

Environment and Responsibility

1. Foreword



Dear Readers and Employees,

with this consolidated environmental statement for the year 2022, we would like to document the importance of environmental protection at GEALAN and report on the progress we have made in achieving our environmental goals to interested parties, our customers and suppliers, as well as our employees.

It is becoming increasingly urgent for all of us to align our goals, our work and our actions in harmony with our environment as well as the available raw materials and natural resources. The GEALAN Group is deeply committed to this major goal for society as a whole. Sustainable management has demonstrably defined our entrepreneurial actions for decades. The fruits of our labour can already be seen, particularly when it comes to the use of raw materials and energy. Many of our work steps are much more efficient today than they were a few years ago. Nevertheless, we continue to strive for additional improvements. We are researching new ways to boost efficiency and try to use our resources more sparingly. We also develop and test new materials and constantly strive to make our processes more expedient. We achieve all these goals through technical innovations and by finetuning organisational measures within our company. Where it makes sense, we also enter fruitful partnerships, because we are convinced that long-term and trusting partnerships are another key to sustainable living and working. With all of GEALAN's initiatives to date and our efforts over the past decades, sustainability will become an even greater priority at GEALAN in the future.

Our corporate strategy will be laid out even more emphatically and future-oriented in this regard. The corresponding adjustment of our strategic alignment took place in 2022, and its implementation has already started.

The current environmental statement includes a description of the two EMAS-certified locations of the GEALAN Group in Germany: GEALAN Fenster-Systeme GmbH and GEALAN Tanna Fenster-Systeme GmbH. Both companies have been certified according to EMAS (EC Eco-Management and Audit Scheme) since 1996 and according to ISO 14001 since 1997. With this unique selling point, GEALAN is a trailblazer in the PVC window profile system provider sector.

As always, we continue to consider environmental protection and resource efficiency to be a prerequisite for long-term corporate success. Social, societal and environmental aspects must be considered in every economic decision we make. We actively pursue dialogue with all stakeholders. We do this because we want to be seen as an open-minded company. But we also consider it our duty to help shape the development of the industry in terms of sustainability.

The GEALAN Management

Ivica Maurović

(Spokesperson of the Executive Board and Managing Director of Sales, Marketing and Systems Development)

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(Managing Director Technology and Finance)

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2. General conditions



2.1 Locations

In order to make a significant contribution to climate protection, GEALAN has been procuring electricity for the two German sites in Oberkotzau and Tanna on a completely CO₂-neutral basis since 2021.

A new raw materials warehouse was completed and occupied at the production and logistics site in Tanna. The construction of a new fully automated high-bay warehouse started on schedule in May 2022 and will take until the end of 2023.

GEALAN commissioned a new recycling plant at the Tanna site in May 2021. This was the first of three steps on the evolutionary path from a manual to an automated recycling process at GEALAN. This process was further advanced in 2022. As part of this continued development, additional silos for recycle storage were built in Tanna and at the administration and technology site in Oberkotzau. Moreover, new granulators were installed for shredding production waste, returns and materials from customer conversions.

The qualitative and quantitative expansion of the in-house tool shop in Oberkotzau is moving along. After the digitalisation of facilities and processes in the previous year increased efficiency, the main focus in 2022 was on reconstruction measures. The same applies to the administrative buildings at the main site, where the workstations were upgraded to a new office concept. The first few employees have already moved in.

On the product side, 2022 marked the 10th anniversary of the GEALAN S 9000 system platform. Since its market launch in 2012, the diverse and varied system platform has proven itself worldwide with almost 200 million profile metres produced.

GEALAN's leading position in digital development was confirmed in autumn 2022: the third gold ARCHITECTS' DARLING® award in a row for the Building Information Modelling data service corroborates the pioneering role of the PVC-U system provider with regard to window planning of the future.

GEALAN also has a long-term human resources policy. GEALAN was recognised for the successful career development of its employees and for providing modern, future-oriented workplaces. For these accomplishments,

the company received the LEADING EMPLOYER award for the first time at the beginning of 2022. This places the company among the top 1% of all employers in Germany. Around the same time, IHK Ostthüringen (East Thuringia Chamber of Industry and Commerce) in Gera also named GEALAN one of the top training companies.

GEALAN's sustainable corporate policy is also reflected in its regional commitment around its two German locations: Since 2021, the company has been the main sponsor of the Rockman Run series of running events in Upper Franconia. The company recently confirmed that it would provide further support for the local event series. The handball players of SV 04 Plauen-Oberlosa also receive active and financial support. Despite their league relegation GEALAN continues to be involved to the same extent. The annual #GEALANTeamSupport campaign has also been running since 2021. GEALAN supports associations from the region and their selected projects with three donations of €1,000 each. GEALAN's extensive regional commitment is rounded off by another annual donation to the initiative 'Hilfe für Nachbarn e.V.' (Help for Neighbours) in the run-up to Christmas, which provides unbureaucratic assistance to people in need in the region.

Based on voluntary commitments, GEALAN has joined numerous initiatives and has been implementing their consistently sustainable guidelines and recommendations for years. This includes VinylPlus®, Umweltpakt Bayern (Environmental Pact of Bavaria), Nachhaltigkeitsabkommen Thüringen (Sustainability Agreement of Thuringia), the window recycling company Rewindo, VinylPlus Deutschland e.V. and Österreichischer Arbeitskreis Kunststofffenster (ÖAKF – Austrian Task Force for Plastic Windows).





2.2 Corporate policy

The GEALAN Group is a corporate network that develops, manufactures and finishes systems for windows and doors made of PVC-U profiles.

As a system provider, our company sells many other necessary parts besides the profiles to enable our customers to manufacture complete windows and doors.

Sustainability is more than a trend for GEALAN! We act economically and handle all raw materials with care – and have been doing so for more than 25 years. GEALAN produces high-quality PVC profiles in a process that conserves resources and is therefore environmentally friendly.

Our environmental management and the sustainability of our products are certified and regularly monitored. GEALAN works with numerous partners to promote environmental protection and sustainable development in the company and to constantly refine it through regular exchange.

Based on partnership collaboration, we strive for a high level of customer satisfaction and offer our customers competitive advantages through intelligent, high-quality and sustainable products, through delivery reliability and speed, as well as through perfectly aligned service and training. To ensure these customer benefits, we are constantly developing our integrated management system and creating synergy effects between the individual subject areas of environment, energy and quality. We achieve continuous improvement of our results by setting and reviewing goals.

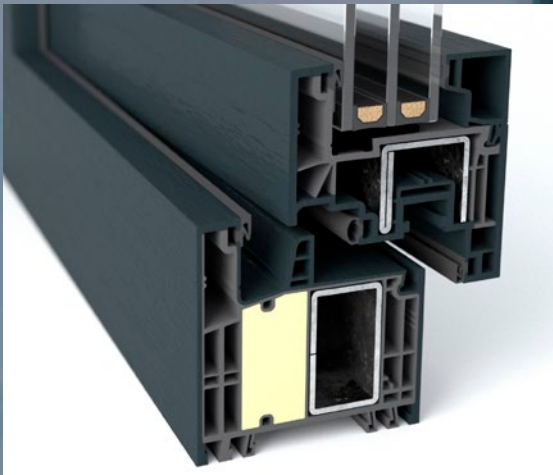
Our employees play an important role here. They perform their tasks independently, in a quality-conscious, environmentally aware and resource-conserving manner, and with an awareness that their performance has a direct impact on our corporate success. We support them with category-based information events, customised professional and personal training and development measures, and with the opportunity to actively contribute improvements to their work processes and environment.

Our processes are another important element. They are designed to be comprehensible and transparent. With the premise that it is more effective to prevent mistakes than to correct them, we frequently analyse our processes and adapt them to the latest technological advancements. The necessary resources for this are provided by the management.

In addition to an efficient workflow, the main focus is on the careful use of various materials and energy resources in order to protect our employees and the environment from negative impact. To this end, we already pay attention to the energy efficiency of products and their potential impact on people and the environment when we procure them.

In order to be a strong, reliable partner for our customers, suppliers, authorities, the general public and our employees, we take compliance with legal and other requirements very seriously and always ensure open and transparent communication with the various interest groups.





2.3 Products

Windows, doors and sliding solutions made from the latest generation of GEALAN profile systems have profile geometries that have been optimised down to the smallest detail and meet all technical requirements. In terms of heat, sound and burglary protection or ventilation, windows made from GEALAN PVC profiles are always at the cutting edge of technology.

Products made of PVC profiles are easy to clean and very low maintenance. Largely resistant to weathering and environmental impact, they have a long service life and thus contribute to sustainable use, in some cases for decades.

GEALAN already started factoring recycling into its product development at the end of the 1990s. This already applies during the design phase of new tools for profile production and during the manufacture of the profiles themselves, but also when it comes to the recyclability of the final product. GEALAN's products are thus designed sustainably throughout, from the first design sketch to the recyclable final product.

GEALAN is a co-partner of the company REWINDO – a recycling initiative of German plastic profile manufacturers. In this context, the company is committed to using recycled old window material in the inner core of GEALAN profiles. It has sourced this material from the window industry's closed-loop recycling system for more than 25 years now. PVC from old windows is thus reused in an environmentally sensible way in new, highly insulating window profiles. Already more than 30 per cent of the PVC used at GEALAN is recycled material – and the trend is rising. In addition to old windows, 100% of GEALAN's own production residues are returned into our highly efficient recycling loop.



Durable and easy-to-clean windows made of GEALAN multi-chamber profiles ensure that the heat stays indoors and the noise outside. But other carefully considered product solutions from GEALAN also play their part in using energy and raw materials responsibly.

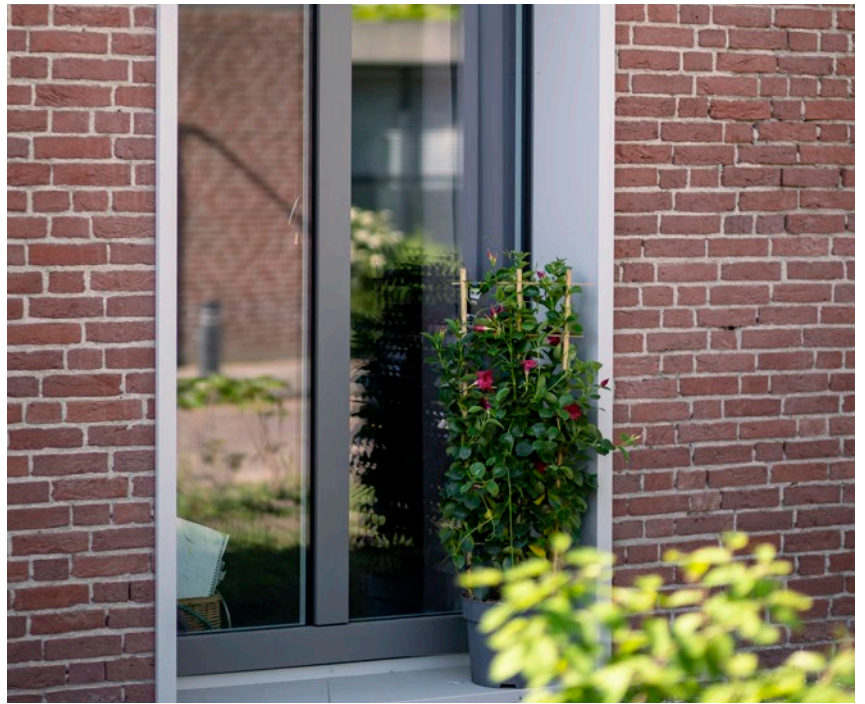
The new premium profile system GEALAN-KONTUR® combines modern appearance and excellent functionality in one system: Modern style meets durability, but also offers the best thermal and sound insulation values.

GEALAN-LINEAR® is another newly designed window and door system that not only stands out due to its visually striking appearance. Like other GEALAN profiles, the use of recycled materials also sets a forward-looking milestone with regard to the environment. After all, a high proportion of the GEALAN-LINEAR® system profiles are supplied with a recycled core by default. Since the energy-related improvement of existing buildings is an increasingly important topic for the future, GEALAN-LINEAR® is also an excellent choice for renovations and retrofits due to the narrow construction depth.

For more than 40 years, GEALAN has been protecting and enhancing PVC windows with GEALAN-acrylcolor®. This acrylic surface is inseparably bonded to the base body. It is resistant to external influences such as weathering or sunlight and is also low maintenance. Windows protected by this unique surface technology do not need to be painted or repainted during their service life, thus saving valuable resources.

With the GEALAN-CAIRE® product family, our system supplier has been offering a ventilation programme for decentralised living space ventilation since 2020. CAIRE stands for CONTROLLED AIR REGULATION, which means that it provides controlled ventilation with the window closed, which is far superior to conventional window ventilation. The active (in some cases even smart) ventilation systems as well as the passive window ventilators offered by GEALAN contribute to comfortable and sustainable living and indoor workspaces. In new and renovated buildings alike, automated ventilation processes save time and, above all, energy in the form of heating costs. Hence, they prove to be significantly more resource-saving and environmentally friendly than manual ventilation.

Nowadays, such automated ventilation processes can even be controlled via an app: intelligent windows and doors are easily and conveniently networked – with TEXINO's Smart Home solutions, you can create

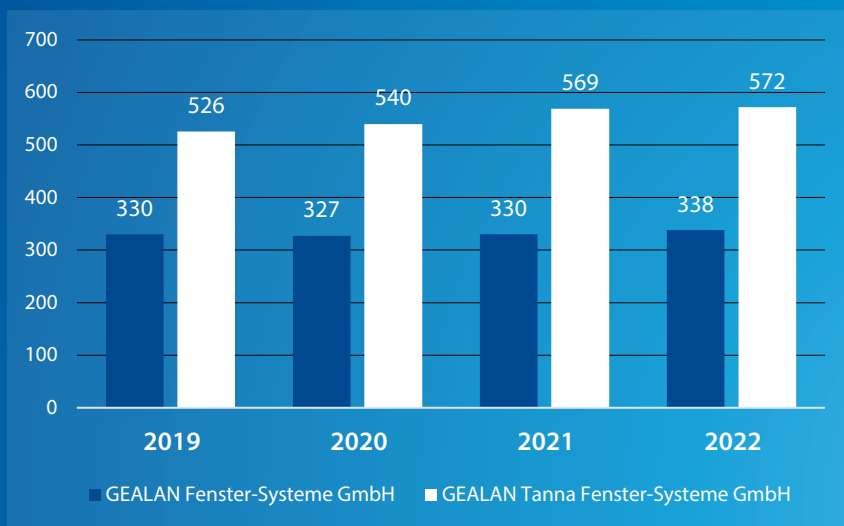


a healthy and safe home with just a few clicks. The TEXINO solutions are designed so that they are child's play to assemble and install. Control is simple and up to date: Smart windows open at the click of a button, the connected roller shutter optionally opens and closes by voice command – and users can keep track of their smart home solutions from anywhere via an app.

(Living) space is also a finite resource. Due to the increasing densification within cities, the sustainable use of the available space is becoming more and more important in building planning. The innovative GEALAN-SMOOVIO® sliding system offers a clever solution here: since there is no need to rotate the sash, the large opening element takes up hardly any (living) space. Optimised sealing tightness rounds off the modern sliding solution. Easy operation and a good price-performance ratio make GEALAN-SMOOVIO® a space- and resource-saving (i.e., sustainable) sliding solution, especially for multi-storey residential buildings.

2.4 Organisation and employees

The sustainable development of the GEALAN Group is supported by the current 'GEALAN Strategy 2027', which includes various goals and initiatives in addition to the mission and vision. The strategy was developed by the management in collaboration with the executives.



Development of employee numbers at the EMAS sites in Oberkotzau and Tanna



VISION

Our inspiration - to fascinate people!

Together we create the framework for the world of windows – innovative, sustainable and customer-oriented.

The following illustration shows the company structure:

Management Spokesperson	Management	Technology/Finance	
Integrated management system	Divisions	Occupational Safety	Facility Management
Design, Technology Centre, QM	Businesses divisions	Production	
Sales Areas		R&D	
Product Management/Innovation, Customer Service Centre		Toolmaking	
Materials Management		Logistics	
Marketing Communication and Public Relations		Information Technology	
		Commercial area Credit Management, Legal/Compliance, Human Resources, Organisation/Controlling, Accounting, Auditing	

2.5 Direct and indirect environmental aspects

Direct environmental aspects occur at the two company locations with the associated products, activities and services, which are subject to direct operational control.

Indirect environmental aspects can only be influenced by the organisation to a limited extent, as they primarily occur in interactions with third parties.

Environmental aspects are identified and assessed at least once a year within the setting of environmental committees and audits. Furthermore, the risks of the environmental aspects are determined annually and resulting measures are derived. Material quantities and their recyclability are also periodically checked.

In addition to the main environmental aspects (such as

energy consumption, waste, hazardous substances and emissions), land use and the use of auxiliary and operating materials play a significant role and are considered in corporate decisions and in work groups.

For example, this includes constant monitoring and substitutability of materials or the company's own use of land at the Tanna site. The resource-conserving use of energy is strongly supported by the electricity tariff that has been in effect since July 2020.

3. Legal and other obligations



For both EMAS sites, compliance with legal regulations as well as official obligations and requirements are taken very seriously and are therefore consistently applied. There are no complaints or legal violations of environmental law at either site. For information on new, relevant legal regulations, we use a web-based legal database with a semi-annual update service on legal changes. This approach ensures a regulated procedure for passing on information about the legal situation to employees. This system is also supported through internal audits and inspections, which are used to observe the implementation of the relevant legal requirements.

Moreover, official wastewater inspections are carried out twice a year. Monthly self-monitoring inspections (wastewater measurements) and emission measurements are performed to ensure that all official requirements and limit values are in full compliance.

4. Environmental audit/internal audits

During the reporting period, several environmental audits were carried out by an environmental team consisting of the Integrated Management System division, the environmental coordinators, the energy officer as well as the occupational safety specialists and the fire safety officers.

The environmental management system was audited, assessed and, where necessary, adjusted with the involvement of the management. Extensive site inspections are part of the environmental audit.

The effectiveness of the environmental management system of the two companies GEALAN Fenster-Systeme GmbH and GEALAN Tanna Fenster-Systeme GmbH fulfils the requirements of the EMAS III regulation and/or a successful validation. The identified potential for improvement is summarised in a central list of measures and is being implemented by the specialist departments.



5. Implementation of the Environmental and Energy Programme 2022 at the Oberkotzau and Tanna sites



The strategic goal of saving 4% of the energy demand from 01/01/2018 to 31/12/2022 based on 2017 was clearly met. The demand in 2017 was 31,495,344 kWh and could be reduced by 2,979,807 kWh due to various projects and a higher material throughput. This corresponds to a reduction by 9.5%.

In 2022, 1.85 ha of land was maintained. It had been reforested into mixed forest by the company in previous years to support the increase of biodiversity. This will result in a CO₂ reduction of approximately 140,000 kg per year, with the reduction increasing as the trees grow.

In order to reinforce standardisation within the group of companies, the process software was rolled out to all locations. The process descriptions will be completed in 2023. Furthermore, work has begun on rolling out the energy management system to the production sites in the network. This project will also be completed in December 2023.

To reduce transport, a raw materials hall was built at the Tanna site and the construction of a high-bay warehouse was initiated, which is expected to be completed in 2024. This should eliminate approximately 10,000 operating hours of forklift journeys.

To optimise the recycling process, additional silos were built at the Tanna and Oberkotzau sites and new granulators were installed. This will optimise transports and improve workplace ergonomics for employees.



6. Environmental performance

6.1 Database and documentation

The environmental performance is based on regularly recorded input and output quantities. They show which substances and resources enter the respective site and which leave it again.

Since the reference to an individual item among roughly 28,000 items is not meaningful and not informative, the quantity of raw materials is used as a benchmark for the

environmental performance indicators for the Tanna site. This also considers resource consumption of the materials reprocessed in the internal materials cycle. For the Oberkotzau site, new key figures had to be established after the relocation of the plant to Tanna. Therefore, the number of employees at the site is used as the reference value.



6.2 GEALAN Fenster-Systeme GmbH

INPUT	2019	2020	2021	2022
1 Raw materials (t)	1.952	1.620	3.630	3.688
2 Auxiliary and operating materials (t)	5.62	5.93	5.75	4.58
3 Municipal water (m ³)	6.231	5.324	4.151	4.865
4 Energy (MWh)	7.180	6.699	7.026	7.080
4.1 Electricity	3.791	4.001	3.886	3.674
4.2 Natural gas	960	1.002	1.238	1.321
4.3 Heating oil	91	74	161	147
4.4 Fuels	2.338	1.622	1.741	1.938
OUTPUT				
6 Non-hazardous waste ⁽¹⁾ (t)	246	254	329	251
7 Hazardous waste ⁽²⁾ (t)	14	12	17	23
8 Wastewater (m ³)	6.231	5.324	4.151	4.865
9 CO ₂ emissions ⁽³⁾ (t) (calculated)	2.880	1.834	885	960
9.1 Electricity	1.902	1.070	0	0
9.2 Natural gas	233	243	300	320
9.3 Heating oil	29	23	50	45
9.4 Fuels	718	498	535	595
10 VCM emissions in (t) (calculated)	0.0017	0.0014	0.0031	0.0019
11 Other emissions (t) (calculated) ⁽⁴⁾	4.321	4.254	4.263	4.090
11.1 SO ₂	1.222	1.277	1.274	1.205
11.2 NO _x	2.895	2.782	2.792	2.695
11.3 PM ₁₀	0.204	0.195	0.198	0.190

^{(1), (2)} For clarity, the total is referenced. The breakdown can be seen in the waste report.

⁽³⁾ CO₂ emissions: Total emissions from electricity generation, heating energy and fuel consumption.

⁽⁴⁾ Source: GEMIS 4.95 [calorific value/direct emissions (without upstream chains)] as of: 04/2017

6.3 GEALAN Tanna Fenster-Systeme GmbH

INPUT	2019	2020	2021	2022
1 Raw materials (t)	69.314	67.844	79.032	83.054
1.1 Recyclate, external purchase (t)	2.584	2.273	6.922	6.351
1.2 Internal recyclate (t)	12.237	12.077	14.575	14.252
2 Auxiliary and operating materials (t)	504.26	502.13	653.81	624.90
2.1 Adhesive+cleaner+primer ⁽¹⁾	455	456	603	576
3 Water (m ³)	19.918	16.527	13.640	14.230
4 Energy (MWh)	32.679	31.929	35.598	35.598
4.1 Electricity	29.670	28.595	31.731	31.429
4.2 Heating oil	1.137	1.644	1.932	1.560
4.3 Liquid gas	502	466	481	498
4.4 Fuels	1.370	1.224	1.454	1.494
OUTPUT				
5 Semi-finished and finished goods (t)	69.190	67.702	78.837	82.660
5.1 Profiles (goods) (t)	49.065	49.600	59.830	59.031
5.2 Recycling rate ⁽¹⁾ (%)	30	29	36	35
6 Non-hazardous waste ⁽²⁾ (t)	1.339	1.110	1.253	1.356
7 Hazardous waste ⁽³⁾ (t)	28	28	31	21
8 Wastewater (m ³)	19.918	16.527	13.640	14.230
9 CO ₂ emissions ⁽⁴⁾ (t) (calculated)	15.771	8.642	1.136	1.028
9.1 Electricity	14.881	7.649	0	0
9.2 Heating oil	352	509	599	483
9.3 Liquid gas	130	121	125	129
9.4 Fuels	408	363	412	416
10 VOC emissions ⁽⁵⁾ (t) (calculated)	10.8	11.4	14.4	13.8
11 VCM emissions (t) (calculated)	0.061	0.059	0.068	0.069
12 Other emissions (t) (calculated) ⁽⁶⁾	26.633	23.336	28.916	28.430
12.1 SO ₂	9.497	9.334	10.395	10.178
12.2 NO _x	15.977	12.871	17.261	17.013
12.3 PM ₁₀	1.160	1.131	1.260	1.238

⁽¹⁾ Auxiliary and operating materials only shown for profile coating.

⁽¹⁾ The recycling quota describes the ratio between reused recycled material and finished goods.

^{(2),(3)} For clarity, the total is referenced. The breakdown can be seen in the waste report.

⁽⁴⁾ CO₂ emissions: Total emissions from electricity generation, heating energy and fuel consumption.

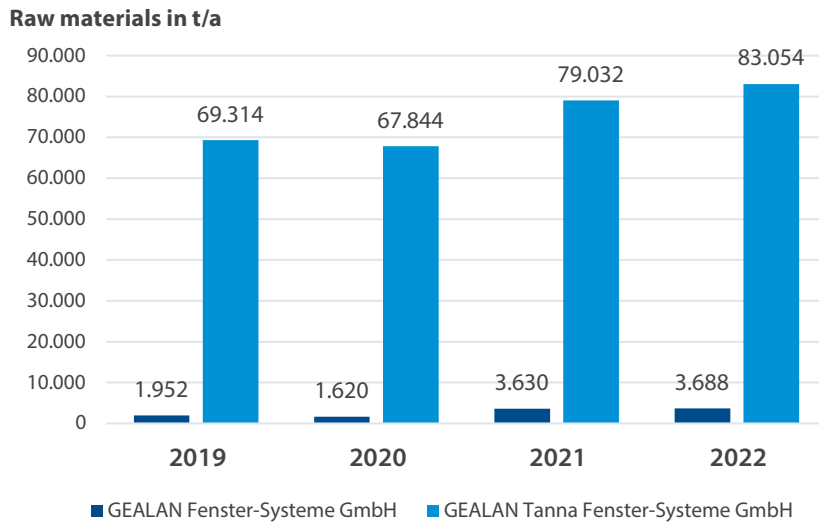
⁽⁵⁾ VOC emissions calculated before thermal afterburning.

⁽⁶⁾ Source: GEMIS 4.95 [calorific value/direct emissions (without upstream chains)] as of: 04/2017

7. Environmental indicators

7.1 Raw materials

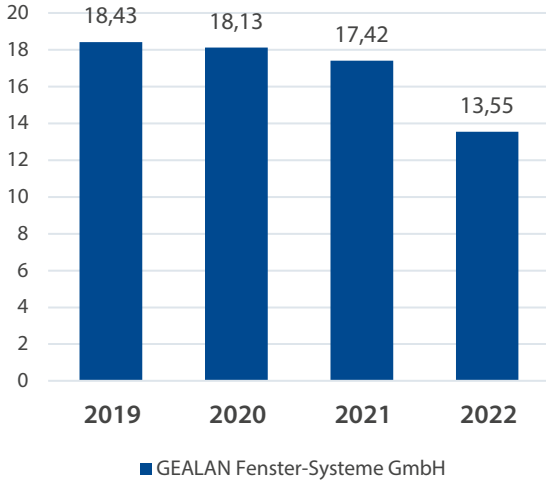
In 2022, approximately the same amount of raw materials was processed in toolmaking at the Oberkotzau site as in 2021. At the Tanna site, on the other hand, another increase was recorded due to the strong order volume in the first half of the year.



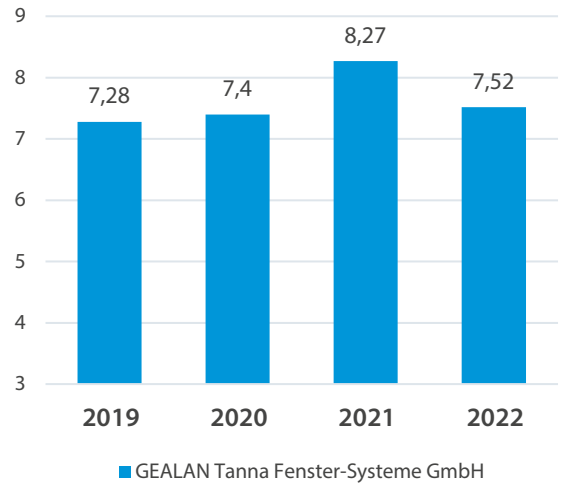
7.2 Auxiliary and operating materials

In 2022, the consumption of auxiliary materials and operating materials was reduced at both locations, whereby the reduction at the Oberkotzau location is more significant. Due to the continued high order situation and wide variety in 2022, the reduction in Tanna is lower, so that consumption is reported at a constant level. Primers, adhesives and decorative foils in the profile finishing segment are especially reflected here.

Consumption of auxiliary and operating materials in kg/employee



Consumption of auxiliary and operating materials in kg/t of processed raw material

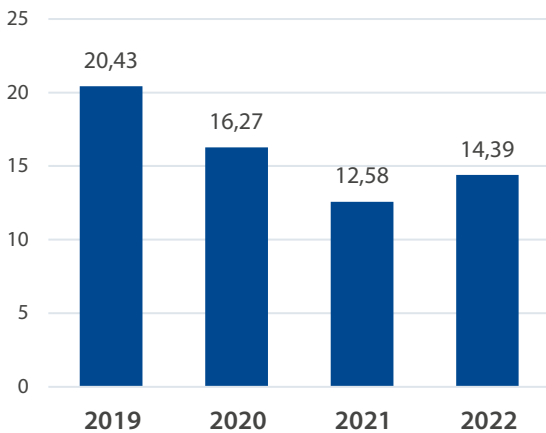




7.3 Water

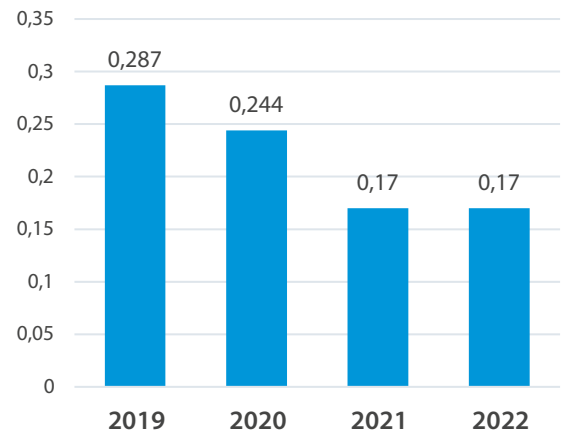
At the Oberkotzau site, water consumption corresponds to process water for tool-making in addition to industrial water. Water consumption has increased in 2022 due to the utilisation of the tool shop, but also due to the more regular attendance of employees after the Covid-19 pandemic.

Consumption of water in m³/employee



■ GEALAN Fenster-Systeme GmbH

Consumption of water in m³/t of processed raw material



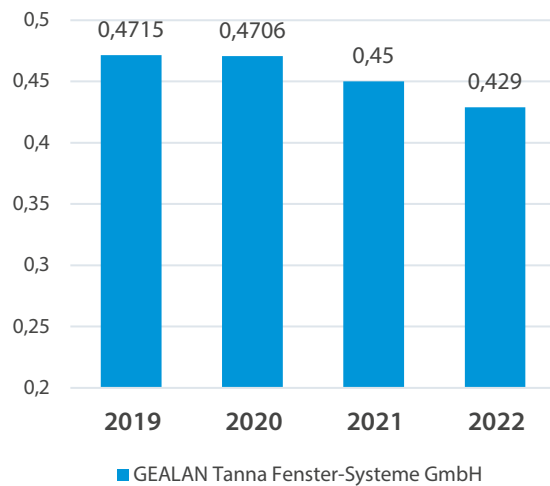
■ GEALAN Tanna Fenster-Systeme GmbH

At the Tanna site, process and industrial water are also included in the analysis. Due to the high order intake in 2022, there is a slight increase in consumption.

Energy consumption in MWh/employee



Energy consumption in MWh/t of processed raw material



7.4 Energy

At the Oberkotzau site, energy consumption per employee has again dropped slightly compared to the previous year. Among other things, this is attributable to the implementation of the Ordinance on Securing Energy Supply via Short-Term Measures (EnSikuMaV). At the Tanna site, energy consumption per tonne of raw material remained at a similar level with a slight decrease.



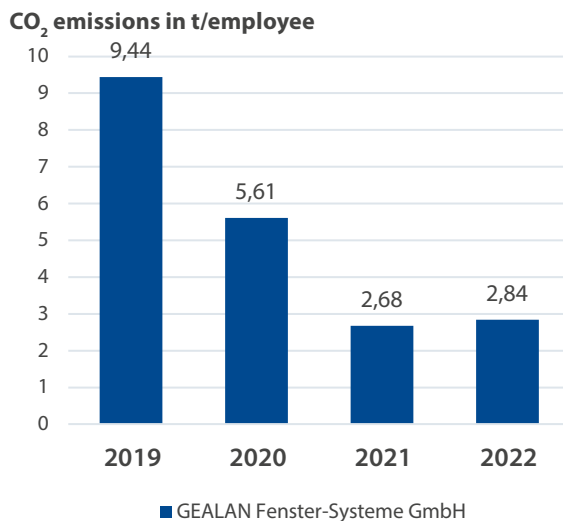


7.5 CO₂ emissions

The calculated CO₂ emissions in Oberkotzau are the sum of the emissions from natural gas, heating oil and fuel consumption. At the Tanna site, the emissions are the sum of heating oil, liquefied petroleum gas and fuel consumption.

In 2022, CO₂ emissions amounted to 2.84 tonnes per employee and 0.012 tonnes per tonne of raw material. Despite the purchase of green electricity from July 2020, for which the supplier certifies an annual reduction of approx. 1,916,600 kg of CO₂ (based on the national average of CO₂ emissions), a slight increase is recorded at the Oberkotzau site. This can be explained by the higher utilisation of the toolmaking and pelletising facilities.

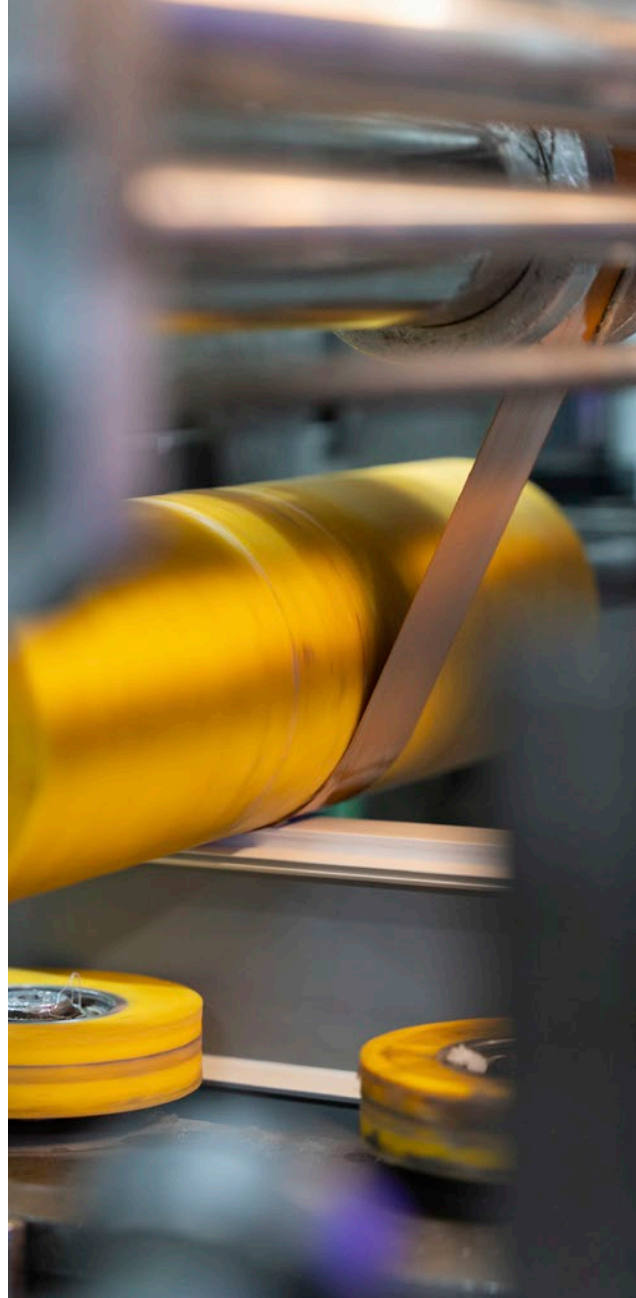
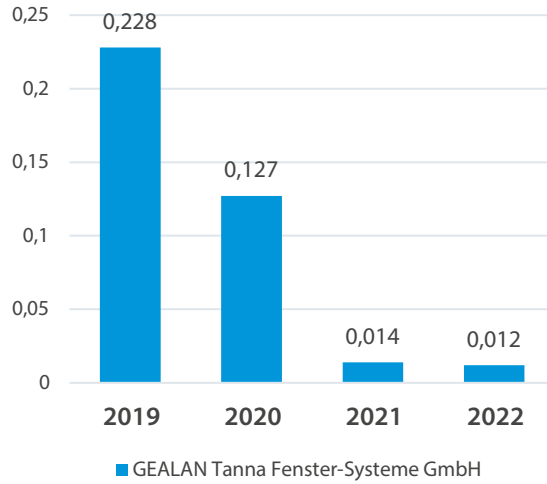
In total, the calculated CO₂ emissions for both sites amount to 1,988 t CO₂ equivalents.



7.6 VOC emissions

The existing afterburning system at the Tanna site has been approved in accordance with the Federal Immission Control Act. Among other things, the VOC emissions are affected by the steadily decreasing batch sizes and the resulting increased cleaning work on the laminating systems. In 2022, they remained at the same level despite new systems.

CO₂ emissions in t/t of processed raw material



7.7 Noise

The environmental impact during normal operation primarily includes the noise emissions caused by the transport traffic of the delivering and collecting haulage companies, the company cars and the employee vehicles.

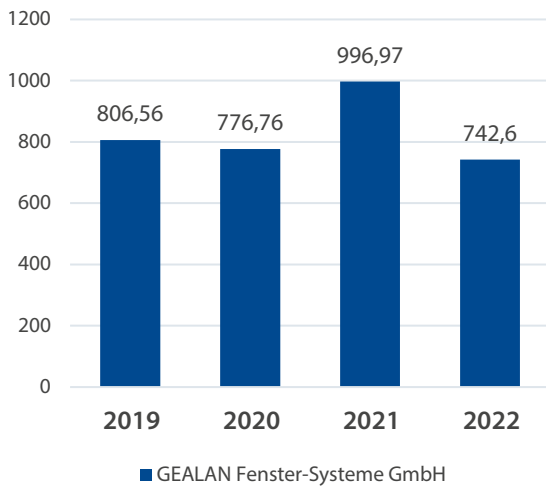
A time frame is set especially for delivery traffic, which is being strictly observed. No complaints about noise have been received from residents at either of the EMAS sites. The noise emission requirements are checked and documented at regular intervals through self-monitoring.



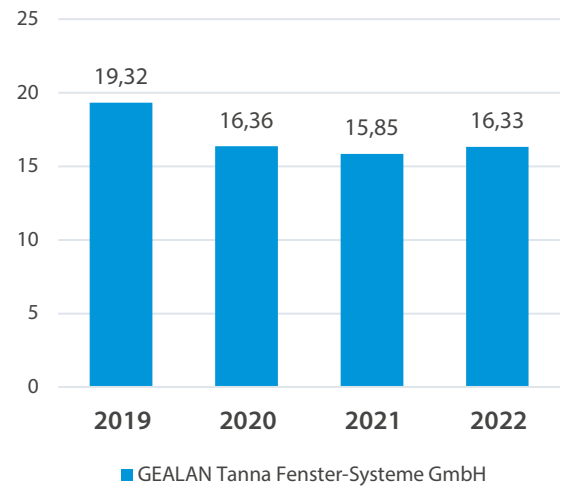
7.8 Waste – non-hazardous

The waste generated at the sites is collected separately and recycled in a regulated and monitored manner.

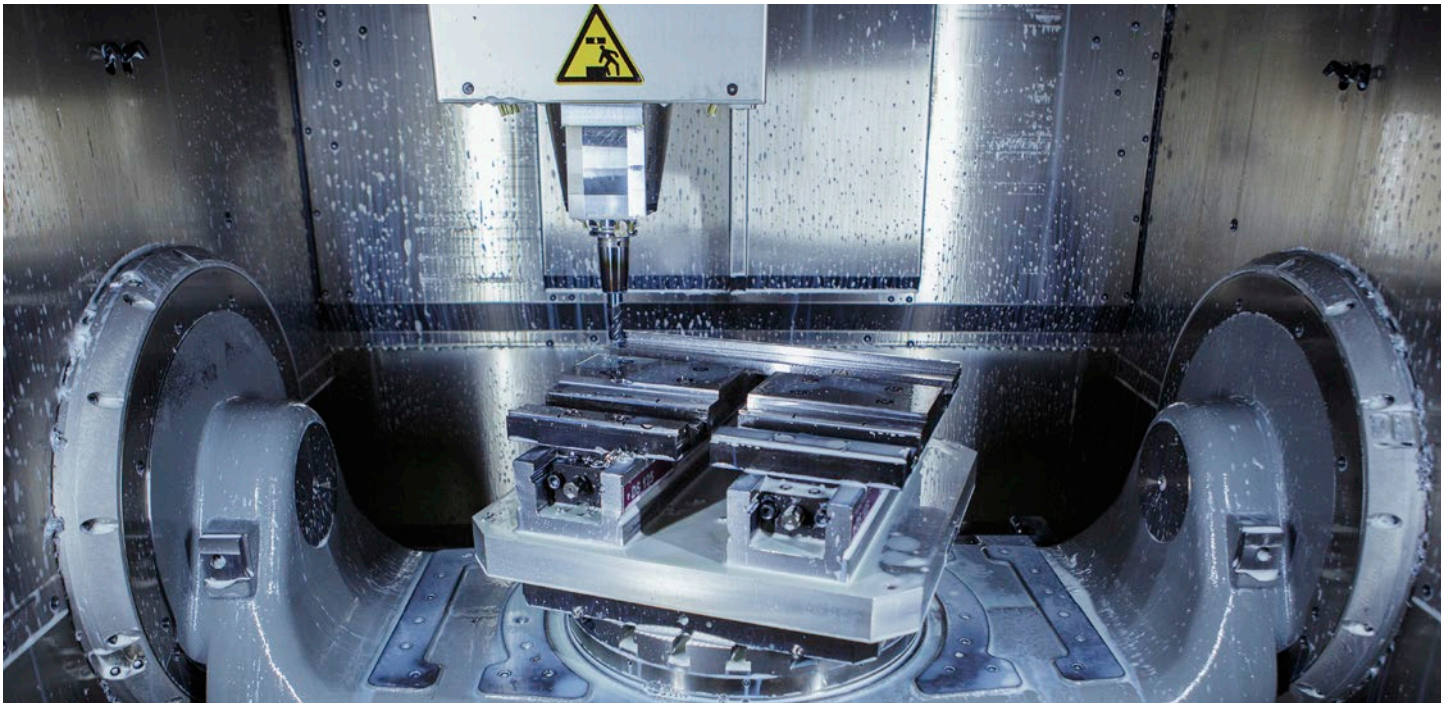
Hazardous waste in kg/employee



Non-hazardous waste in kg/t of processed raw material

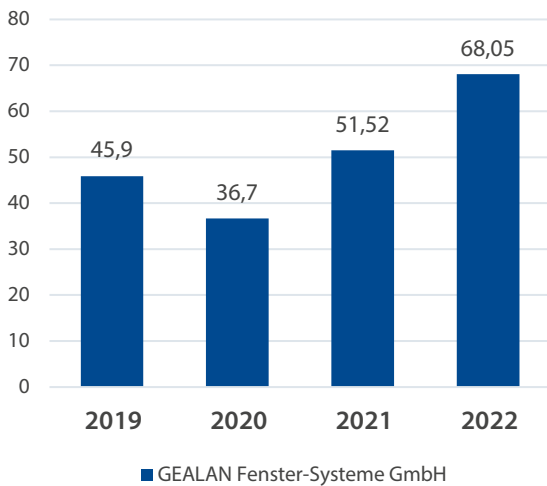


In Oberkotzau, a reduction in non-hazardous waste per employee was recorded, whereas an increase was recorded at the Tanna site. Among other things, this is attributable to the high order situation, resulting in more packaging materials being put into circulation and taken back.

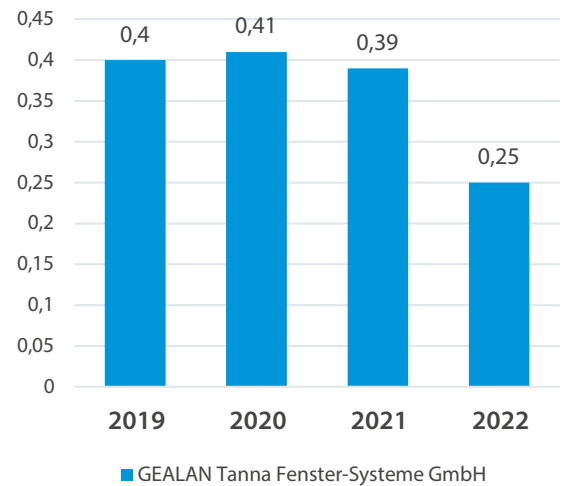


7.9 Waste – hazardous

Hazardous waste in kg/employee



Hazardous waste in kg/t of processed raw material



The hazardous waste per employee at the Oberkotzau site has increased due to the high capacity utilisation of the tool shop. At the Tanna site, hazardous waste per tonne of raw material continues to decline.

8. Core indicators

8.1 GEALAN Fenster-Systeme GmbH

INDICATORS	2019	2020	2021	2022
Raw materials (t)	1.952	1.620	3.630	8.895
Energy demand (MWh)	7.180	6.699	7.026	6.987
Energy efficiency MWh/t	3.68	4.14	1.94	0.79
Water (m ³ /t)	3.19	3.29	1.14	0.55
Water (m ³ /employee)	20.43	16.28	12.58	14.39
Waste non-hazardous (kg/t)	126.02	156.79	90.63	28.22
Waste hazardous (kg/t)	7.17	7.41	4.68	2.59
Biodiversity – degree of sealing in %	91.82	90.03	81.98	81.98
Total areas (m ²)	22.000	28.156	31.292	31.292
Sealed areas (m ²)	20.200	25.350	25.652	25.652
Near-natural areas (m ²)	1.800	2.806	5.640	5.640
Emissions				
CO ₂ (t/t)	1.475	1.132	0.244	0.10
VCM (g/t)	0.871	0.864	0.854	0.21
SO ₂ (kg/t)	0.626	0.788	0.351	0.135
NO _x (kg/t)	1.483	1.717	0.769	0.303
PM ₁₀ (kg/t)	0.104	0.120	0.055	0.021

8.2 GEALAN Tanna Fenster-Systeme GmbH

INDICATORS	2019	2020	2021	2022
Raw materials (t)	69.314	67.844	79.032	83.054
Semi-finished and finished goods (t)	69.190	67.702	78.837	82.660
Energy efficiency (MWh/t)	0.471	0.471	0.450	0.429
Material efficiency ⁽¹⁾ (%)	99.82	99.79	99.75	99.53
Water (m ³ /t)	0.29	0.24	0.17	0.17
Water (m ³ /employee)	37.87	30.61	23.97	24.88
Waste non-hazardous (kg/t)	19.32	16.36	15.85	16.33
Waste hazardous (kg/t)	0.40	0.41	0.39	0.25
Biodiversity – degree of sealing in %	81.87	81.87	81.87	85.06
Total areas (m ²)	120.409	120.409	120.409	121.626
Sealed areas (m ²)	98.574	98.574	98.574	103.457
Near-natural areas (m ²)	21.835	21.835	21.835	18.169
Emissions				
CO ₂ (t/t)	0.228	0.127	0.014	0.01
VCM (g/t)	0.880	0.870	0.860	0.83
VOC (t/t adhesive)	0.0237	0.0250	0.0239	0.0240
SO ₂ (kg/t)	0.137	0.138	0.132	0.123
NO _x (kg/t)	0.230	0.190	0.218	0.205
PM ₁₀ (kg/t)	0.017	0.017	0.016	0.015
⁽¹⁾ Material efficiency: Semi-finished and finished goods in t/raw material in t				

9. Environmental and energy programme for Tanna and Oberkotzau from 2023 onwards



Objective	Measure/Project	Expected benefit/improvement	Target date
Standardisation in the group of companies	Holistic introduction of an energy management system in the GEALAN Group in accordance with ISO 50001	Standardisation of energy policy and increase in sustainability	12/2023
Resource savings of 50,000 kWh per year up to and including 2027	Optimisation of heating control	Reduction by 50,000 kWh/a	12/2023
	Claw vacuum pump system M22.1	Reduction of 20,000 kWh/a	12/2023
	Installation of a heat pump BA2	Savings of 350,000 kWh/a	12/2023
Expansion of the metering point concept by 2027	Provision of weather-adjusted key figures by 2027 through the expansion of Efficio	Weather adjustment/normalisation of key figures for better comparability over the years	12/2025
Process optimisation	Integration of a high-bay warehouse to improve the availability of semi-finished and finished goods	Reduction of forklift hours by 10,000 operating hours per year as of 2024 and thus a reduction of 17.8 kg/h CO ₂ emissions	6/2024
Increase biodiversity	Conversion of agricultural land to mixed forest	Reduction of CO ₂ emissions by approx. 140,000 kg CO ₂ /a	9/2024
Transformation of energy forms	Installation of a heat pump in construction phase 2	Reduction by 350,000 kWh/a	12/2023
Conservation of resources	Increase of the recycling share to 55% in sash combinations	Reduction of 1.8 t CO ₂ /t PVC (compared to raw material)	12/2024
	Increase of recycling share to 37.5% post-consumer material by 2030	Reduction of 53,299 t CO ₂ based on 2022 consumption	12/2030
Reduction of emissions	Redesign and implementation of the TNV	· Plant design for future expansion of lamination · Use other energy sources to operate the plant (CO ₂ reduction) · Possibility of heat recovery	12/2024
Improvement of waste management	Concept development for future sorting of returned goods from customers	Sorting rate will be increased by approx. 5% after implementation of the concept	12/2023



Declaration of validity

Declaration by the environmental inspector on assessment and validation processes

The undersigned EMAS environmental inspector Dipl.- Ing. (FH) Jürgen Schmallenbach (DE-V-0036), accredited or licensed for the sector Manufacture of plastic products 22.2 (NACE code) confirms to have verified whether the sites of GEALAN Fenster-Systeme GmbH in Oberkotzau and GEALAN Tanna Fenster-Systeme GmbH in Tanna – as indicated in the environmental statement with registration numbers (DE-S-106-00003) and (DE-S-154-00004) – meet all requirements of Regulation (EC) No. 1221/2009 of the European Parliament and of the Council of 25 November 2009 and Commission Regulation (EU) 2017/1505 of 28 August 2017 as well as Commission Regulation (EU) 2018/2026 of 19 December 2018 on the voluntary participation by organisations in a Community Eco-Management and Audit Scheme (EMAS).

By signing this declaration, the environmental inspector confirms that

- the assessment and validation was carried out in full compliance with the requirements of Regulation (EC) No 1221/2009, Regulation (EU) 2017/1505 and Regulation (EU) 2018/2026,
- the result of the assessment and validation confirms that there is no evidence of non-compliance with applicable environmental legislation,
- the data and information in the sites' environmental statement depict a reliable, credible and true scenario of all the activities of the organisation/sites within the scope stated in the environmental statement.

This statement cannot be equated with an EMAS registration. EMAS registration can only be carried out by a competent body in accordance with Regulation (EC) No 1221/2009. This statement may not be used as a stand-alone basis for public information.

Oberkotzau/Tanna/Maselheim, 10/05/2023



Dipl.-Ing. (FH) Jürgen Schmallenbach, Master's degree in engineering
Environmental Inspector (DE-V-0036)

Schmallenbach – CONSULTING & CERTIFICATION
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Publication dates

This Environmental Statement was approved by the management in May 2023 and submitted to the environmental inspector for validation. It is published in an annually updated form and checked and validated by the environmental inspector. The next updated environmental statement will be published in May 2024.

Glossary

GEALAN-acrycolor®	In the colouring process, the PVC base is fused indissolubly with the coloured acrylic glass
AOX	Adsorbable organically bound halogens; used to assess water and sewage sludge
BImSchG	Federal Immission Control Act
BImSchV	Federal Immission Control Regulation
Co-extrusion	Simultaneous processing of two plastics via two extruders through one nozzle to form one product
DIN EN 14001:2015	German version of the International ISO Standard entitled: 'Environmental management systems – requirements with guidance for use' (ISO 14001:2015)
Dryblend	powdered mixture of PVC and additives
EMAS III, EG-VO No 1221/2009	Eco Management and Audit Scheme stands for the voluntary commitment of companies and organisations to improve the environmental protection of their operations
Emissions	Substances, noise, heat, cold emitted to the environment
EnEV	Ordinance on energy saving in heated buildings
EPD	Environmental Product Declaration
Extrusion	Molten plastic mass is pressed through a specially shaped nozzle in a continuous process and thereby formed into a product
GFS	GEALAN Fenster-Systeme GmbH
GT	GEALAN Tanna Fenster-Systeme GmbH
Auxiliary and operating materials	e.g. cleaners, lubricants, adhesives and printer ink
IKD®	Intensive core insulation. In the process, the reinforcement chamber of the window sash is foamed with a strong insulating effect
Modifier	powdery substance; is added to PVC and increases impact strength and toughness
PMMA, acrylic glass	Polymethyl methacrylate (PMMA) is a synthetic, glass-like, thermoplastic material called acrylic glass or Plexiglas
PUR	Polyurethane
PVC	Polyvinyl chloride
Rewindo	Association of the leading German plastic profile manufacturers with the goal of increasing the recycling rate of removed windows, doors and roller shutters made of PVC
STV®	Static dry glazing. By bonding the pane to the sash, the pane assumes a static function
TNV	Technical afterburning
VCM	Vinyl chloride monomers
VOC	volatile organic compounds