



## CERTIFICATIONS

Fibre	Certification No.	Expiration Date
PEFC Chain of Custody	DC-COC-000827	30. June, 2024
FSC® Chain of Custody	TUVDC-COC-100827	30. June, 2024
FSC® Controlled Wood	TUVDC-CW-100827	30. June, 2024
Quality and Environmental		
ISO 9001: 2015	ID 15 100 11000	17. June, 2024
ISO 14001: 2015	ID 15 104 4121	17. June, 2024
ISO 50001: 2018	ID 15 275 12018	17. June, 2024
Food Grade	Standard	
ISEGA	49596 U 19	25. May, 2025
US-FDA	21 CFR 176.170 and 176.180	25. May, 2025
Composting		
ISEGA	EN 13432	22. March, 2024

## MODERN PULP PRODUCTION

### The most efficient use of the renewable material

Mercer Rosenthal GmbH processes approximately 1.8 million cubic meters of wood on an annual basis. Mercer's vision is to transform biomass into bioproducts for a more sustainable world. In addition to pulp production, the mill also produces bioenergy, biochemicals, and other bio-based products from wood. The goal is to achieve as much value from the biomass wood as possible.

### Modern pulp production in a biorefinery

Mercer Rosenthal uses the renewable raw material wood as efficiently and sustainably as possible, implementing the principle of biorefineries: break wood down to its basic components and use them as extensively as technologically possible. In addition to cellulose fibers, the mill extracts various biochemicals, such as lignin in the black liquor from the wood, which can be used to replace fossil-based raw materials.

The mill operates Germany's second largest biomass power plant and generates energy from the remaining organic components only after the material utilization of the biomass.

Pulp is a raw material for the paper industry and is used primarily in the production of printing, hygiene, and specialty papers. Another important use is as fresh fiber in the recycling of waste paper. In this way, the mill plays an important role in contributing to maintaining paper recycling.

For more information, visit [www.mercerint.com](http://www.mercerint.com)

## Environmental Product Declaration 2023

### 2022 ENVIRONMENTAL PARAMETERS

#### Fossil Fuel Greenhouse Gas Emissions

154 kg CO<sub>2</sub>-e/ADMT - Scope 1 GHG Emissions

#### Renewable Electricity

100% of the electricity required for pulp mill operations is biomass energy generated from the mill's biofuel.

#### Energy Efficiency

41.64 GJ/ADMT of which 93% is from renewable biomass energy.

#### Water Emissions

BOD <sup>5</sup> (kg/ADMT)	0.08
AOX (kg/ADMT)	0.03
Nitrogen (kg/ADMT)	0.07
Phosphorus (kg/ADMT)	0.01
Water Usage (m <sup>3</sup> /ADMT)	33.0
Total Suspended Solids (kg/ADMT)	0.16

#### Air Emissions

SO <sub>2</sub> (kg/ADMT)	0.04
Particulate Matter (kg/ADMT)	0.14
NO <sub>x</sub> (kg/ADMT)	1.90

#### Waste Management

Solid waste land filled (kg/ADMT)	15.3
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### MILL LOCATION

Rosenthal am Rennsteig, Germany

### PRODUCT PROFILE

NBSK Pulp: 360,000 ADMT/yr

### PROCESS DESCRIPTION

Mercer Rosenthal produces high-quality, bleached softwood kraft pulp using softwood chips purchased from sawmills and chips from roundwood. The bleach plant process is enhanced Elemental Chlorine Free (ECF) and Total Chlorine Free (TCF).

### ECF BLEACHING SEQUENCE

OO-OP-D-PO

### TCF BLEACHING SEQUENCE

OO-OP-Z-PO

### SOFTWOOD SPECIES

- **Spruce** - Picea abies
- **Pine** - Pinus sylvestris
- **Larch** - Larix decidua
- **Douglas Fir** - Pseudotsuga menziesii

### COMPLIANCE WITH INTERNATIONAL STANDARDS

Pulps are fully compliant with the requirements of the US Lacey Act, EU Timber Regulations and REACH.

## Responsible Fiber Sourcing

All of Mercer Rosenthal's fiber suppliers must comply with the Mercer International Wood and Fiber Procurement Policy that ensures all of Mercer sources fiber from sustainably managed forests.

Mercer Holz, Mercer Germany's wood procurement organization, harvests and transports this renewable resource as environmentally-friendly and cost-efficiently as possible. All of the wood that Mercer Holz purchases comes from controlled sources. This ensures that our resource

- is not illegally harvested,
- does not originate from areas with violation of traditional and civil rights,
- does not originate from forests in which high conservation values are threatened by management activities,
- does not originate from forests being converted from natural and semi-natural forest to plantations or non-forest use, and
- does not originate from forests in which genetically modified trees are planted.

Mercer Holz has invested in a new rail fleet that allows the transport of wood more efficiently and in a more environmentally-friendly manner.

## Leading Safety Culture

The protection of human health and personal safety rank at the highest level of importance to Mercer's operations.

Mercer Rosenthal operates in a diligent and responsible manner to ensure ZERO HARM to their people through their Road to Zero safety program. Mercer Rosenthal is dedicated to continuously improving their processes, being individually accountable, and promoting comprehensive safety awareness.

### Mill Safety Performance (TRIR):

(Incidents /200,000 hrs)

2020: 2.08

2021: 2.14

2022: 1.43



## Mercer's Fiber Center - Quality Assurance

Refining is the key process required in paper making to alter fiber characteristics. To support customers, mill projects, and applied research, Mercer operates a state-of-the-art laboratory refiner simulating the industrial refining process. This device is integrated into a fully equipped wet and dry laboratory.



## Environmental Product Declaration 2023

### Environmental Performance

Due to the immediate proximity to Germany's largest artificial water, the 'Bleilochtsperre' (dam), and the exposed location of the company on the edge of the natural park 'Thüringer Schiefergebirge' (Thuringian Highland), Mercer Rosenthal aims to keep environmental impact as low as possible. Mercer Rosenthal's production facilities are state-of-the-art and comply with the most stringent requirements of environmental protection. Technological improvements have led to increases in production over the last few years, while simultaneously optimizing most environmental indicators. A worldwide comparison of sulfate pulp mills demonstrates that Mercer Rosenthal has a leading environmental performance.

Whether energy or water consumption, solid waste volume, air or water emissions — the environmental performance indicators of Mercer Rosenthal are far below the limits imposed by the legislator in almost all areas. In the recent past, particularly significant improvements have been achieved in the reduction of odors. The environmental indicators are continuously monitored in Mercer's environmental laboratory.

### Mitigating Climate Change

Mercer is committed to reducing its GHG intensity through continuous investment in technologies for improving energy efficiency, increasing the usage of renewable fuels and through full-fiber utilization. Mercer Rosenthal has made significant capital investments in renewable electricity generation

In 2022, Mercer Rosenthal generated 362 GWh of renewable energy which is enough to power 115,000 homes in the Thuringia region.

### Food Grade Certifications

Both of Mercer Rosenthal's softwood pulps are manufactured and rigorously tested by independent labs to ensure they meet Food Grade Standards, including US FDA and European Standards (ISEGA) EC No. 1935/2004.

### Science Based Target initiative

Mercer International has responded to SBTi's urgent call for corporate climate action by committing to align with 1.5°C and net-zero through the Business Ambition for 1.5°C campaign.



DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

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