | Objective 6: Avoid, reduce, and utilize waste

The principle of “avoidance before utilization before disposal” applies at KRAIBURG TPE. Numerous waste avoidance measures have and are being implemented already:

- Strict quality control of products to prevent customer complaints
- Development of return concepts for the recycling of TPE materials
- Customer consultations regarding optimal further processing with the reduction of scrap rates
- Support for customers by providing material data for simulations
- Reduction in the use of auxiliary materials
- Reduction in the disposal of conforming products by optimizing the testing frequency while maintaining the same quality level. Material waste in quality assurance was reduced by 17% compared to the prior year.

KRAIBURG TPE uses the waste hierarchy defined in the EU Waste Framework Directive 2008/98/EC for guidance. It is considered the priority sequence for waste avoidance and management in legislation and politics. Waste that cannot be utilized is properly disposed of in an appropriate manner according to the Closed Substance Cycle Waste Management Act.

The specific waste volume increased by around 10.4% to 12.56 kg/t in 2023. This is due to an increase in the disposal volume of used oil (by about 90%), paper, and granulate waste (respectively by about 9%). Non-hazardous waste, in part recycled externally and in part used as fuel, is composed, for example, of residual waste, plastic waste, paper, wood, iron, and steel. Hazardous special waste at KRAIBURG TPE consists of used oil and contaminated wastewater from cleaning. This fraction increased by 67% year-on-year due to the disposal of used oil and oil-water mixtures.



Figure 20: Development of waste accumulation at KRAIBURG TPE (source: KRAIBURG TPE)



SOCIAL
INFORMATION

7. Responsibility to employees (S1: Own workforce)

Personal health and safety is the highest priority for KRAIBURG TPE in any situation and at all times. While the focus is primarily on our own employees, avoiding negative effects on workers along the supply chain and on society through business activities is considered as well.

Clear guidelines to protect and support the employees have been established within the framework of KRAIBURG TPE's quality, environmental protection, occupational health and safety, and energy policies. They form the foundation for the company's success. Special emphasis is placed on the following spheres of activity:

- **Values and culture** (focus on respect, trust, and participation)
- **Health and safety** (accident prevention)
- **Diversity and equal opportunities** (equal treatment, transparency in processes, healthy company culture)
- **Internal and external (continuing) education**
- **Work-life balance**



KRAIBURG TPE's objectives for the key topic of "Responsibility to employees":

- **Objective 1:** Improve job satisfaction
- **Objective 2:** Avoid and reduce occupational accidents within the occupational health and safety framework
- **Objective 3:** Support behavior that promotes health through prevention offers
- **Objective 4:** Develop and retain skilled workers in line with demand

7.1 | Opportunities and risks – responsibility to employees

	Evaluation
Physical und transitory risks with relevance to our business	
Accidents at work	High
Sickness absences (sick days and sickness rate)	Medium
Shortage of skilled workers	Medium
Rising personnel costs	Medium
Opportunities	
Increase in job satisfaction, motivation and willingness to perform	Medium
Retention of employees and managers	Medium
Improvement of the image through responsible action (employer branding)	Medium
Internal communication and increased transparency	Medium
Impacts	
Increase in job satisfaction	Medium
Promotion of employee health	Medium

Table 7: Results of the opportunity and risk analysis for the key topic of “Responsibility to employees” (source: KRAIBURG TPE)

7.2 | Objective 1: Improve job satisfaction

KRAIBURG TPE’s employees are essential for the company’s economic success. Long-term loyalty is therefore a key factor, especially against the background of a worsening shortage of skilled workers. Naturally, KRAIBURG TPE complies with the established standards regarding work conditions, such as working time rules, protection against dismissal, maternity protection and parental leave, health protection, and occupational health and safety, as well as the provisions of the framework collective agreement for the chemicals industry.

[Flexible work](#)

The balance between work and private life plays a very big role for employees. KRAIBURG TPE therefore provides a number of options for flexibility. The company fundamentally has two types of working time:

- **Flexible working time:** Under consideration of company and personal interests, employees can determine the distribution of working time themselves in coordination with their supervisor.
- **Fixed working time:** The working time is determined using company shift models.

Partial retirement was negotiated in 1983 to provide relief for older employees. Accordingly, the daily working time is reduced based on established criteria.

[Mobile work](#)

Digitalization of the working world also makes it possible for employees to perform all or part of their work independently of a fixed work location. Mobile work helps harmonize the work-life balance for employees and also improves productivity. Prerequisites include the suitability of tasks and the external workplace along with data protection and occupational health and safety requirements. Interpersonal relations and interactions defined by empathy are very important at KRAIBURG TPE.

[External crisis counseling](#)

External, independent counseling is provided free of charge and, on request, anonymously for the support of all employees, including their families, in stressful life situations or times of crisis. Personal, confidential discussions provide the framework for addressing work-related, private, or health matters. The counseling team is subject to professional secrecy according to Section 203 of the Criminal Code (StGB).

[Additional services](#)

KRAIBURG TPE also offers incentives in the form of social benefits, including:

- Wedding and birth bonuses
- Certification bonus for good vocational school performance
- Company anniversaries
- Childcare subsidy for children younger than school age
- Company pension plan (retirement and disability)
- Vacation homes at reduced rates
- Bicycle leasing
- "CareFlex Chemie" supplementary long-term care insurance

7.3 | Objective 2: Avoid and reduce occupational accidents within the occupational health and safety framework

The goal of occupational health and safety is to identify possible hazards and risks in advance, thereby avoiding work-related injuries and illnesses. Hazards and risks are determined in the course of forward-looking analyses by the respective persons responsible at KRAIBURG TPE in cooperation with experts. Meetings of the environmental management and occupational health and safety task force are held quarterly. The occupational health and safety officer, environmental management officer, company physician, works council, and site management discuss appropriate measures and follow up on them, among other things in the environmental protection/occupational health and safety program. In addition, the company establishes ergonomic workplaces and healthy work conditions.

If accidents occur in spite of these efforts, their causes are analyzed in detail in order to learn from them. They are extensively investigated in cooperation with the affected individuals and the findings are used to derive appropriate measures. Hazard determination is not only required by law according to Section 5 of the Occupational Health and Safety Act (ArbSchG), but also serves as a central occupational health and safety tool for the assessment of risks. Uniform, systematic hazard assessments are prepared and implementation of the defined measures is monitored with the help of occupational health and safety software.

Accident figures are important indicators for the accident risk at the Waldkraiburg site. There were 11 reportable occupational accidents overall in 2023. The resulting accident rate per 1000 employees is 26.41. The Lost Time Injury Frequency (LTIF) excluding commuting accidents is 23.44. Thus the positive development from 2022 could not be maintained (see Figure 21). Since this was primarily traced back to behavior-related causes of accidents, specific measures are required to counteract this development.

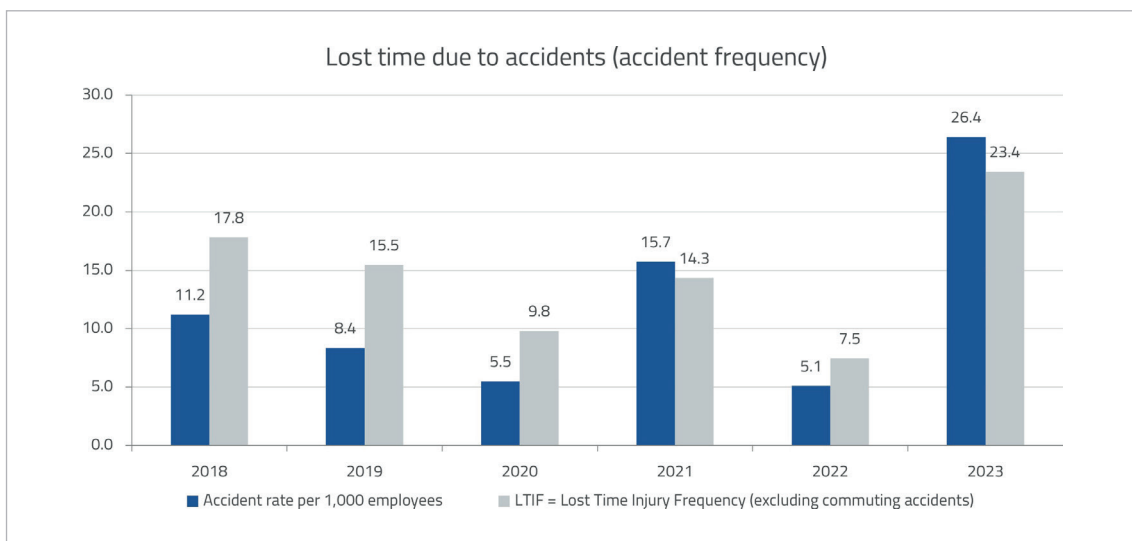


Figure 21: Development of the accident frequency at KRAIBURG TPE (source: KRAIBURG TPE)

The “Safety Culture Inventory” project was subsequently launched in November 2023. A sustainable concept was prepared in cooperation with external partners, employees, and company management to promote the further development of the safety culture at KRAIBURG TPE and to reduce the accident figures in the long term. The project team conducted employee interviews and evaluated them in an initial step. This was done because including all employees in occupational health and safety is of fundamental importance. On this basis, the working group developed concrete spheres of activity that will be prioritized in subsequent workshops. Central aspects include the systematic observation of behavior, positive feedback for safe behavior and constructive feedback in case of risky behavior, and providing role models.

In concrete terms, the safety culture at KRAIBURG TPE encompasses eight principles (see Figure 22). They serve as guidelines and help avoid and reduce occupational accidents within the occupational health and safety framework.

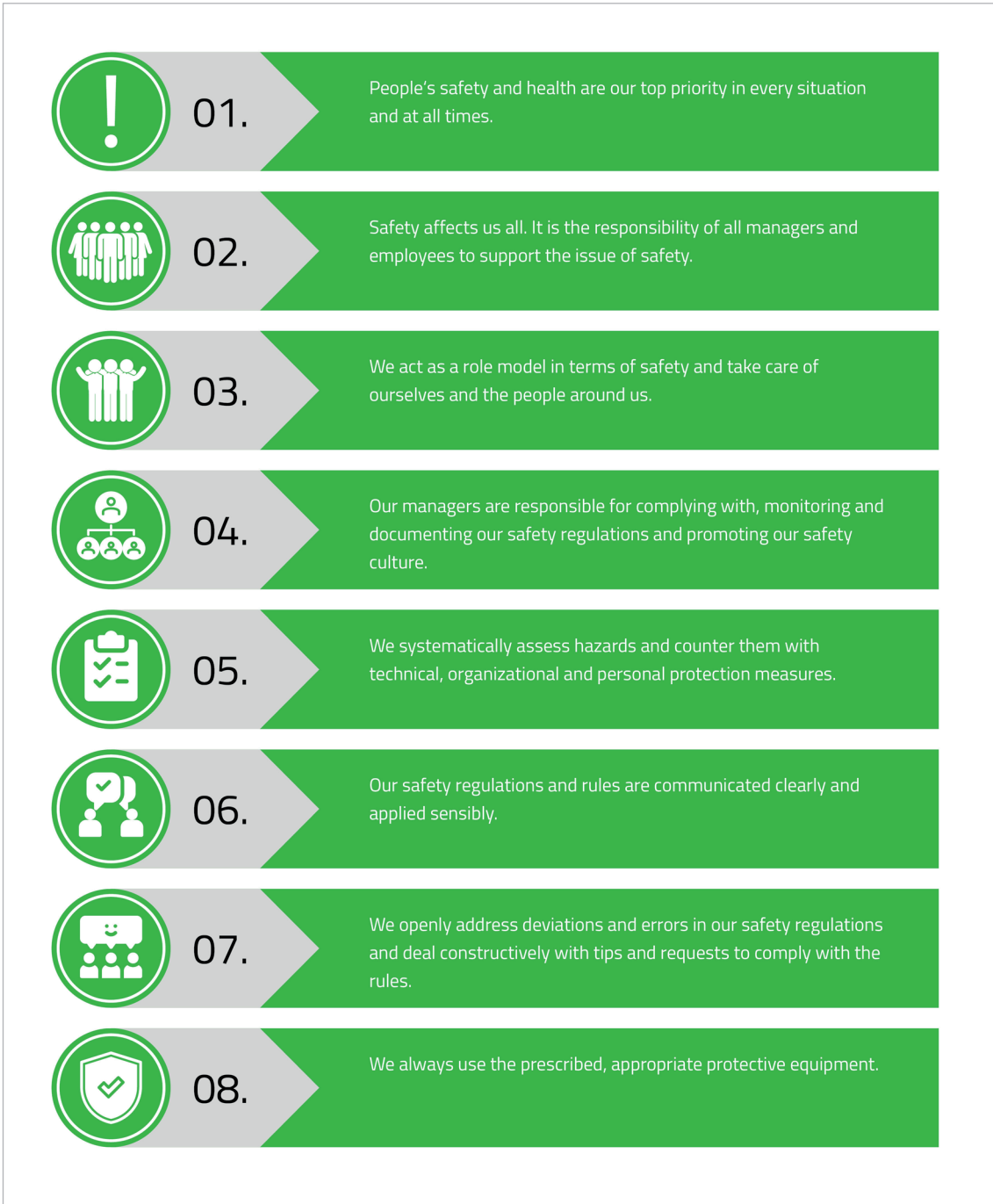


Figure 22: Eight principles of the safety culture at KRAIBURG TPE (source: KRAIBURG TPE)

Aside from a safety culture that is put into practice, dealing responsibly with the following risk factors is crucial:

Plant safety

In the interest of production that is safe and effective, and therefore has future viability, experts identify and evaluate possible risks in the planning and conceptual design of new plants, in the operation of existing plants, and for plant modifications. Environmental protection, health protection, and safety are taken into account and protective measures are established in the process. The results also support the continuous improvement of external company management at KRAIBURG TPE. To maintain the safety of plants throughout their life cycle, protection concepts and technologies are reviewed regularly with the operators. The implementation of legal requirements is reviewed in the course of audits and safety inspections.

Explosion protection

Plants using potentially explosive hazardous substances are subject to particularly strict safety and inspection regulations. Compliance with these regulations is ensured in close coordination with the responsible authorities and external specialists. We benefit from the results by incorporating them in the further development of our maintenance concept.

Fire protection

The KRAIBURG Group has its own fire protection directive in addition to the applicable legal requirements. Compliance with this directive is reviewed on a random sample basis by the fire protection officer and other experts. A fire protection report is prepared annually. Thus the company makes its employees aware of fire protection topics, which supports a safe working environment.

Noise protection

All of the noise registers are updated every two years. Important information on possible sources of noise is provided by our employees, among others. The results form the basis for KRAIBURG TPE's noise reduction program. This primarily focuses on avoiding noisy areas above 85 dB(A) and limiting noise in all production areas to a value below 85 dB(A) that is not harmful to health. The prescribed limit value for noise exposure at the property line is met.

Drinking water

The hygiene status of drinking water is monitored in the form of legionella limit values. Possible residual risks are recorded in a hazard assessment and corrective actions are implemented. A Water Safety Team has been formed for this purpose.

Handling of hazardous substances

The rising number of hazardous substances in terms of raw materials that are harmful to health leads to increased responsibility towards the employees. The substitution of hazardous substances with non-critical or less critical substances ensures that possible risks for employees are reduced to a minimum. In addition, the company maintains employee health through technical and innovative solutions for the safe handling of the remaining hazardous substances. Regular workplace concentration limit measurements, hazard assessments, and safety inspections are used to determine effectiveness and derive additional protective measures as needed.

Examples of protective measures:

- Wearing appropriate personal protective equipment according to the latest standards
- "Introduction of new raw materials" directive
- Hazard assessment prior to initial use
- "Substitution review for hazardous substances" working group
- Systematic, software-assisted evaluation of the finished goods classification for the consistent labeling of hazardous substances and identification of protective measures

Hazardous goods

No hazardous goods accidents and no incidents with hazardous goods in which persons were harmed or goods of material value were damaged occurred in the reporting year. Training regarding improvements and an on-site audit with no deviations were completed in cooperation with our external hazardous goods officer in November 2023. A hazardous goods report is on hand. KRAIBURG TPE has no finished products with hazardous goods characteristics.

[Hazard prevention, emergency management, and crisis prevention](#)

KRAIBURG TPE has implemented crisis management according to the directives of the KRAIBURG Group for hazard prevention. This supports the proper handling of disruptions at the site and also along the downstream value-added steps. It comprises the safe handling of products in emergency situations, preventive fire protection and initial measures, support for emergency personnel, and cooperation with the competent authorities. Regular practical exercises are essential for the success of hazard prevention concepts. The crisis management team, emergency manager, employees, fire department, and required emergency personnel therefore carry out emergency exercises at intervals. Observers derive potential improvements based on the analyzed exercises.

7.4 | Objective 3: Support behavior that promotes health through prevention offers

[Occupational health management \(OHM\)](#)

Occupational health management in terms of an integrated strategy encompasses all measures that contribute to the health and wellbeing of employees in the workplace and to a “healthy” business organization by maintaining their performance over the long term. It provides orientation for employees and managers as a structured, planned, and coordinated process. OHM goes beyond occupational health and safety required by law as well as individual health promotion. The challenge lies in networking existing competencies, combining individual health promotion measures with each other in a meaningful and effective way, and making their effects on employee health measurable.

The competent steering committee meets quarterly and establishes the strategy, targets, and measures in close coordination with company management. This steering committee is comprised of the prevention and health manager, safety officer, representative for employees with disabilities, works council, HR manager, and company physician. The prevention and health manager implements appropriate measures in partnership with internal and external providers. Results of activities implemented based on the evaluation are continuously incorporated in subsequent planning.

Focal points of occupational health management 2023

1. KRAIBURG TPE improved its engagement through participation in the benchmark analysis for the chemicals and pharmaceuticals industry of the Corporate Health Award in the structure, strategy, and performance categories. Progress is evaluated annually and occupational health management is subject to continuous further development.
2. Raising awareness of a healthy lifestyle and work habits among industrial employees is assured.
3. Education is provided regarding clinical pictures, conditions for development, and manifestations of an addiction. The Employer's Liability Insurance Association for Raw Materials and the Chemicals Industry provided corresponding training for managers.

7.5 | Objective 4: Develop and retain skilled workers in line with demand

KRAIBURG TPE pursues the goal of developing and retaining specialists in-house to precisely meet its demands with a variety of measures.

Occupational training at KRAIBURG TPE:

- Occupational training at KRAIBURG TPE encompasses vocational training according to Section 1 of the Vocational Training Law (BBiG), preparation for vocational training, continuing occupational training, and occupational retraining.
- In the course of dual vocational training, KRAIBURG TPE teaches the skills, knowledge, and abilities required for performing a qualified occupational activity according to the respective training regulations. Trainees gain practical experience at the same time. Personal trainers are appointed for each occupation that requires training. KRAIBURG TPE employed 27 trainees in 8 occupations in the reporting year.

[Continuing education and training at KRAIBURG TPE](#)

Employee qualification and their lifelong learning readiness are crucial for the company's competitiveness, to protect jobs, and to maintain employability. Against this background, training and continuing education play a central role. The HR department obtains information about the needs for the coming year from the departments and teams in the course of annual continuing education planning. This forms the basis for budget calculations as well as continuing education planning and approval.

KRAIBURG TPE offers various training components for management development, covering topics such as the company-specific leadership concept, situational leadership, conflict resolution, and change management. Fundamentals are repeated every 5 years. The content in the reporting year focused on team development, an important point to foster cohesion after the pandemic. This also contributes to the "Improve job satisfaction" objective.



GOVERNANCE INFORMATION

8. Responsible corporate governance (G1 Business conduct)

Responsible corporate governance is decisive for the conscientious and transparent management of a company. The interests of all stakeholders are taken into account.

Responsible corporate governance at KRAIBURG TPE follows these principles:

- **Transparency:** The organization should be open and transparent regarding its objectives, performance, and decision-making processes.
- **Responsibility:** The organization acts responsibly towards its stakeholders and assumes responsibility for its actions.
- **Participation:** The organization actively contacts its stakeholders and includes them in decision-making processes.
- **Fairness:** The organization ensures that its decisions are fair and just, and that all stakeholders are treated equally.
- **Responsiveness:** The organization responds to the needs and concerns of its stakeholders and takes appropriate steps to solve problems. This includes a whistleblower process for stakeholders to report violations of any kind.

KRAIBURG TPE is a member of the UN Global Compact. It helps companies act responsibly based on ten principles in the areas of human rights, labor standards, the environment, and anti-corruption, and to advance innovative solutions for realizing the 17 Sustainable Development Goals.



Objectives for responsible corporate governance at KRAIBURG TPE:

- **Objective 1:** Ensure compliance with internal code of conduct
- **Objective 2:** Ensure legal compliance
- **Objective 3:** Ensure transparency through certifications and by adhering to standards

8.1 | Opportunities and risks – responsible corporate governance

	Evaluation
Physical und transitory risks with relevance to our business	
Business-threatening events e.g. cyber attacks, damage to image, pandemics	Medium
Loss of competitiveness compared to foreign companies, e.g. due to high bureaucratic costs	Medium
Opportunities	
Customer assurance through responsible and reliable behavior	High
Acquisition of new customers, e.g. through transparent business practices	Medium
Improvement of the image through reliable appearance e.g. ethical correctness, reliability, transparency	Medium
Increasing attractiveness as an employer	Medium
Long-term and trusting partnerships (customers, suppliers, etc.)	Medium
Early recognition of stakeholder requirements	Medium
Partnerships with mechanical and chemical recyclers and suppliers	Medium
Impacts	
Increasing transparency for stakeholders through responsible business practices	High
Promoting cooperation with customers on sustainability issues through discussions	High
Avoiding corruption through responsible business practices	Medium

Table 8: Results of the opportunity and risk analysis for the key topic of “Responsible corporate governance” (source: KRAIBURG TPE)

8.2 | Objective 1: Ensure compliance with internal code of conduct

KRAIBURG TPE places special emphasis on interpersonal relationships and a company culture that is put into practice, including an open communication and feedback culture. Conduct and interactions are based on mutual appreciation, respect, acceptance, and understanding. Company management and employees conform to the law and adhere to internal directives, company agreements, compliance rules, and the code of conduct. The code of conduct encompasses binding statements regarding legally, ethically, and socially correct behaviors. These directives were established by the KRAIBURG Group

and serve as orientation and decision-making aids for the group's compliant conduct in the global market. The KRAIBURG Group does not tolerate violations of these defined standards.

Human rights and labor laws

KRAIBURG TPE is committed to the protection of human rights. Forced labor including prison labor, compulsory labor, and child labor is strictly prohibited. Employing school age children and children less than 15 years of age is prohibited. Higher age limits imposed by the respective national laws must be observed. The provisions of the ILO (International Labor Organization), agreement no. 138, are excluded. Pay and other benefits must not be less than the minimum wage prescribed by law. Compliance with all labor laws is assured, including laws regarding working time, location, conditions, and safety. The right of employees to freedom of association and wage negotiations must be respected.

The works council as the representative body represents the co-determination of the employees, especially in social matters. It has a right to unobstructed internal communication with the employees. The works council also has the authority to adopt all measures that are in the interest of the employees and a comprehensive right to information within the framework of its statutory participation rights.

Examples of the co-determination rights (excerpt from Section 87 of the Works Constitution Act (BetrVG)):

- Matters of order in the company and employee behavior
- Distribution of working time and breaks
- Payment of remuneration
- Establishment of general principles for leave
- Form, design, and administration of the company's social services

Voluntary company agreements may also be concluded, for example (excerpt from Section 88 of the Works Constitution Act (BetrVG)):

- Measures to support the accumulation of capital
- Measures for the integration of foreign employees
- Measures for the integration of people with disabilities

KRAIBURG TPE also has a youth and trainee representative. They represent the interests of young employees in operations that have a works council.

Equal opportunities and non-discrimination

KRAIBURG TPE and its business partners are committed to a cosmopolitan, tolerant company culture with integrity. It stands for diversity and equal opportunities, and distances itself from all forms of extremism or discrimination based on ethnic origin, gender, religion or world view, disability, age, sexual orientation, or political affiliation. The company observes the General Act on Equal Treatment (AGG) to avoid incidents of discrimination. Gender equality is separately regulated by Article 3(2) of the Basic Law (GG). At KRAIBURG TPE, compliance is assured among other things by the collective agreement on remuneration.

Inclusion

Company management, the inclusion officer, representative for employees with disabilities, and works council agree that employing people with disabilities, protecting their jobs, and promoting job creation is a social and socio-political task of special importance. Therefore, KRAIBURG TPE is committed to equal opportunities and combats the unequal treatment and social exclusion of people with disabilities. The inclusion agreement according to Section 166, Book IX of the Social Security Code (SGB) supports the participation of people with disabilities in working life and operational management. It contains provisions for personnel planning, design of the workplace and working environment, working time, qualification, prevention and rehabilitation, work organization, and the integration commission.

8.3 | Objective 2: Ensure legal compliance

Legal compliance

KRAIBURG TPE as part of the KRAIBURG Group conducts business worldwide in accordance with legal regulations and official rules. This is essential in order to effectively safeguard its lasting business success. Employees are obligated to comply with the legal regulations of the legal system under which they operate. Legal violations must be prevented under all circumstances. Furthermore, all employees of the KRAIBURG Group undertake to act based on ethical standards and to treat third parties with respect and integrity.

With internal compliance guidelines, KRAIBURG TPE provides all employees with additional, binding rules that help them in dealing with legal challenges in their day-to-day work. A compliance officer has been appointed and advises employees on corresponding matters to avoid legal violations. The compliance officer is available as a contact person in case of legal doubts regarding personal conduct or information regarding the working environment. Disclosed circumstances are treated confidentially on request. Incidents can also be reported to the independent internal reporting office, anonymously using a web-based whistleblower reporting system (accessible at www.kraiburg.de or through the websites of the individual divisions), by telephone at +49 8638 61 444, by email to whistleblowing@kraiburg.com, in a personal meeting, or by mail. Whistleblowers are protected against disadvantages or other negative subsequent measures. No reports were submitted in 2023.

Compliance is of key importance for every company today due to the numerous new and revised European directives and national laws, the resulting obligations, and official requirements for companies. KRAIBURG TPE strives to ensure legal compliance. Transparency and an understanding of the respective requirements are prerequisites. These aspects are facilitated by the "Quentic" software system with the partner "Legal Compliance" that continuously updates legal requirements and periodically reviews compliance in cooperation with qualified personnel. This not only increases the awareness of the persons responsible, but also ensures the implementation of necessary compliance measures. An external service provider ensured the legal compliance of KRAIBURG TPE in the course of 178 reviews in 2023. A total of 573 valid legal regulations were recorded in the software, with 134 changes that affected KRAIBURG TPE. The company continuously optimizes its processes for the timely completion of reviews and the documentation of approvals and notices.

Corruption and bribery

Company management, the employees, and subcontractors of KRAIBURG TPE and its business partners act in accordance with applicable criminal and administrative offenses law. Acts of corruption and bribery in particular are punishable and/or subject to fines – both in the private sector and in relation to the civil service.

Company management, employees, and subcontractors do not ask for or accept promises of benefits for themselves or third parties, nor accept them as consideration for unfair advantages (corruptibility). Offering, promising, or granting such an unfair advantage is conversely prohibited as well (bribery). This applies especially in relations with officials and people with special public functions with regard to their official position, but also for private individuals without the legally effective approval of the respective supervisor.

Granting and accepting benefits that are customary and socially acceptable in view of the respective business relationship is permitted in the private sector. As a rule, they must not exceed a value of USD/EUR 60.00. The prior approval of the compliance officer or company management is required beyond this amount. Approval may be given if the benefit is not associated with preferential treatment. There were no violations at KRAIBURG TPE in the reporting year.

Anti-competitive practices

Competition and a free market economy are essential elements of a free society. Safeguarding and protecting this is in the interest of the KRAIBURG Group and its business relations. Applicable European and international competition and cartel laws must be followed at all times. The following in particular is prohibited:

- Agreements on prices, price increases, and other pricing parameters (rebates, discounts, payment terms, etc.)
- Exchange of sensitive market information between competitors, for example, turnover, prices, strategies, customer data, or market share
- Dividing up markets, in particular the mutual assignment of clientele and sales regions
- Enticement and exclusivity undertakings, insofar as they are not exempt from the cartel ban

- Price fixing agreements, meaning an undertaking of customers to resell at a minimum or fixed price
- Abuse of a dominant market position
- Coordination of offers in a public or private tendering procedure

8.4 | Objective 3: Ensure transparency through certifications and by adhering to standards

KRAIBURG TPE strives for transparency and credibility by operating and acting according to recognized standards.

- **Integrated quality, environmental, and energy management:** In the interest of continuous improvement, KRAIBURG TPE's environmental management system at the Waldkraiburg site has already been certified according to DIN EN ISO 14001:2015 since 2002. The energy management system was first validated according to the DIN EN ISO 50001:2018 standard in 2013. Determining and evaluating environmental aspects and measuring the environmental performance via key indicators are central elements. Within the framework, the company has identified environmental impacts, opportunities, and risks throughout the product life cycle and summarized measures in an environmental program. This process has been carried out, documented, and optimized using corresponding software.
- **The Product Carbon Footprint** of KRAIBURG TPE compounds is reported according to the strict requirements of the Greenhouse Gas Protocol and based on the DIN EN ISO 14044/14067 standards. Responding to customer inquiries and communication related to the PCF are therefore largely standardized. Provided that all basic requirements for calculating the PCF are met, existing customers receive informative values within a few days.
- KRAIBURG TPE has established climate targets according to the guidelines of the **Science Based Target Initiative (SBTI)**. Thus the climate targets are based on established, scientifically substantiated standards and guided by the Paris Agreement.

- **ISCC PLUS:** The Waldkraiburg site was initially certified in January 2023 and successfully recertified in November 2023. High social and environmental standards are therefore assured along the entire supply chain for ISCC PLUS raw materials.
- KRAIBURG TPE has been voluntarily participating in select external sustainability ratings since 2020. The **Carbon Disclosure Project (CDP)**, a non-profit organization, gave KRAIBURG TPE a grade of “B” in the climate category for 2023.
- **EcoVadis** evaluates the corporate sustainability of companies using integrated ratings. With the silver medal ranking for sustainability engagement in the environment, labor practices, ethics, and sustainable procurement categories, KRAIBURG TPE is among the best 15% of evaluated companies in the chemicals sector for 2023. This corresponds to a 10% improvement compared to the prior year.

A total of 44 audits were conducted in the reporting year: 24 internal, one customer, two certification, and four supplier audits along with twelve safety inspections and one environmental inspection.

Conclusion

KRAIBURG TPE pursued the further development of sustainability in the 2023 reporting year and established this complex of topics as the sixth core competence. Strategy development and formulating quality objectives were the focal points. The objectives are aligned with the five key topics for KRAIBURG TPE – climate and energy, water, circular economy for resource conservation, responsibility to employees, and responsible corporate governance. With regard to the environment, we intend to achieve improvements in energy, climate, and water management, implement the 2031 Climate Program, and expand circular management. Processes and procedures will be examined to identify and realize additional optimization potential. Progress is already being made at the product level: in the form of proportions of bio-based raw materials, post-industrial recycled materials, post-consumer recycled materials, and more sustainable compounds, we help our customers on their way to the circular economy. For our own employees, we ensure greater job satisfaction, health awareness, and a safety culture that is put into practice, along with training and continuing education for skilled workers. The transfer of sustainability know-how and knowledge is also promoted for all KRAIBURG TPE employees across all departments. By complying with the internal code of conduct and ensuring legal compliance and transparency regarding standards and certifications, we promote responsible corporate governance.

Gaps in existing reporting regulations are closed and the overall responsibility for sustainability reporting is expanded by the Corporate Sustainability Reporting Directive. Standardization of the company information that needs to be published leads to greater transparency, comparability, and measurability. We are increasingly engaging with the associated European Sustainability Reporting Standards.

Waldkraiburg, 26 June 2024



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