

Annex

2022

Table of content

Supplementary information pursuant to §243b UGB	115
Additional information on chapters	117
NaDiVeG compliance table	120
GRI Content Index	120
TCFD Index	120
Independent Assurance Report on the Non-financial Reporting according to 243b and 267a UGB	121
Glossary	123
List of tables and figures	128
Imprint	131

Supplementary information pursuant to §243b UGB

Lenzing Aktiengesellschaft – Safety

Work-related injuries for all employees – Lenzing AG

Table 44

	2020 ^a	2021	2022
Total hours worked (productive working hours)	4,129,308	4,830,780	5,406,705
i) Number of fatal injuries	0	0	0
Rate of fatal injuries	0	0	0
ii) Number of high-consequence work-related injuries	0	0	0
Rate of high-consequence work-related injuries	0	0	0
iii) Number of recordable work-related injuries	35	34	28
Rate of recordable work-related injuries	0.94	1.41	1.04
iv) Total number of work-related injuries or ill health	99	87	107
Rate of work-related injuries	4.79	3.6	3.96

Work-related injuries for other workers (workers who are not employees but whose work and/or workplace is controlled by the organization)

	2020 ^a	2021	2022
Total hours worked (productive working hours)	789,421	853,099	846,478
i) Number of fatal injuries	0	0	0
Rate of fatal injuries	0	0	0
ii) Number of high-consequence work-related injuries	0	0	0
Rate of high-consequence work-related injuries	0	0	0
iii) Number of recordable work-related injuries	5	5	7
Rate of recordable work-related injuries	1.27	1.17	1.65
iv) Total number of work-related injuries or ill health	5	10	13
Rate of work-related injuries	1.27	2.34	3.07

a) With the exception of the major projects in Brazil and Thailand for data consistency reasons. The data analysis for 2021 refers only to the total number of reportable violations.

Work-related fatalities

No work-related fatalities were reported at Lenzing AG in the 2022 financial year.

Top five injury types – Lenzing AG

Top five injury types – Lenzing AG^a

Table 45

	2020	2021	2022
The top five work-related injuries for employees		Cuts and lacerations –11	Cuts and lacerations –27
		Bruises –6	Chemical burn –20
		Fracture –5	Abrasion –15
		Sprain –5	Bruises –12
		Conditions due to substances –2	Not assigned –12
The top five types of injuries for contractors		Bruises –2	Abrasions –2
		Chemical burn –1	Fracture –2
		Condition due to substances –1	Sprain –2
		Cuts and lacerations –1	Not assigned –2
		–	Cuts and lacerations –2

a) The list of injury types for the Lenzing site was newly introduced with 2021.

Lenzing Aktiengesellschaft – Workforce

Employees 2022 – Lenzing AG

Lenzing Aktiengesellschaft: Number of employees as of December 31; employees only (including apprentices, excluding temporary workers)

Employees 2022

Table 46

Lenzing AG Lenzing Aktiengesellschaft: Number of employees as of December 31; employees only (including apprentices, excluding temporary workers)	2020	2021	2022
Total headcounts as of 31.12.	3,119	3,201	3,278
Proportion of women	17.7%	18.6%	19.0%
Proportion of age >50	26.0%	24.9%	24.0%
Proportion of non-Austrians	6.1%	6.8%	7.9%
Apprentices	140	144	144
Contractors	144	167	128
Proportion of employees with full-time contract	87.5%	87.2%	87.0%
Thereof female	10.8%	11.6%	12.0%
Thereof male	89.2%	88.4%	88.0%
Proportion of employees with part-time contract	12.50%	12.80%	13.03%
Thereof female	65.8%	65.9%	65.8%
Thereof male	34.2%	34.1%	34.2%
Proportion of employees for whom collective bargaining agreements exist	100%	100%	100%
Employees with disabilities	78	68	59
Turnover rate	6.7%	6.1%	7.7%

As regards potential corruption offenses or breaches of antitrust law, no official measures were undertaken or legal claims made against Lenzing Aktiengesellschaft in 2022.

Figures concerning environmental matters will not be reported separately for competitive reasons and because these matters are managed and measured on a Group-wide basis. The omission of this information does not prevent a fair and balanced understanding of its development, performance, position, and impact of these activities.

Additional information on chapters

Wood and pulp procurement

Wood procurement for the company's own fiber pulp plants in Lenzing (Austria) and Paskov (Czech Republic)

Beech and spruce, by country, 2020 to 2022.

Regional – own country and neighboring countries

Lenzing

Table 47

Country	2020	2021	2022
Austria	45.90%	38.60%	42.86%
Germany	22.10%	23.40%	15.41%
Czech Republic	9.90%	14.00%	17.02%
Slovakia	12.10%	13.50%	13.31%
Hungary	4.00%	5.30%	4.70%
Slovenia	0.40%	0.40%	0.46%
Total regional	94.50%	95.20%	93.76%
Poland	2.10%	2.00%	1.86%
France	2.60%	2.10%	2.22%
Switzerland	0.90%	0.70%	2.16%
Croatia			0.01%
Other countries	5.60%	4.70%	6.25%
Total	100.0%	100.0%	100.0%

Paskov

Table 48

Country	2020	2021	2022
Czech Republic	89.60%	84.00%	89.67%
Slovakia	10.00%	8.70%	5.80%
Poland	0.40%	2.10%	1.78%
Austria	0.00%	2.90%	0.78%
Germany	0.00%	2.30%	1.97%
Total regional	100.0%	100.0%	100.0%

Certification status in the Lenzing Group, 2020–2022

Certification status of total wood input at Lenzing fiber production sites via own and purchased dissolving wood pulp. Basis: dissolving wood pulp by weight. All PEFC certified or controlled sources are also FSC® controlled.

Certification status in the Lenzing Group, 2020–2022

Table 49

	2020	2021	2022
PEFC	28.50%	27.40%	24.20%
FSC® 100%	0.00%	0.00%	3.50%
FSC® Mix	41.80%	35.90%	37.40%
FSC® Controlled Wood	29.70%	36.70%	34.10%
No claim ^a	0.00%	0.00%	0.80%

a) Part of this is due to the formal process of certifying the new site. A small amount of non-certified wood was used for R&D purposes and was submitted to a due-diligence process according to Lenzing's Wood and Pulp Policy.

Lenzing's most important wood species in 2022

Lenzing's most important wood species

Table 50

Wood sourcing Region	Europe	South Africa	North America	South America
Wood species (most important)	Beech, spruce, ash, birch, poplar	Eucalyptus, Acacia	Pine, Ash, Aspen, Maple, Fir, Hemlock	Eucalyptus

Human rights & fair labor practices

Different nationalities within the Lenzing Group 2022

Table 51

Nationality	Female	Male	Total
Afghanistan	–	2	2
Albania	1	–	1
Australia	–	1	1
Austria	613	2,781	3,394
Belgium	–	3	3
Bolivia	1	–	1
Bosnia Herzeg.	2	28	30
Brazil	219	734	953
Canada	–	1	1
China	180	688	868
Columbia	1	1	2
Croatia	3	12	15
Czech Republic	107	381	488
Dutch Antilles	–	1	1
Egypt	–	1	1
France	3	1	4
Germany	26	67	93
Hong Kong	2	2	4
Hungary	1	9	10
India	4	35	39
Indonesia	63	1,450	1,513
Italy	–	7	7
Kosovo	1	9	10
Malaysia	3	5	8
Mazedonia	3	4	7
Mexico	2	–	2
Montenegro	–	1	1
Netherlands	3	7	10
Nigeria	–	1	1
Pakistan	1	2	3
Poland	2	5	7
Portugal	–	2	2
Romania	1	14	15
Russia	3	2	5
Serbia	1	2	3
Singapore	5	5	10
Slovenia	1	3	4
Slovakia	4	5	9
South Africa	–	2	2
South Korea	4	1	5
Spain	–	3	3
Switzerland	–	2	2
Syria	–	3	3
Tajjikistan	–	1	1
Taiwan	3	3	6
Thailand	45	225	270
Türkiye	14	11	25
Uganda	–	2	2
Ukraine	3	–	3
United Kingdom	24	204	228
USA	44	177	221
Vietnam	1	1	2

References in policies

Table 52

Lenzing Policies	Intergovernmental Regulation Reference
Global Code of Conduct	International Labor Organization's Declaration on Fundamental Principles
	International Bill of Human Rights
Sustainability Policy	Paris Climate Agreement
	United Nations Framework Convention on Climate Change
Supplier Code of Conduct	None
Wood and Pulp Policy	Forest Stewardship Council® (FSC®) certification
	Programme for the Endorsement of Forest Certification (PEFC)
	Declaration on Fundamental Principles and Rights at Work of the International Labor Organisation (ILO) – Core conventions
Policy for Safety, Health and Environment	None
Performance Management	None
Anti-Bribery and Corruption Directive	Reference made to United Nations, WHO
Investigation Directive	None
Anti-Money Laundering Directive	Basel AML Index (published by the Basel Institute)
	Reference made to Financial Action Task Force (FATF), Transparency International, the World Bank, the World Economic Forum
	UN sanction list
	Debarred firms World Bank list
	IDB Group List of Sanctioned Firms and Individuals
Whistleblower Directive	None
Water Policy	EU Best Available Techniques Reference Documents (BREFs)
	EU Discharge of Hazardous Chemicals (ZDHC)
	International Financial Reporting Standards (IFRS)
Group Financial Reporting Directive	IFRS Group Accounting Guideline
	Committee of Sponsoring Organisations of the Treadway Commission (COSO)
	None
Modern Slavery Act Transparency Statement (UK)	Modern Slavery Act 2015
	Universal Declaration of Human Rights
	UN Global Compact
	OECD Guidelines for Multinational Enterprises
	Declaration on Fundamental Principles and Rights at Work of the International Labor Organisation (ILO)
Policy on Human Rights and Labour Standards	ISO 26000
	Universal Declaration of Human Rights
	UN Global Compact
	OECD Guidelines for Multinational Enterprises
Declaration on Fundamental Principles and Rights at Work of the International Labor Organisation (ILO)	None
	None
Global EDI Policy (Draft)	None
Global Recruitment Guideline	None
Global Job Evaluation Guidelines	None
Global Learning & Development Guideline	None
Group Expatriate Guideline for Long Term International Assignments	None
Group Expatriate Guideline for Short Term International Assignments	None
Group Reward Guideline	None
Group Salary Guideline	None
Group Guideline for Creating a Job Description	None
Group Short Term Incentive Plan Grade 6A and above	None
Group Short Term Incentive Plan up to Grade 6A	None

NaDiVeG compliance table

You can find this table here:

<https://reports.lenzing.com/sustainability-report/2022/annex/nadiveg>

GRI content index

You can find this table here:

<https://reports.lenzing.com/sustainability-report/2022/annex/gri>

TCFD index

You can find this table here:

<https://reports.lenzing.com/sustainability-report/2022/annex/tcf>

Independent Assurance Report on the Non-financial Report according to §§ 243b and 267a UGB

To the Board of Directors and to the Supervisory Board of Lenzing Aktiengesellschaft, Lenzing

This English language independent assurance report is a translation provided for information purposes only. The original German text shall prevail in the event of any discrepancies between the English translation and the German original. We do not accept any liability for the use of, or reliance on, the English translation nor for any errors or misunderstandings that may derive from the translation.

We have performed an independent limited assurance engagement on the combined consolidated non-financial report according to §§ 243b and 267a UGB (“NFI report”) for the financial year 2022, which has been published as Sustainability Report 2022 of

Lenzing Aktiengesellschaft, Lenzing
(referred to as “Lenzing” or “the Company”).

Conclusion

Based on the procedures performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the NFI report of the Company is not in accordance with the legal requirements of the Austrian Sustainability and Diversity Improvement Act (§§ 243b and 267a UGB), the provisions of Article 8 of the Regulation (EU) 2020/852 as amended and the supplementing delegated Regulation (EU) 2021/2178 (hereafter “EU Taxonomy Regulation”) and the sustainability reporting guidelines of the Global Reporting Initiative (GRI Standards) Option “in accordance with” in all material respects.

Management’s Responsibility

The Company’s management is responsible for the proper preparation of the NFI report in accordance with the reporting criteria. The Company applies the legal requirements of the Austrian Sustainability and Diversity Improvement Act (§§ 243b and 267a UGB) and the sustainability reporting guidelines of the Global Reporting Initiative (GRI Standards) Option “in accordance with” as reporting criteria. In addition, the company prepares disclosures in accordance with the EU Taxonomy Regulation, which are published as part of sustainability reporting.

The Company’s management is responsible for the selection and application of appropriate methods for non-financial reporting (especially the selection of significant matters) as well as the use of appropriate assumptions and estimates for individual non-financial disclosures, given the circumstances.

Furthermore, their responsibilities include the design, implementation and maintenance of systems, processes and internal controls that are relevant for the preparation of the sustainability report in a

way that is free of material misstatements – whether due to fraud or error.

Auditors’ Responsibility

Our responsibility is to state whether, based on our procedures performed and the evidence we have obtained, anything has come to our attention that causes us to believe that the Company’s NFI report is not in accordance with the legal requirements of the Austrian Sustainability and Diversity Improvement Act (§§ 243b and 267a UGB), the legal requirements of the EU Taxonomy Regulation and the sustainability reporting guidelines of the Global Reporting Initiative (GRI Standards) Option “in accordance with” in all material respects.

Our engagement was conducted in conformity with the International Standard on Assurance Engagements (ISAE 3000) applicable to such engagements. These standards require us to comply with our professional requirements including independence requirements, and to plan and perform the engagement to enable us to express a conclusion with limited assurance, taking into account materiality.

An independent assurance engagement with the purpose of expressing a conclusion with limited assurance (“limited assurance engagement”) is substantially less in scope than an independent assurance engagement with the purpose of expressing a conclusion with reasonable assurance (“reasonable assurance engagement”), thus providing reduced assurance. Despite diligent engagement planning and execution, it cannot be ruled out that material misstatements, illegal acts or irregularities within the non-financial report will remain undetected.

The procedures selected depend on the auditor’s judgment and included the following procedures in particular:

- Inquiries of personnel at the group level, who are responsible for the materiality analysis, in order to gain an understanding of the processes for determining material sustainability topics and respective reporting thresholds of the Company;
- A risk assessment, including a media analysis, on relevant information on the Company’s sustainability performance in the reporting period;
- Evaluation of the design and implementation of the systems and processes for the collection, processing and monitoring of disclosures on environmental, social and employees matters, respect for human rights, anti-corruption as well as bribery and also includes the consolidation of data;
- Inquiries of personnel at the group level, who are responsible for providing, consolidating and implementing internal control procedures relating to the disclosure of concepts, risks, due diligence processes, results and performance indicators;

- Inspection of selected internal and external documents, in order to determine whether qualitative and quantitative information is supported by sufficient evidence and presented in an accurate and balanced manner;
- Assessment of the processes for local data collection, validation and reporting, as well as the reliability of the reported data through a (remotely conducted) survey performed on a sample basis at Lenzing Fibers LTd., Grimsby, UK.
- Analytical evaluation of the data and trend of quantitative disclosures regarding the GRI Standards listed in the GRI-Index, submitted by all locations for consolidation at the group level;
- Evaluation of the consistency of the of the Austrian Sustainability and Diversity Improvement Act (§§ 243b and 267a UGB), the EU Taxonomy Regulation and the GRI Standards, Option “in accordance with” to disclosures and indicators of the NFI report, which apply to the Company;
- Evaluation of the overall presentation of the disclosures by critically reading the NFI report.

The procedures that we performed do not constitute an audit or a review. Our engagement did not focus on revealing and clarifying of illegal acts (such as fraud), nor did it focus on assessing the efficiency of management. Furthermore, it is not part of our engagement to audit future-related disclosures, prior year figures, statements from external sources of information, expert opinions or references to more extensive external reporting formats of the Company.

Restriction on use

Because our report will be prepared solely on behalf of and for the benefit of the principal, its contents may not be relied upon by any third party, and consequently, we shall not be liable for any third party claims. We agree to the publication of our assurance certificate and NFI report. However, publication may only be performed in its entirety and as a version that has been certified by us.

General Conditions of Contract

Our responsibility and liability towards the Company and any third party is subject to paragraph 7 of the General Conditions of Contract for the Public Accounting Professions.

Linz, 3rd of March 2023

KPMG Austria GmbH
Wirtschaftsprüfungs- und Steuerberatungsgesellschaft

Mag. Alexander Gall
Wirtschaftsprüfer
(Austrian Chartered Accountant)

Glossary

Accelerating Circularity

Accelerating Circularity is a collaborative effort to accelerate the textile industry's move from linear to circular. The textile industry must move from a take, make waste system to circularity, avoiding the massive amounts of textile waste annually put into landfill. www.acceleratingcircularity.org

AFRAC - Austrian Financial Reporting and Auditing Committee

The Austrian Accounting Standards Committee, whose activities are not aimed at profit, serves the research, documentation and further development of accounting and auditing in Austria, taking into account international and European developments and Austrian interests in this field. www.afrac.at

Austrian Sustainability and Diversity Improvement Act

The "Nachhaltigkeits- und Diversitätsverbesserungsgesetz" (NaDiVeG) implements the European "NFI Directive" (2014/95/ EU) in Austria. It expands the reporting obligations in the area of non-financial information for large companies of public interest, with an average of more than 500 employees.

BAT – Best available techniques

Best available techniques means the most effective and advanced stage in the development of activities and their methods of operations. The techniques should indicate the practical suitability of particular techniques for providing, in principle, the basis for emission limit values designed to prevent, and, where this is not practicable, generally to reduce emissions and the impact on the environment as a whole.

Better Growth

Lenzing's corporate strategy Better Growth stands for moving from linear to circular, transforming the cellulose industry, offering customer-centric solutions and achieving excellence with a value-driven mind-set.

Biobased

Biobased products are those that originate partially or completely from renewable resources. These products can be either biodegradable or non-biodegradable.

Biobased chemicals

Chemicals from the biorefinery, originating from renewable resources and also referred to in this report as biorefinery products

Biodegradable / Biodegradation

The property of a substance or material to be degraded by micro-organisms (bacteria, fungi, etc.) to water and carbon dioxide (CO₂) and to be absorbed by the environment. Test methods specify a fixed time under defined conditions of temperature, oxygen and humidity, and a certain percentage of degradation. For information about biodegradability of Lenzing fibers please see the definition of "TÜV certified biodegradable and compostable LENZING™ fibers".

Biodiversity

This is the variability among living organisms from all sources including, among others, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part. This includes diversity within species, between species and of ecosystems.

Bioenergy

Bioenergy is energy derived from biomass. The term refers to various forms of energy, including heat and electricity. Also the biomass that contains this energy can be referred to as bioenergy. The main sources of bioenergy are renewable resources.

Biorefinery

A biorefinery can be defined as a framework or a structure in which biomass is utilized in an optimal manner to produce multiple products such as fibers, biobased biorefinery products and bioenergy.

Blended learning approach

Blended learning (also known as hybrid learning) is a method of teaching that integrates technology and digital media with traditional instructor-led classroom activities.

Blockchain

Blockchains are forgery-proof, distributed data structures in which transactions are recorded in the time sequence, traceable, unchangeable and without a central instance linked in a peer-to-peer network. The blockchain technology enables digital traceability of fibers and the corresponding wood sources across each production and distribution step. The technology also allows consumers to verify the garment composition and the underlying textile supply chain.

Canopy

Canopy is a Canadian non-profit organization dedicated to the conservation and protection of ancient and endangered forests. Lenzing works together with Canopy to ensure responsible wood sourcing. Canopy publishes the Hot Button Report annually. <https://canopyplanet.org/campaigns/canopystyle/>

CDP – Carbon Disclosure Project

The Carbon Disclosure Project (CDP) is a non-profit organization with the aim that companies and also municipalities disclose their environmental data, such as climate-damaging greenhouse gas emissions and water consumption. Once a year, the CDP collects data and information on behalf of investors using standardized questionnaires on CO₂ emissions, climate risks and reduction targets and strategies of companies. Participation is voluntary. www.cdp.net

Carbon footprint

A carbon footprint is the sum of greenhouse gas emissions and greenhouse gas removals of a product system or an organization, expressed as a carbon dioxide equivalent.

Carbon-neutral

CO₂ neutrality means, in a narrow sense, that no CO₂ is emitted or that the CO₂ emissions are fully offset or compensated. Carbon-neutral is not the same concept as net-zero. <https://de.wikipedia.org/wiki/Klimaneutralit%C3%A4t>.

Carbon-zero

Carbon-zero is the name of the concept for certain TENCEL™ fibers in our range. It is only offered to our TENCEL™ fibers with the lowest carbon footprint. The remaining emissions from our carbon-zero TENCEL™ fibers are offset by supporting renewable energy supply projects.

Cellulose

The raw material for pulp production. Cellulose is a component of all plants. The cellulose content of wood depends on the species and is typically around 40 percent.

Chain of custody

The chain of custody documents the flow of materials and raw materials through various stages right up to the final product. It is important for the certification of raw materials and their traceability. In order to ensure that final products really meet the requirements of the standard, initiatives trace the flow of materials throughout the chain of custody.

COD

Chemical oxygen demand. A further method for assessing the organic load of wastewater (besides BOD biological oxygen demand). It measures the degree to which the wastewater can undergo chemical oxidation.

Compensation

Reducing the negative impact of greenhouse gas emissions in the atmosphere by saving greenhouse gas emissions elsewhere, e.g. by supporting climate protection projects.

Compostable / compostability

Compostable products undergone strict testing to ensure that they break down within a specific time frame and do not release anything harmful into the environment.

Compliance

In general, compliance means conforming to a rule, such as a specification, policy, standard or law. Regulatory compliance describes the goal that organizations aspire to achieve in their efforts to ensure that they are aware of and take steps to comply with relevant laws, policies, and regulations.

Co-product

By-products recovered during pulp and fiber production.

Decarbonization

Decarbonization denotes the declining average carbon intensity (CO₂ emission per unit of a product) over time. Products can be, for example, (primary) energy, gross domestic product, or any units produced by a company.

Denial of service

A denial of service attack (DoS attack) is a cyberattack, that prevents legitimate users from accessing services, computer systems, networks, or other information technology resources.

Dissolving wood pulp

A special kind of pulp with special characteristics used to manufacture viscose, modal and lyocell fibers and other cellulose-based products. This grade of pulp is characterized by higher alpha cellulose content and by a high degree of purity.

ECF

Elemental chlorine free – a bleaching process without using elemental chlorine.

EcoVadis

EcoVadis aims to promote the environmental and social practices of companies through CSR performance monitoring within the supply chain and to support companies in improving sustainability. EcoVadis operates the first collaborative platform to deliver CSR ratings from suppliers to global supply chains.

eIDAS - electronic identification and trust services

eIDAS is an EU regulation on electronic identification and trust services for electronic transactions in the European Single Market.

e2e- End to End

End-to-end describes a process that takes a system or service from beginning to end and delivers a complete functional solution.

EPA (United States Environmental Protection Agency)

The United States Environmental Protection Agency (EPA, resp. USEPA) is an independent agency of the United States for the environmental protection and the protection of human health. EPA works to ensure that Americans have clean air, land and water. <https://www.epa.gov/>

ESG – Environmental, social and governance standards

Environmental, social and governance (ESG) refers to the three central factors in measuring the sustainability and ethical impact of an investment in a company or business.

ESRS – European Sustainability Reporting Standards

The ESRS is the new EU framework for sustainability reporting and is a key element of the EU's new Corporate Sustainability Reporting Directive (CSRD). The aim is to make reports more standardized and comparable. It is mandatory for Lenzing from 2024 onwards.

FAO – Food and Agriculture Organization of the United Nations

The Food and Agriculture Organization of the United Nations (FAO) is a specialized agency of the United Nations that leads international efforts to defeat hunger. It is based in Rome.

FSC®

The Forest Stewardship Council® (FSC) is an international non-profit organization for wood certification.

Furfural

A clear yellowish liquid with a characteristic scent of almonds. During viscose fiber production, beech wood is cooked and furfural is released in a double distillation process.

GHG – Greenhouse gas emissions

Emissions of gases which contribute to global warming by absorbing infrared radiation, thereby heating the atmosphere. The main contributors are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O).

GRI – Global Reporting Initiative

The Global Reporting Initiative (known as GRI) is an international independent standards organization that helps businesses, governments and other organizations understand and communicate their impacts on issues such as climate change, human rights and corruption. The purpose of GRI is to develop globally applicable guidelines for sustainability reporting.

Hemicellulose

The designation for carbohydrates that are contained in wood but that are not cellulose. They can have the widest variety of compositions depending on the type of wood involved, e.g. xylan (in beech wood).

Higg FEM/FSLM

The Higg Facility Environmental Module (Higg FEM) informs manufacturers, brands and retailers about the environmental performance of their individual facilities and enables them to make improvements achieve sustainability. The Higg Facility Social and Labor Module (FSLM) tool focuses on issues such as hours of work, wages and benefits, health and safety, and strengthening communities. <https://apparelcoalition.org/higg-facility-tools/>

Higg MSI

The Higg Materials Sustainability Index (Higg MSI) is the apparel industry's most trusted tool to measure and score the environmental impacts of materials.

ILO – International Labour Organization

The International Labour Organization (ILO) is a United Nations agency that sets international labor standards and promotes social protection and work opportunities for all. The ILO has 187 member states: 186 of the 193 UN member states plus the Cook Islands are members of the ILO.

Integration

All stages of fiber production are concentrated at one and the same site, from wood, the raw material, to pulp and fiber production.

IOSH – Institute of Occupational Safety and Health

IOSH is the only Chartered body for safety and health professionals. Their members follow a strict Code of Conduct and a formal professional development program.

IPBES

IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) is an intergovernmental body providing scientific policy advice on biodiversity – comparable to the IPCC (Intergovernmental Panel on Climate Change). <https://www.bmu.de/faq/was-ist-und-macht-ipbes>

IPCC

The abbreviation “IPCC” stands for Intergovernmental Panel on Climate Change. In German-language media, the IPCC is usually referred to as the “Weltklimarat”.

The IPCC was founded in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP). Its findings form the basis for international climate negotiations under the United Nations Framework Convention on

Climate Change (UNFCCC). In it, member states affirm their intention to prevent “dangerous climate change.” <https://wiki.bildungsserver.de/klimawandel/index.php/IPCC>

ISO 14001:2015

An international standard for the certification of environmental management systems.

ISO 9001:2015

An international standard for the certification of quality management systems.

ISS ESG

ISS ESG is the responsible investment arm of Institutional Shareholder Services Inc., the world's leading provider of environmental, social, and governance solutions for asset owners, asset managers, hedge funds, and asset servicing providers.

KPI

The term key performance indicator describes indicators in business economics which are used to measure progress or achievements related to important targets or critical success factors within an organization.

LCA

Life Cycle Assessment is a systematic analysis of the environmental impacts of products throughout their life cycle (“from cradle to grave”).

Lignin

A polyaromatic component of wood that cannot be used for fiber production. It is used for generating power and to recover co-products.

Lignosulfonate

The decomposition products of lignin from wood after pulping.

Lyocell fibers

Lyocell fiber is the latest generation of cellulosic fibers. In Lenzing's case the cellulose used is wood-based or recycled cotton (RE-FIBRA™ Technology). The generic fiber name is lyocell, the branded products from Lenzing are marketed as TENCEL™ and VEOCEL™ fibers. It is known for its smooth and silky handfeel as well as performance aspects.

Microplastics

Small plastic particles of 5 mm or less in size – known as “microplastics” – are perceived to be a major pollution problem in freshwater bodies and the sea. While recent industry initiatives and legislation aim to promote the development of less polluting alternatives, Lenzing, as a producer of wood-based cellulosic fibers, laid the foundations for biodegradable products more than 80 years ago.

Modal

Modal is a viscose fiber refined under modified viscose production conditions and spinning conditions. It is characterized by a particular softness and is the preferred fiber for high-quality next to skin applications like underwear and similar products. The fibers have improved characteristics such as tenacity, dimensional stability, and so forth. Lenzing markets these fibers under TENCEL™ Modal.

Net-benefit products

Lenzing's net-benefit products offer positive impacts and benefits for the environment, society, and value chain partners, and are better than most competing alternatives in the market. Net-benefit products take a life cycle perspective and thus include both upstream and downstream value chain processes. Net-benefit thinking describes the performance of our specialties and forward solutions.

Net-zero target

Companies shall set one or more targets to reach a state of net-zero emissions, which involves: (a) reducing their scope 1, 2 and 3 emissions to zero or to a residual level that is consistent with reaching net-zero emissions at the global or sector level in eligible 1.5°C scenarios or sector pathways and; (b) neutralizing any residual emissions at the net-zero target date and any GHG emissions released into the atmosphere thereafter. Source: Net-Zero-Standard.pdf (sciencebasedtargets.org) When talking about net-zero, a maximum of 10 % can be compensated by removal offsets (according to the science-based target initiative), 90 % of absolute carbon must be reduced. This is the main difference to carbon-neutral, where there are no limits on the level of offsetting.

NIST Cyber Security Framework

The NIST Cyber Security Framework consists of voluntary guidelines, standards and best practices to manage cybersecurity risk.

NMMO

N-Methylmorpholine N-oxide is an aqueous, biodegradable, organic solvent.

Nonwovens

Nonwoven fabric materials, fleece. Nonwovens made from Lenzing fibers are used for sanitary, medical, and cosmetics applications.

Offsetting

Reducing the damage caused by releasing carbon dioxide into the environment by doing other things that remove carbon dioxide from the atmosphere, e.g. through climate protection projects.

OHSAS 18001:2007

Occupational Health and Safety Assessment Series (OHSAS) is a certification system for management systems pertaining to work safety.

PEFC

The Programme for the Endorsement of Forest Certification Schemes (PEFC) is an international non-profit organization for wood certification.

Plantation forest

Planted Forest that is intensively managed and meet all the following criteria at planting and stand maturity: one or two species, even age class, and regular spacing (FAO-FRA 2020). Examples: poplar, acacia or eucalyptus plantations.

Post-consumer

A product made from post-consumer material is made from waste that has been used and disposed of by a consumer (such as used clothing).

Pre-consumer

Pre-consumer upcycling is the reclamation of waste materials that were created during the manufacturing process prior to their delivery to a consumer (such as cotton scraps from garment making). Often also referred to as post-industrial waste.

Ransomware as a Service (RaaS)

RaaS is a service in which cybercriminals provide a compact malware program that can be used to launch a ransomware attack. Ransomware is a malware, where cybercriminals attack a system with malicious code. The goal is to lock legitimate users out of their system and encrypt sensitive data. Companies are then often blackmailed into paying high ransoms in order to obtain the decryption key.

Salutogenesis

Developed by Aaron Antonovsky († July 7, 1994), an Israeli-American professor of sociology. In contrast to pathogenesis, the salutogenic approach does not focus on the question "What makes a human being ill?" but rather "What keeps a human being healthy?"

Security patch

A security patch is a method of updating applications, systems or software by inserting code to fix the vulnerability.

Science-based targets (SBT)

Targets adopted by companies to reduce greenhouse gas emissions are considered "science-based" if they are in line with the level of decarbonization required to keep global temperature increase below 1.5°C compared to pre-industrial temperatures, as described in the Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). [Applies to the 4th or 5th AR of IPCC as well as modelling of the IEA.]

Scope 1, 2 & 3 emissions

Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.

Semi-natural forest

Forests of native species, established either through assisted or natural regeneration, or a mix of these under intensive stand management (includes forests in which assisted regeneration carried out with same species and similar species composition as in the natural forests in the area). Examples: many production forests in Europe, some teak plantations.

These forests include, according to FAO (2020): Naturally regenerating forests, which are forest predominantly composed of trees established through natural regeneration. Planted forests, which are forest predominantly composed of trees established through planting and/or deliberate seeding. But not plantation forests.

SFI-Sustainable Forestry initiative

The SFI program was developed in 1994 to ensure North America's valuable forests were protected and to document the commitment of forest products industry members to keep our forests healthy and to practice the highest level of sustainable forestry.

SHEARS

Safety, Health and Environment Action Reporting System of the Lenzing Group

Stakeholders

All internal and external persons or groups affected directly or indirectly by business activities currently or in the future.

SAC – Sustainable Apparel Coalition

An association of leading companies, non-profit organizations as well as research and educational experts aiming to create a more sustainable international apparel, footwear and textile industry. The SAC is the developer of the Higg Index.

Sustainalytics

Sustainalytics is a rating agency that assesses the sustainability of listed companies based on their environmental, social and governance performance. www.sustainalytics.com

TCF

Totally chlorine free (bleaching process).

Textile Exchange (TE)

Textile Exchange, founded in 2002, is a global nonprofit organization that works closely with all sectors of the textile supply chain to find the best ways to minimize and even reverse the negative impacts on water, soil, air, animals, and the human population.

TÜV certified biodegradable and compostable LENZING™ fibers

LENZING™ fibers which are TÜV certified biodegradable and compostable include the following products: LENZING™ Viscose Standard textile/nonwovens, LENZING™ Lyocell Standard textile/nonwovens, LENZING™ Modal Standard, LENZING™ FR Standard^a, LENZING™ FR Black^a, LENZING™ Lyocell Filament^b, LENZING™ Lyocell Dry^b, LENZING™ Web Technology

a) LENZING™ FR Standard and LENZING™ FR Black are only industrial compostable.

b) LENZING™ Lyocell Filament was not tested for marine biodegradability and LENZING™ Lyocell Dry is not compostable in salt water.

UNCITRAL - United Nations Commission on International Trade

The United Nations Commission on International Trade Law is a subsidiary body of the U.N. General Assembly responsible for helping to facilitate international trade and investment.

VBV Austrian Sustainability Index (VÖNIX)

VÖNIX is Austria's first sustainability index. It was created by the VBV Austrian pension fund and is comprised of listed Austrian companies that are leaders in terms of social and environmental performance.

Viscose fibers

Viscose is a cellulosic fiber (also known as rayon). In Lenzing's case the cellulose used is wood-based. Wood from trees is processed into pulp which gets derivatized by a chemical reaction and then is dissolved until it becomes a sticky liquid. The solution is pushed through nozzles into a "spinning bath" which allows that fibers are regenerated from the solution into a shape suitable in diameter and length for use in textile and nonwoven applications. The cellulosic fiber viscose is a fiber with a flowy drape, in personal hygiene products it is used to absorb and retain liquid. LENZING™ ECOVERO™ Viscose is the branded fiber for textile and VEOCEL™ Specialty Viscose fibers for nonwovens applications.

Wood-based cellulosic fiber

A fiber industrially produced from the raw material wood. The industry is known as man-made cellulose fiber industry.

Xylose

Wood sugar, component of thick liquor and base material for xylitol (sweetener that inhibits tooth decay)

ZDHC – Zero discharge of hazardous chemicals

The ZDHC Foundation is a global center of excellence in responsible chemical management which works towards zero discharge of hazardous chemicals in the textile, leather, and footwear value chain to improve the environment and people's wellbeing.

ZDHC MMCF Guidelines

The ZDHC MMCF Guidelines is a set of guidelines that addresses integrated expectations for discharge wastewater quality, emissions to air, and chemical recovery for manufacturing facilities producing Man-Made Cellulosic Fibers (MMCF).

Zero-day vulnerabilities

A zero-day vulnerability is a computer-software vulnerability that is unknown to the vendors and therefore has no patch ready. The term zero-day means that there is a zero-day gap between the time the vulnerability is discovered and the first attack happens.

List of tables and figures

List of figures

	Page
Figure 1: Value chain of Lenzing's products	12
Figure 2: Locations of the Lenzing Group	14
Figure 3: Sustainability organization	16
Figure 4: ESG Committee structure	17
Figure 5: Materiality analysis 2022	19
Figure 6: Strategic focus areas of sustainability in the Lenzing Group and the corresponding SDGs	21
Figure 7: Key stakeholder groups	29
Figure 8: Circular economy model of the Lenzing Group	34
Figure 9: Highly efficient use of the raw material wood at the Lenzing Group's biorefineries	35
Figure 10: Biodegradation of fibers in various environments	37
Figure 11: Fiber types on the world market	38
Figure 12: Lenzing Group's carbon footprint	43
Figure 13: Energy sources of the world, Lenzing Group and Lenzing site	44
Figure 14: Levers to meet science-based target	48
Figure 15: Wood sourcing for Lenzing Group's own pulp mills in Lenzing (Austria) and Paskov (Czech Republic)	53
Figure 16: Certification status in the Lenzing Group 2022	56
Figure 17: Certification status – overall certified and controlled wood FSC®	57
Figure 18: Certification status – FSC® Mix and FSC® controlled wood	57
Figure 19: The AR3T framework of Science based targets for nature	59
Figure 20: Water stewardship	77
Figure 21: Diversity per age (all employees)	90
Figure 22: Diversity per site	90
Figure 23: Talent Management	92
Figure 24: Hierarchy of compliance guidelines and directives	100
Figure 25: Elements of the Lenzing Compliance Management System	100
Figure 26: Building blocks of transparency	105

List of tables

	Page
Table 1: Lenzing Group: Sustainability key performance indicators	5
Table 2: Lenzing Group	11
Table 3: Materiality analysis – allocation of topics	20
Table 4: Sustainability targets, measures and progress	23
Table 5: The proportion of turnover	27
Table 6: EU Taxonomy, CAPEX	28
Table 7: EU Taxonomy, OPEX	28
Table 8: Waste by type and disposal method	39
Table 9: Total waste generated	39
Table 10: Fuel sources used in the Lenzing Group	44
Table 11: Primary energy consumption of the Lenzing Group	45
Table 12: Greenhouse gas emissions of the Lenzing Group	45
Table 13: Transition risks, physical risks, Transition opportunities	47
Table 14: How forests and wood products work for climate change mitigation	49
Table 15: Countries of Lenzing Group's pulp suppliers (in 2022)	52
Table 16: Number of suppliers responding to EcoVadis questionnaire since the introduction of the assessment in 2017	52
Table 17: Regionality of purchased chemicals	52
Table 18: Certification status of Lenzing operations – Chain of custody	56
Table 19: Framework of actions for nature, from SBTN (2020)	60
Table 20: SBTN's framework for action and Lenzing's approach	60
Table 21: Quantity of forest area used for Lenzing's wood sourcing: data availability and quality	62
Table 22: Quantitative description of areas managed and influenced by LD Celulose	63
Table 23: EU Ecolabel criteria	71
Table 24: Water withdrawal	78
Table 25: Specific water use in the Lenzing Group	78
Table 26: Water consumption	78
Table 27: Water discharge	79
Table 28: Absolute emissions to water	80
Table 29: Specific emissions to water	80
Table 30: Absolute emissions to air	81
Table 31: Specific emissions to air	81
Table 32: Work-related injuries for all employees	83
Table 33: Work-related injuries for other workers	83
Table 34: Top five work-related injuries	84
Table 35: Socio-economic effects of Lenzing's activities --Main results for 2022	89
Table 36: Employees 2022 – General information required	93
Table 37: Employees 2022 – Employees turnover	94
Table 38: Annual Total compensation ratio 2022	94
Table 39: Employees 2022 – Newly hired employees	95
Table 40: Employees 2022 – Employees with disabilities	95
Table 41: Employees 2022 – Individuals within the organization's governance body	95
Table 42: Employees 2022 – Individuals outside the organization's governance body	96
Table 43: Employees 2022 – Individuals within managing role	96
Table 44: Work-related injuries for all employees – Lenzing AG	116
Table 45: Top five injury types – Lenzing AG	116

Table 46: Employees 2022 – Lenzing AG	117
Table 47: Wood procurement for the company's own fiber pulp plants in Lenzing (Austria)	118
Table 48: Wood procurement for the company's own fiber pulp plants in Paskov (Czech Republic)	118
Table 49: Certification status Lenzing AG – 2020–2022	118
Table 50: Lenzing's most important wood species	118
Table 51: Different nationalities within the Lenzing Group 2022	119
Table 52: References in Policies – Lenzing Policy	120

SPECIAL THANKS FOR EDITORIAL CONTRIBUTIONS GO TO:

- Amelung Felix
- Austaller Anna
- Bartsch Peter
- Böhm Laura
- Buchleitner Robert Johann
- Dodds Adrian
- Durz Angelika
- Eder-Kollmitzer Alexandra
- Fili Gregor
- Gibasova Jana
- Girardi-Walch Alexander
- Gluth Claudia
- Gorringer Stuart
- Grünewald Arne
- Heubrandner Florian
- Holzinger Franziska
- Innerlohinger Jo-Ann
- Köfner Dominic
- Kogler Doris
- Krahbichler David
- Kroeg Walter
- Kulka Stephan
- Ledl Caroline
- Liu Sandy
- Luo Zheng
- Manda Krishna
- Markus Janina
- Matiz Thomas
- Mommer Claudia
- Moosbauer Karin
- Nasioudis Andreas
- Panholzer Thomas
- Parsan Chand Mahaveer
- Promberger Andrea
- Rettl Giovanni
- Rivera Ramos Alexandra
- Schmid Susanne
- Schmid-Schlager Stefanie
- Schuster Kurt Christian
- Seyfriedsberger Gerhard
- Simunovic Nenad
- Stampfel Angelika
- Steinmair Philipp
- Tuzimsky Thomas
- Topbas Meltem
- Untersberger Lukas
- Viehbock Johann-Peter
- Waldow Luise
- Wechselberger Dietmar
- Welles Joyce
- Wester Andreas
- Winkelmeier Daniel
- Wirth Florian
- Wukits Claudia
- Zak Sonja
- Zimmermann Kerstin

Imprint

Copyright and published by

Lenzing Aktiengesellschaft
4860 Lenzing, Österreich
www.lenzing.com

Concept and edited by

GW+Co (www.gilmarwendt.com)
Lenzing Group

Layout and graphic design

Produced inhouse using firesys (www.firesys.de)
nexxar GmbH (www.nexxar.com)

Photographs by

Christian Leopold; Lenzing AG / Christian Leopold / YC Shek; Lenzing AG / Richard Ramos; Lenzing AG / Lucas Capra; LD Celulose / Flavio Pasqua; Lenzing AG / Richard Cordero; Lenzing AG / Getty Images / Franz Neumayr; Lenzing AG / Franz Neumayr / Tawan Studio; Lenzing AG / Lee Jian Shen; Lenzing AG / Kevin Wong; Lenzing AG / Cheung Chi Lock; Lenzing AG