

# Environmental Product Declaration



In accordance with ISO 14025 and EN 15804+A2 and EN 16485 for:

## Wood flooring – TARKETT Polish Production.



Programme:	The International EPD® System <a href="http://www.environdec.com">www.environdec.com</a>
Programme operator:	EPD International AB
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Geographical scope:	Europe



## General information

### Programme information

<b>Programme:</b>	The International EPD® System
<b>Address:</b>	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
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CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product category rules (PCR): PCR 2019:14 version 1.11 and Sub-PCR-E Wood and wood-based products for use in construction (EN 16485:2014).
PCR review was conducted by: <i>The Technical Committee of the International EPD® System lead by Claudia A Peña. A full list of members available on <a href="http://www.environdec.com">www.environdec.com</a>. The review panel may be contacted via <a href="mailto:info@environdec.com">info@environdec.com</a>.</i>
Independent third-party verification of the declaration and data, according to ISO 14025:2006: <input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification
Third party verifier: M. Damien Prunel from LCIE Bureau Veritas.
Procedure for follow-up of data during EPD validity involves third party verifier: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

### Differences versus previous version

2020-07 Version 1

2022-09 Version 2

**New Verification** : Full update of LCIA with separation of Polish production from Swedish production

2022-09 Version 2.1.

**Editorial change** : Harmonisation of HDF renewables material weight% in all content information tables.

## Company Information

Owner of the EPD: Tarkett France.

Contact : Vincent MONTI, [vincent.monti@tarkett.com](mailto:vincent.monti@tarkett.com), Tarkett La Défense, 1 Terrasse Bellini 92400 Paris

### Description of the organisation

With an international coverage and a wide range of products, Tarkett has over 130 years of experience in providing integrated solutions for floorings to professionals and end users.

Many of the most important architectural firms in the world and building professionals have chosen Tarkett for the value of its products and for its consultation and service abilities. Therefore, Tarkett floorings and sport surfaces are present in several prestigious architectural reference points. Tarkett offers integrated solutions for floorings, able to meet the particular needs of customers. Our wide range of designs, colors and models provides an infinite series of possibilities, contributing to create a positive environment and a better quality of life for people.

Tarkett operates with the utmost respect for the environment towards the realization of eco-friendly products.

Tarkett's commitment to the environment is woven throughout its business. Cradle-to-Cradle principles are, in fact, the basis of the design and production of every solution. Particularly, the lifecycle analysis is used to continuously improve the production process, and so the products until their use stage, disposal and recycling. The commitment to the environment is also proven by the accession to the Circular Economy 100 program, where Tarkett group, with a network of companies, is working to develop a circular economy model based on the reuse of materials and preservation of natural resources. The development of products that can be reused within internal production cycles, or external ones in case of other individuals, has been an integral part of the business strategy aimed at sustainability for many years. The WCM (World Class Manufacturing) management system has been developed in 2009, and it includes the environmental pillar aimed to the elimination of losses and to the growth of process efficiency.

Product-related or management system-related certifications: ISO 9001, ISO 14001, ISO 50001, WCM manufacturing site

Name and location of production sites: Hanaskog (Sweden), Orzechowo (Poland).

## Product Information

Products name: Heritage, Noble, Prestige, Grace, Pure, Shade, Viva, Professional, Professional 10, Professional Plus, Professional XT.

Product identification: Wood floor coverings (EN 13489:2017)

Product description: Wood collection is a flooring developed by Tarkett. Engineered from multiple layers of hardwood for increased stability, each floor is easy to install and designed for long-lasting resistance. After years of use, these floors can be removed and reused or recycled.

The service lifetime recommended by Tarkett is 50 years when well maintained in domestic application.

Geographical scope: Europe

UN CPC code: APE/NAF – 1622Z

Range of application : The products are to be installed in various areas of application, such as: domestic and commercial use.

## LCA information

Functional unit / declared unit: 1m<sup>2</sup> of floor covering with a reference service life (RSL) of 1 year for specified characteristics application and use areas according to EN 13489:2017 and EN 14342:2013.

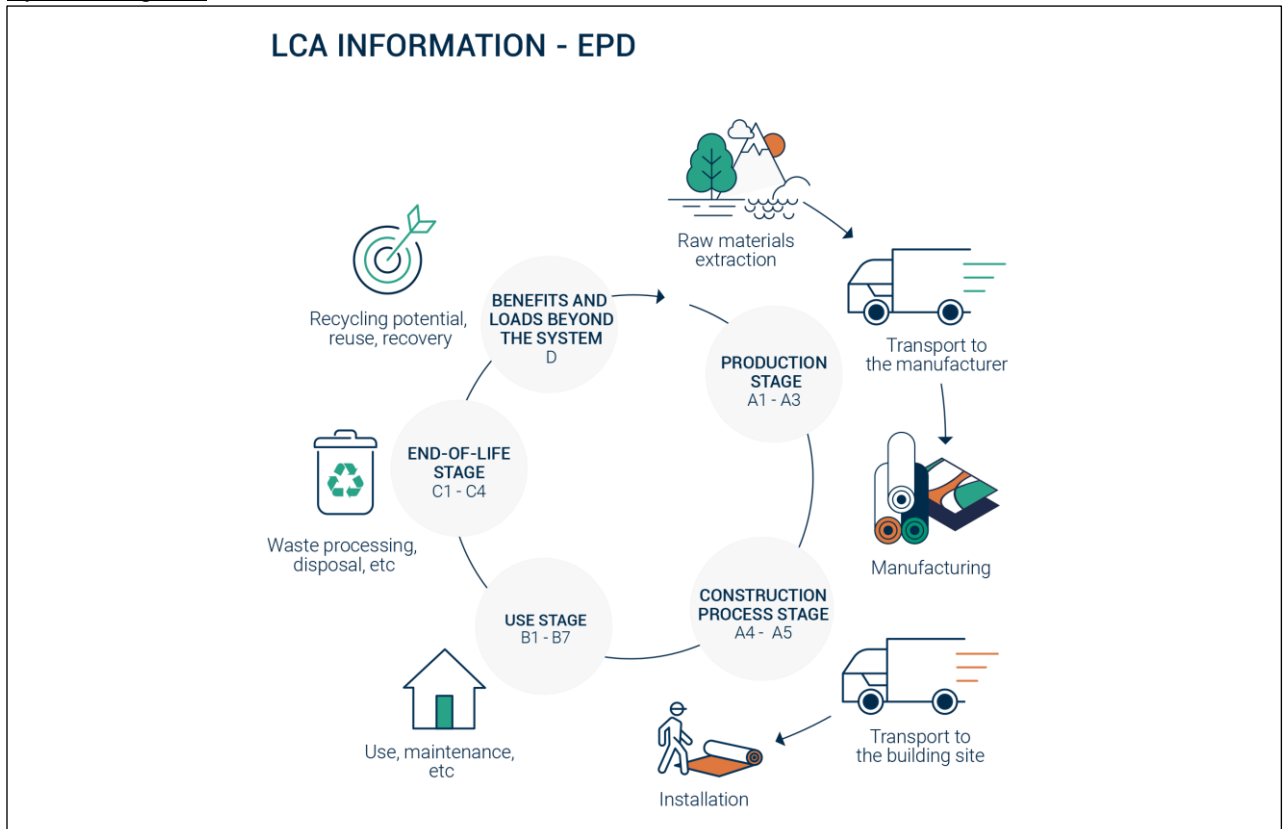
Reference service life: 50 years

Time representativeness: 2021.

Database(s) and LCA software used: Ecoinvent3.8, Simapro 9.1

Description of system boundaries: Cradle to grave and module D (A + B + C + D)

System diagram:



Modules declared, geographical scope, share of specific data (in GWP-GHG indicator) and data variation:

	Product stage		Construction process stage			Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	X		X						X	X	X	X	X
Geography	European technology and process coverage															European	
Specific data used	-	100%	100%	100%	100%	-	-	-	-	-	-	-	-	-	-	100% for incineration with energy recovery	100% for incineration with energy recovery
Variation – products	-3% to 3%		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	-	-	-	European average for Tarkett		-	-	-	-	-	-	-	-	-	-	-	-

## Content Information

According to PCR 2019:14 v1.11, several similar products can be included in the same EPD if "differences between the mandatory impact indicators lower than  $\pm 10\%$  (concerning A1-A3) could be presented using the impacts of a representative product". The next table presents how products are grouped :

Products	Weight Kg/m <sup>2</sup>	Representative product group
ORZ Oak 8.5 mm	7.70E+00	Total thickness of 8.5 mm with Walnut and Oak wood from ORZ plant
ORZ Walnut 8.5 mm	7.70E+00	
ORZ Ash 13 mm	7.30E+00	Total thickness of 13mm and 14 mm with Ash, Oak and Oak AM wood from ORZ plant
ORZ Oak 13 mm	7.30E+00	
ORZ Ash 14 mm	7.90E+00	
ORZ Oak 14 mm	7.90E+00	
ORZ Oak AM 13mm	7.60E+00	
ORZ Oak AM 14 mm	8.20E+00	
ORZ Oak 13 mm (3 strips)	7.30E+00	
ORZ Oak 14 mm (3 strips)	7.90E+00	
ORZ Oak 10 mm	6.00E+00	Total thickness of 10 mm from ORZ plant
ORZ Oak 16 mm	9.00E+00	Total thickness of 16 mm from ORZ plant

The components for products with Total thickness of 8.5mm with walnut and Oak wood are detailed here:

Total thickness of 8.5 mm with Walnut and Oak wood from ORZ plant			
Product components	Weight, kg/m <sup>2</sup>	Post-consumer material, weight-%	Renewable material, weight-%
Wood layer	8.44E-01	0%	100%
HDF	6.07E+00	0%	82%
Urea Formaldehyde	4.42E-01	0%	0%
Glue thread	0.00E+00	0%	0%
Polypropylene	0.00E+00	0%	0%
Surface Treatment	1.36E-01	0%	0%
Putty-UV filler	0.00E+00	0%	0%
TOTAL	7.70E+00	0%	76%

Packaging materials	Weight, kg/m <sup>2</sup>	Weight-% (versus the product)
Product Packaging PELD	1.85E-02	0.24%
Product Packaging Cardboard	7.75E-02	1%
Product Packaging Wood	1.70E-01	2.20%
Product Packaging PE	4.10E-03	0.053%
Product Packaging Paper	2.20E-03	0.029%
Product Packaging Sticker	2.90E-03	0.038%

The components for products with Total thickness of 13mm and 14 mm with Ash, Oak and Oak AM wood from ORZ plant are detailed here:

Total thickness of 13mm and 14 mm with Ash, Oak and Oak AM wood from ORZ plant			
Product components	Weight, kg/m <sup>2</sup>	Post-consumer material, weight-%	Renewable material, weight-%
Wood layer	7.30E+00	0%	100%
HDF	0.00E+00	0%	82%
Urea Formaldehyde	4.42E-01	0%	0%
Glue thread	2.30E-03	0%	0%
Polypropylene	1.13E-02	0%	0%
Surface Treatment	8.76E-02	0%	0%
Putty-UV filler	2.89E-02	0%	0%
TOTAL	7.73E+00	0%	94%

Packaging materials	Weight, kg/m <sup>2</sup>	Weight-% (versus the product)
Product Packaging PELD	3.20E-02	0.41%
Product Packaging Cardboard	7.75E-02	1%
Product Packaging Wood	1.24E-01	1.60%
Product Packaging PE	4.10E-03	0.053%
Product Packaging Paper	2.20E-03	0.029%
Product Packaging Sticker	2.90E-03	0.038%

The components for products with Total Thickness of 13mm (3-strips) and 14mm (3-strips) with Oak wood from ORZ plant are detailed here:

Total Thickness of 13mm (3-strips) and 14mm (3-strips) with Oak wood from ORZ plant			
Product components	Weight, kg/m <sup>2</sup>	Post-consumer material, weight-%	Renewable material, weight-%
Wood layer	7.08E+00	0%	100%
HDF	0.00E+00	0%	82%
Urea Formaldehyde	3.35E-01	0%	0%
Glue thread	2.30E-03	0%	0%
Polypropylene	6.00E-03	0%	0%
Surface Treatment	1.10E-01	0%	0%
Putty-UV filler	1.66E-02	0%	0%
TOTAL	7.54E+00	0%	94%
Packaging materials	Weight, kg/m <sup>2</sup>	Weight-% (versus the product)	
Product Packaging PELD	2.62E-02	0.35%	
Product Packaging Cardboard	5.62E-02	0.75%	
Product Packaging Wood	7.94E-02	1.05%	
Product Packaging PE	3.20E-03	0.042%	
Product Packaging Paper	2.80E-03	0.037%	
Product Packaging Sticker	2.30E-03	0.031%	

The components for products with Total thickness of 10 mm from ORZ plant are detailed here:

Total thickness of 10 mm from ORZ plant			
Product components	Weight, kg/m <sup>2</sup>	Post-consumer material, weight-%	Renewable material, weight-%
Wood layer	5.66E+00	0%	100%
HDF	0.00E+00	0%	82%
Urea Formaldehyde	4.42E-01	0%	0%
Glue thread	2.30E-03	0%	0%
Polypropylene	0.00E+00	0%	0%
Surface Treatment	1.42E-01	0%	0%
Putty-UV filler	1.80E-02	0%	0%
TOTAL	6.00E+00	0%	94%



Packaging materials	Weight, kg/m <sup>2</sup>	Weight-% (versus the product)
Product Packaging PELD	1.85E-02	0.24%
Product Packaging Cardboard	7.75E-02	1%
Product Packaging Wood	1.70E-01	2.20%
Product Packaging PE	4.10E-03	0.053%
Product Packaging Paper	2.20E-03	0.029%
Product Packaging Sticker	2.90E-03	0.038%

The components for products with Total thickness of 16 mm from ORZ plant are detailed here:

Total thickness of 16 mm from ORZ plant			
Product components	Weight, kg/m <sup>2</sup>	Post-consumer material, weight-%	Renewable material, weight-%
Wood layer	8.51E+00	0%	100%
HDF	0.00E+00	0%	82%
Urea Formaldehyde	5.22E-01	0%	0%
Gluethread	2.30E-03	0%	0%
Polypropylene	7.00E-03	0%	0%
Surface Treatment	8.15E-02	0%	0%
Putty-UV filler	3.00E-03	0%	0%
TOTAL	9.00E+00	0%	95%

Packaging materials	Weight, kg/m <sup>2</sup>	Weight-% (versus the product)
Product Packaging PELD	2.50E-02	0.27%
Product Packaging Cardboard	7.75E-02	0.86%
Product Packaging Wood	9.60E-02	1.10%
Product Packaging PE	4.10E-03	0.046%
Product Packaging Paper	2.20E-03	0.024%
Product Packaging Sticker	2.90E-03	0.032%

## Products

Products	Products – Commercial name	Thickness (mm)	Mass (kg/m <sup>2</sup> )	Factories City
ORZ Oak 10 mm	Professional 10mm, Professional Plus, Professional XT	1.00E+01	6.00E+00	Orzechowo
ORZ Ash 13 mm	Shade	1.30E+01	7.30E+00	
ORZ Oak 13 mm	Pure, Shade, Professional	1.30E+01	7.30E+00	
ORZ Ash 14 mm	Prestige, Shade, Professional	1.40E+01	7.90E+00	
ORZ Oak 14 mm	Grace, Heritage, Prestige, Pure, Shade	1.40E+01	7.90E+00	
ORZ Oak AM 13mm	Shade	1.30E+01	7.60E+00	
ORZ Oak AM 14 mm	Shade, Pure	1.40E+01	8.20E+00	
ORZ Oak 13mm_3strips	Shade, Pure	1.30E+01	7.30E+00	
ORZ Oak 14mm_3strips	Grace, Heritage, Prestige, Pure, Shade	1.40E+01	7.90E+00	
ORZ Oak 16 mm	Noble, Grace	1.60E+01	9.00E+00	
ORZ Oak 8.5mm	Viva	8.50E+00	7.70E+00	
ORZ Walnut 8.5mm	Viva	8.50E+00	7.70E+00	

EPD Products are already representative products of different widths of commercial collections: ORZ Oak 13 is a product representative of the Professional (13 mm), Pure (13 mm), Shade (13 mm) entire collections with Oak wood as wear layer.

Characteristics	Product Weight [kg/m <sup>2</sup> ]	Emission of formaldehyde	Reaction to fire	Dimension stability	Thermal conductivity
Total thickness of 8.5 mm with Walnut and Oak wood from ORZ plant	7.70E+00	E1 (EN 14342)	Dfl-s1 (EN 14342 – Table 1)	0.2 % (EN 13329)	≤ 0.15 (EN ISO 10456:2007)
Total thickness of 10 mm from ORZ plant	6.00E+00				
Total thickness of Total thickness of 13mm and 14 mm with Ash, Oak and Oak AM wood from ORZ plant	7.73E+00				
Total Thickness of 13mm (3-strips) and 14mm (3-strips) with Oak wood from ORZ plant	7.54E+00				
Total thickness of 16 mm from ORZ plant	9.00E+00				

## Packaging

The packaging depends on the thicknesses and the plants of products.

## Product manufacturing

### Production process

The production of the wood flooring is divided into the following stages:

- Wood layer production: Wear layers are produced from hardwood timber and the rib-core for the middle layer is produced from softwood timber. In Viva-range the middle layer is HDF.
- Pressing: Different wood layers are pressed into the multilayer wood flooring.
- Cutting: The planks are cut at the desired characteristics.
- Coating: The planks are coated to protect the wear layer against wear and tear.
- Profiling: Milling the profile for the locking system and, for 2-lock system, assembling the plastic spring.
- Packaging: The final product is bundled with plastic strip, wrapped with cardboard banderols and covered with shrink foil. Paper inlays are included. The boxes are placed on wooden spacers or wooden pallets.

This production process takes place in different plants as shown in the table below; Semi finished products are produced in other plants, but are sent to Orzechowo for assembling.

Product Groups	Plants involved
Total thickness of 8.5 mm with Walnut and Oak wood from ORZ plant	ORZ
Total thickness of 10 mm from ORZ plant	ORZ, HSG
Total thickness of Total thickness of 13mm and 14 mm with Ash, Oak and Oak AM wood from ORZ plant	ORZ, HSG
Total Thickness of 13mm (3-strips) and 14mm (3-strips) with Oak wood from ORZ plant	ORZ, HSG.
Total thickness of 16 mm from ORZ plant	ORZ, HSG.

With ORZ: Orzechowo in Poland; HSG : Hanaskog in Sweden.

Therefore the waste types reported here takes into account the various plants involved in the production process of average representative product.

### Production waste

Waste type	Total thickness of 8.5 mm with Walnut and Oak wood from ORZ plant	Total thickness of 10 mm from ORZ plant	Total thickness of Total thickness of 13mm and 14 mm with Ash, Oak and Oak AM wood from ORZ plant	Unit
Hazardous waste for external treatment		2.80E-02		kg/m <sup>2</sup>
Non Hazardous waste for external recycling		2.30E-02		kg/m <sup>2</sup>
Hazardous waste-water to external treatment		1.55E-02		kg/m <sup>2</sup>
Non Hazardous waste-water to external treatment		2.20E-02		kg/m <sup>2</sup>
Non hazardous waste-water to landfill		9.30E-03		kg/m <sup>2</sup>

Waste type	Total Thickness of 13mm (3-strips) and 14mm (3-strips) with Oak wood from ORZ plant	Total thickness of 16 mm from ORZ plant	Unit
Hazardous waste for external treatment		2.80E-02	kg/m <sup>2</sup>
Non Hazardous waste for external recycling		1.70E+00	kg/m <sup>2</sup>
Hazardous waste-water to external treatment		1.55E-02	kg/m <sup>2</sup>
Non Hazardous waste-water to external treatment		1.70E+00	kg/m <sup>2</sup>
Non hazardous waste-water to landfill		4.80E-02	kg/m <sup>2</sup>

It is assumed that all products are stocked in Hanaskog, and all deliveries to customer are from Hanaskog. The distance between the two factories (Orzechowo to Hanaskog) is about 900 km, by truck.

### Health, safety and environmental aspects during production

Wood production sites comply with the ISO 14001 Environmental Management System, the ISO 9001 Quality Management System and the OHSAS 18001 Health and Safety Management, and the the ISO 5001 Energy Management System for Orzechowo only.



## Delivery and installation

### Delivery

The average distribution distance between the factory and the installation site is 1304 km. It has been calculated considering the average distance between European countries where Tarkett is selling the Wood products and the warehouse plant in Hanaskog (Sweden). The distribution is made by truck.

### Installation

The product is designed for floating installation on a subfloor, thus the flooring products are locked together, and no glue is needed for the installation. Electricity consumption is considered for the plank cutting.

Description	Amount	Unit
Electricity consumption	2.00E-02	kWh/m <sup>2</sup>

### Waste

During the installation approximately 3% of the flooring is lost as off-cuts for all products except the Total Thickness 16mm product which is 8%. These flooring losses are sent incineration with energy recovery.

### Packaging

The wooden pallet, 82 % of the paper packaging materials and 46 % of the plastic packaging materials go to recycling, the rest goes to landfill.

## Use Stage

### Reference Service Life (RSL)

For this product, the stated RSL is 1 year. It should be noted, however, that the service life of a Wood floor covering may vary depending on the amount and nature of floor traffic and the type and frequency of maintenance. The manufacturer has provided this service life on the basis of his experience of flooring manufacture and supply. This RSL is applicable as long as the product use complies with that defined by EN 13489:2017 and EN 14342:2013. The service lifetime recommended by Tarkett is 50 years for domestic use, well maintained and sanded.

## Cleaning and maintenance



For common domestic use, cleaning the installed wooden floor includes, vacuuming or cleaning with a dry mop. In addition moist cleaning with microfibre cloth and gentle detergents is done when needed to remove dirt and stains. Periodic maintenance involves the use of a refresher for wooden floors is used to protect and strengthen the floor surface.

Sanding is necessary twice during the service lifetime recommended by Tarkett.<sup>1</sup>

The maintenance scenario is :

- **Common maintenance : 2 cleaning / week**
- **Periodic maintenance : 2 refresher / year**

Description	Amount	Unit
Electricity consumption	2.50E-01	kWh/year/m <sup>2</sup>
Water consumption	1.45E+00	L/year/m <sup>2</sup>
Detergent consumption	2.65E-01	L/year/m <sup>2</sup>

## Prevention of structural damage

To avoid excessive wear, usage should be restricted to the stated areas of application as outlined by the manufacturer, when well maintained.

## End of Life

The End of Life scenario for wood products is 100% incineration with energy recovery, as it is assumed that it is the most probable treatment for the product.

The transport between construction site and waste treatment facility is by truck, with an estimated distance of 100 km to incineration.

## Benefits and loads beyond system boundary

### 1/ Incineration with energy recovery.

Benefits from installation offcuts, incineration energy recovery are calculated in D.

<sup>1</sup> See your Tarkett certified installer to evaluate the overall condition of your floor and have the work done – [Parquet catalogue, 2017, p.95](#)

## Environmental performance

### Potential environmental impact

Results per functional or declared unit - Total thickness of 8.5 mm with Walnut and Oak wood from ORZ plant																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
GWP-total	kg CO <sub>2</sub> eq.	4.48E-01	2.91E+00	4.54E-01	0.00E+00	3.96E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01	0.00E+00	1.02E+01	-9.21E+00
GWP-Fossil	kg CO <sub>2</sub> eq.	1.19E+01	2.90E+00	4.67E-01	0.00E+00	3.73E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01	0.00E+00	7.10E-02	-9.19E+00
GWP- Biogenic	kg CO <sub>2</sub> eq.	-1.16E+01	1.17E-03	-1.61E-02	0.00E+00	1.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.11E-05	0.00E+00	1.01E+01	-2.09E-02
GWP- Lulu	kg CO <sub>2</sub> eq.	1.14E-01	1.15E-03	3.49E-03	0.00E+00	2.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.03E-05	0.00E+00	2.50E-05	-6.73E-03
ODP	kg CFC 11 eq.	1.20E-06	6.73E-07	5.90E-08	0.00E+00	3.25E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.96E-08	0.00E+00	8.22E-09	-1.17E-06
AP	mol H <sup>+</sup> eq.	7.41E-02	1.17E-02	2.73E-03	0.00E+00	2.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.19E-04	0.00E+00	2.38E-03	-3.58E-02
EP-freshwater	kg P eq	5.67E-03	1.88E-04	1.87E-04	0.00E+00	1.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.24E-06	0.00E+00	4.62E-05	-3.10E-03
EP-freshwater	kg PO <sub>4</sub> <sup>3-</sup> eq	1.74E-02	5.77E-04	5.75E-04	0.00E+00	5.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-05	0.00E+00	1.42E-04	-9.53E-03
EP-marine	kg N eq.	1.63E-02	3.48E-03	7.00E-04	0.00E+00	7.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-04	0.00E+00	1.19E-03	-5.51E-03
EP-terrestrial	mol N eq.	1.66E-01	3.81E-02	6.70E-03	0.00E+00	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-03	0.00E+00	1.28E-02	-5.58E-02
POCP	kg NMVOC eq.	5.55E-02	1.17E-02	2.18E-03	0.00E+00	1.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-04	0.00E+00	3.35E-03	-1.65E-02
ADP-minerals&metals*	kg Sb eq.	5.45E-05	1.02E-05	2.00E-06	0.00E+00	3.95E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.45E-07	0.00E+00	2.58E-07	-9.98E-06
ADP-Fossil*	MJ	1.75E+02	4.40E+01	6.93E+00	0.00E+00	7.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E+00	0.00E+00	7.24E-01	-1.53E+02
WDP	m <sup>3</sup>	4.04E+00	1.28E-01	1.28E-01	0.00E+00	3.32E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.61E-03	0.00E+00	1.63E-02	-6.80E-01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															



**Results per functional or declared unit - Total thickness of 10mm from ORZ plant**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
GWP-total	kg CO <sub>2</sub> eq.	-1.47E+00	2.26E+00	3.44E-01	0.00E+00	3.96E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.98E-02	0.00E+00	9.12E+00	-8.41E+00
GWP-Fossil	kg CO <sub>2</sub> eq.	7.46E+00	2.26E+00	3.10E-01	0.00E+00	3.73E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.97E-02	0.00E+00	5.53E-02	-8.39E+00
GWP- Biogenic	kg CO <sub>2</sub> eq.	-8.97E+00	9.07E-04	3.23E-02	0.00E+00	1.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.98E-05	0.00E+00	9.06E+00	-1.90E-02
GWP- Luluc	kg CO <sub>2</sub> eq.	4.24E-02	8.92E-04	1.32E-03	0.00E+00	2.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.92E-05	0.00E+00	1.95E-05	-6.14E-03
ODP	kg CFC 11 eq.	1.27E-06	5.24E-07	5.60E-08	0.00E+00	3.25E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-08	0.00E+00	6.40E-09	-1.07E-06
AP	mol H <sup>+</sup> eq.	5.27E-02	9.08E-03	1.99E-03	0.00E+00	2.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.05E-04	0.00E+00	1.86E-03	-3.26E-02
EP-freshwater	kg P eq	1.52E-03	1.46E-04	6.07E-05	0.00E+00	1.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.42E-06	0.00E+00	3.60E-05	-2.83E-03
EP-freshwater	kg PO <sub>4</sub> <sup>3-</sup> eq	4.68E-03	4.49E-04	1.86E-04	0.00E+00	5.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-05	0.00E+00	1.10E-04	-8.69E-03
EP-marine	kg N eq.	1.80E-02	2.71E-03	7.23E-04	0.00E+00	7.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-04	0.00E+00	9.24E-04	-5.03E-03
EP-terrestrial	mol N eq.	1.96E-01	2.96E-02	7.24E-03	0.00E+00	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-03	0.00E+00	9.99E-03	-5.10E-02
POCP	kg NMVOC eq.	5.75E-02	9.11E-03	2.13E-03	0.00E+00	1.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.08E-04	0.00E+00	2.61E-03	-1.50E-02
ADP-minerals&metals*	kg Sb eq.	4.95E-05	7.91E-06	1.77E-06	0.00E+00	3.95E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.47E-07	0.00E+00	2.01E-07	-9.11E-06
ADP-Fossil*	MJ	1.32E+02	3.43E+01	5.29E+00	0.00E+00	7.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E+00	0.00E+00	5.64E-01	-1.39E+02
WDP	m <sup>3</sup>	3.31E+00	9.96E-02	1.05E-01	0.00E+00	3.32E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E-03	0.00E+00	1.27E-02	-6.20E-01

**Acronyms**

GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption





**Results per functional or declared unit - Total thickness of 13mm and 14 mm with Ash, Oak and Oak AM wood from ORZ plant**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
GWP-total	kg CO <sub>2</sub> eq.	-4.35E+00	2.91E+00	3.91E-01	0.00E+00	3.96E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-01	0.00E+00	1.17E+01	-1.01E+01
GWP-Fossil	kg CO <sub>2</sub> eq.	8.32E+00	2.90E+00	3.58E-01	0.00E+00	3.73E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01	0.00E+00	7.13E-02	-1.01E+01
GWP- Biogenic	kg CO <sub>2</sub> eq.	-1.27E+01	1.17E-03	3.16E-02	0.00E+00	1.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.13E-05	0.00E+00	1.16E+01	-2.29E-02
GWP- Luluc	kg CO <sub>2</sub> eq.	4.55E-02	1.15E-03	1.43E-03	0.00E+00	2.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.04E-05	0.00E+00	2.51E-05	-7.38E-03
ODP	kg CFC 11 eq.	1.47E-06	6.74E-07	6.73E-08	0.00E+00	3.25E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-08	0.00E+00	8.25E-09	-1.17E-06
AP	mol H <sup>+</sup> eq.	5.64E-02	1.17E-02	2.22E-03	0.00E+00	2.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-04	0.00E+00	2.39E-03	-3.92E-02
EP-freshwater	kg P eq	1.68E-03	1.88E-04	6.64E-05	0.00E+00	1.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.28E-06	0.00E+00	4.64E-05	-3.40E-03
EP-freshwater	kg PO <sub>4</sub> <sup>3-</sup> eq	5.15E-03	5.77E-04	2.04E-04	0.00E+00	5.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-05	0.00E+00	1.42E-04	-1.04E-02
EP-marine	kg N eq.	1.91E-02	3.48E-03	8.10E-04	0.00E+00	7.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-04	0.00E+00	1.19E-03	-6.04E-03
EP-terrestrial	mol N eq.	2.08E-01	3.81E-02	8.09E-03	0.00E+00	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-03	0.00E+00	1.29E-02	-6.12E-02
POCP	kg NMVOC eq.	6.19E-02	1.17E-02	2.40E-03	0.00E+00	1.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.26E-04	0.00E+00	3.37E-03	-1.81E-02
ADP-minerals&metals*	kg Sb eq.	5.42E-05	1.02E-05	1.94E-06	0.00E+00	3.95E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.47E-07	0.00E+00	2.59E-07	-1.09E-05
ADP-Fossil*	MJ	1.47E+02	4.40E+01	6.02E+00	0.00E+00	7.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E+00	0.00E+00	7.27E-01	-1.67E+02
WDP	m <sup>3</sup>	3.50E+00	1.28E-01	1.06E-01	0.00E+00	3.32E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-03	0.00E+00	1.64E-02	-6.80E-01

**Acronyms**

GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption



**Results per functional or declared unit - Total Thickness of 13mm (3-strips) and 14mm (3-strips) with Oak wood from ORZ plant**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
GWP-total	kg CO <sub>2</sub> eq.	-1.44E+00	2.81E+00	3.94E-01	0.00E+00	3.96E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	1.14E+01	-1.01E+01
GWP-Fossil	kg CO <sub>2</sub> eq.	9.70E+00	2.81E+00	3.52E-01	0.00E+00	3.73E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	6.96E-02	-1.01E+01
GWP- Biogenic	kg CO <sub>2</sub> eq.	-1.12E+01	1.13E-03	4.00E-02	0.00E+00	1.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.01E-05	0.00E+00	1.13E+01	-2.28E-02
GWP- Luluc	kg CO <sub>2</sub> eq.	4.84E-02	1.11E-03	1.40E-03	0.00E+00	2.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.92E-05	0.00E+00	2.45E-05	-7.37E-03
ODP	kg CFC 11 eq.	1.63E-06	6.52E-07	6.53E-08	0.00E+00	3.25E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-08	0.00E+00	8.06E-09	-1.28E-06
AP	mol H <sup>+</sup> eq.	6.77E-02	1.13E-02	2.18E-03	0.00E+00	2.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.09E-04	0.00E+00	2.34E-03	-3.92E-02
EP-freshwater	kg P eq	2.07E-03	1.82E-04	6.56E-05	0.00E+00	1.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.07E-06	0.00E+00	4.53E-05	-3.40E-03
EP-freshwater	kg PO <sub>4</sub> <sup>3-</sup> eq	6.36E-03	5.59E-04	2.01E-04	0.00E+00	5.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.48E-05	0.00E+00	1.39E-04	-1.04E-02
EP-marine	kg N eq.	2.14E-02	3.37E-03	7.83E-04	0.00E+00	7.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-04	0.00E+00	1.16E-03	-6.04E-03
EP-terrestrial	mol N eq.	2.31E-01	3.69E-02	7.94E-03	0.00E+00	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-03	0.00E+00	1.26E-02	-6.12E-02
POCP	kg NMVOC eq.	6.81E-02	1.13E-02	2.35E-03	0.00E+00	1.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.13E-04	0.00E+00	3.29E-03	-1.80E-02
ADP-minerals&metals*	kg Sb eq.	4.93E-05	9.85E-06	1.93E-06	0.00E+00	3.95E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E-07	0.00E+00	2.53E-07	-1.09E-05
ADP-Fossil*	MJ	1.72E+02	4.26E+01	5.97E+00	0.00E+00	7.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+00	0.00E+00	7.10E-01	-1.67E+02
WDP	m <sup>3</sup>	3.26E+00	1.24E-01	1.10E-01	0.00E+00	3.32E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-03	0.00E+00	1.60E-02	-7.44E-01

**Acronyms**

GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption



**Results per functional or declared unit - Total thickness of 16 mm from ORZ plant**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
GWP-total	kg CO <sub>2</sub> eq.	-3.11E+00	3.36E+00	1.18E+00	0.00E+00	3.96E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-01	0.00E+00	1.38E+01	-1.18E+01
GWP-Fossil	kg CO <sub>2</sub> eq.	1.04E+01	3.35E+00	1.13E+00	0.00E+00	3.73E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-01	0.00E+00	8.30E-02	-1.18E+01
GWP- Biogenic	kg CO <sub>2</sub> eq.	-1.36E+01	1.35E-03	3.94E-02	0.00E+00	1.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.98E-05	0.00E+00	1.37E+01	-2.67E-02
GWP- Luluc	kg CO <sub>2</sub> eq.	4.95E-02	1.32E-03	4.10E-03	0.00E+00	2.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.87E-05	0.00E+00	2.92E-05	-8.62E-03
ODP	kg CFC 11 eq.	1.79E-06	7.78E-07	2.11E-07	0.00E+00	3.25E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E-08	0.00E+00	9.61E-09	-1.50E-06
AP	mol H <sup>+</sup> eq.	7.19E-02	1.35E-02	7.17E-03	0.00E+00	2.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.07E-04	0.00E+00	2.79E-03	-4.58E-02
EP-freshwater	kg P eq	2.22E-03	2.17E-04	2.09E-04	0.00E+00	1.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.63E-06	0.00E+00	5.40E-05	-3.97E-03
EP-freshwater	kg PO <sub>4</sub> <sup>3-</sup> eq	6.81E-03	6.67E-04	6.43E-04	0.00E+00	5.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.96E-05	0.00E+00	1.66E-04	-1.22E-02
EP-marine	kg N eq.	2.25E-02	4.02E-03	2.32E-03	0.00E+00	7.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-04	0.00E+00	1.39E-03	-7.06E-03
EP-terrestrial	mol N eq.	2.45E-01	4.39E-02	2.46E-02	0.00E+00	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-03	0.00E+00	1.50E-02	-7.15E-02
POCP	kg NMVOC eq.	7.22E-02	1.35E-02	7.26E-03	0.00E+00	1.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.12E-04	0.00E+00	3.92E-03	-2.11E-02
ADP-minerals&metals*	kg Sb eq.	5.86E-05	1.17E-05	5.72E-06	0.00E+00	3.95E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.21E-07	0.00E+00	3.02E-07	-1.28E-05
ADP-Fossil*	MJ	1.86E+02	5.08E+01	1.95E+01	0.00E+00	7.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E+00	0.00E+00	8.47E-01	-1.96E+02
WDP	m <sup>3</sup>	3.73E+00	1.48E-01	3.15E-01	0.00E+00	3.32E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.56E-03	0.00E+00	1.91E-02	-8.71E-01

**Acronyms**

GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption



## Use of Resources

Results per functional or declared unit - Total thickness of 8.5 mm with Walnut and Oak wood from ORZ plant																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
PERE	MJ	2.82E+02	6.22E-01	8.53E+00	0.00E+00	2.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-02	0.00E+00	3.24E-02	-1.13E+01
PERM	MJ	1.92E+01	0.00E+00	3.26E+00	0.00E+00	3.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	3.14E+02	6.22E-01	1.22E+01	0.00E+00	2.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-02	0.00E+00	3.24E-02	-1.13E+01
PENRE	MJ	1.75E+02	4.40E+01	6.92E+00	0.00E+00	7.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E+00	0.00E+00	7.24E-01	-1.52E+02
PENRM	MJ	1.20E+01	0.00E+00	3.60E-01	0.00E+00	2.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	1.87E+02	4.40E+01	7.28E+00	0.00E+00	7.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E+00	0.00E+00	7.24E-01	-1.52E+02
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m <sup>3</sup>	9.92E-02	1.67E-03	3.30E-03	0.00E+00	9.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.32E-05	0.00E+00	3.24E-03	-4.88E-02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

Results per functional or declared unit - Total thickness of 10mm from ORZ plant																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
PERE	MJ	4.58E+02	4.84E-01	1.38E+01	0.00E+00	2.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-02	0.00E+00	2.52E-02	-1.03E+01
PERM	MJ	1.20E+02	0.00E+00	5.13E+00	0.00E+00	3.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	6.97E+02	4.84E-01	2.25E+01	0.00E+00	2.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-02	0.00E+00	2.52E-02	-1.03E+01
PENRE	MJ	1.31E+02	3.42E+01	5.27E+00	0.00E+00	7.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E+00	0.00E+00	5.64E-01	-1.38E+02
PENRM	MJ	1.27E+01	0.00E+00	3.82E-01	0.00E+00	2.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	1.44E+02	3.42E+01	5.65E+00	0.00E+00	7.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E+00	0.00E+00	5.64E-01	-1.38E+02
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m³	8.58E-02	1.30E-03	2.86E-03	0.00E+00	9.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.70E-05	0.00E+00	2.53E-03	-4.45E-02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

Results per functional or declared unit - Total thickness of 13mm and 14 mm with Ash, Oak and Oak AM wood from ORZ plant																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
PERE	MJ	5.19E+02	6.22E-01	1.53E+01	0.00E+00	2.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-02	0.00E+00	3.25E-02	-1.24E+01
PERM	MJ	1.71E+02	0.00E+00	6.62E+00	0.00E+00	3.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	8.02E+02	6.22E-01	2.55E+01	0.00E+00	2.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-02	0.00E+00	3.25E-02	-1.24E+01
PENRE	MJ	1.46E+02	4.40E+01	6.00E+00	0.00E+00	7.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E+00	0.00E+00	7.27E-01	-1.66E+02
PENRM	MJ	1.37E+01	0.00E+00	3.80E-01	0.00E+00	2.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	1.60E+02	4.40E+01	6.38E+00	0.00E+00	7.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E+00	0.00E+00	7.27E-01	-1.66E+02
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m³	8.81E-02	1.67E-03	2.87E-03	0.00E+00	9.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.35E-05	0.00E+00	3.26E-03	-5.35E-02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															



**Results per functional or declared unit - Total Thickness of 13mm (3-strips) and 14mm (3-strips) with Oak wood from ORZ plant**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
PERE	MJ	4.91E+02	6.02E-01	1.50E+01	0.00E+00	2.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-02	0.00E+00	3.18E-02	-1.24E+01
PERM	MJ	1.50E+02	0.00E+00	5.66E+00	0.00E+00	3.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	7.55E+02	6.02E-01	2.42E+01	0.00E+00	2.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-02	0.00E+00	3.18E-02	-1.24E+01
PENRE	MJ	1.71E+02	4.26E+01	5.95E+00	0.00E+00	7.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E+00	0.00E+00	7.10E-01	-1.66E+02
PENRM	MJ	1.05E+01	0.00E+00	4.12E-01	0.00E+00	2.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	1.82E+02	4.26E+01	6.36E+00	0.00E+00	7.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E+00	0.00E+00	7.10E-01	-1.66E+02
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m³	8.37E-02	1.62E-03	2.95E-03	0.00E+00	9.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.17E-05	0.00E+00	3.18E-03	-5.34E-02

**Acronyms**  
 PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

**Results per functional or declared unit - Total thickness of 16mm from ORZ plant**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
PERE	MJ	5.42E+02	7.18E-01	4.35E+01	0.00E+00	2.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-02	0.00E+00	3.79E-02	-1.45E+01
PERM	MJ	1.81E+02	0.00E+00	1.60E+01	0.00E+00	3.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	8.38E+02	7.18E-01	6.87E+01	0.00E+00	2.08E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-02	0.00E+00	3.79E-02	-1.45E+01
PENRE	MJ	1.86E+02	5.08E+01	1.94E+01	0.00E+00	7.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E+00	0.00E+00	8.46E-01	-1.94E+02
PENRM	MJ	1.30E+01	0.00E+00	1.04E+00	0.00E+00	2.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	1.99E+02	5.08E+01	2.05E+01	0.00E+00	7.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E+00	0.00E+00	8.46E-01	-1.94E+02
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



FW	m <sup>3</sup>	8.99E-02	1.93E-03	7.82E-03	0.00E+00	9.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.55E-05	0.00E+00	3.79E-03	-6.25E-02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water																

## Waste production and output flows

### Waste production

Results per functional or declared unit - Total thickness of 8.5 mm with Walnut and Oak wood from ORZ plant																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
Hazardous waste disposed	kg	4.23E-01	3.19E-02	1.61E-02	0.00E+00	1.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-03	0.00E+00	7.02E-02	-9.61E-02
Non-hazardous waste disposed	kg	7.77E+00	2.52E+00	3.47E-01	0.00E+00	1.73E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-01	0.00E+00	3.51E-02	-1.71E+00
Radioactive waste disposed	kg	6.19E-04	2.98E-04	2.99E-05	0.00E+00	2.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-05	0.00E+00	1.70E-06	-6.15E-04

Results per functional or declared unit - Total thickness of 10mm from ORZ plant.																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
Hazardous waste disposed	kg	2.39E-01	2.48E-02	9.83E-03	0.00E+00	1.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-03	0.00E+00	5.47E-02	-8.77E-02
Non-hazardous waste disposed	kg	4.81E+00	1.96E+00	2.41E-01	0.00E+00	1.73E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.62E-02	0.00E+00	2.73E-02	-1.56E+00
Radioactive waste disposed	kg	6.57E-04	2.32E-04	2.88E-05	0.00E+00	2.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-05	0.00E+00	1.32E-06	-5.61E-04

Results per functional or declared unit - Total thickness of 13mm and 14 mm with Ash, Oak and Oak AM wood from ORZ plant.																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
Hazardous waste disposed	kg	2.51E-01	3.19E-02	1.08E-02	0.00E+00	1.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-03	0.00E+00	7.05E-02	-1.05E-01
Non-hazardous waste disposed	kg	5.49E+00	2.52E+00	2.88E-01	0.00E+00	1.73E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-01	0.00E+00	3.52E-02	-1.88E+00
Radioactive waste disposed	kg	7.43E-04	2.98E-04	3.40E-05	0.00E+00	2.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-05	0.00E+00	1.70E-06	-6.74E-04



**Results per functional or declared unit - Total Thickness of 13mm (3-strips) and 14mm (3-strips) with Oak wood from ORZ plant.**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
Hazardous waste disposed	kg	2.95E-01	3.09E-02	1.08E-02	0.00E+00	1.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-03	0.00E+00	6.89E-02	-1.05E-01
Non-hazardous waste disposed	kg	6.61E+00	2.44E+00	2.73E-01	0.00E+00	1.73E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-01	0.00E+00	3.44E-02	-1.88E+00
Radioactive waste disposed	kg	9.90E-04	2.88E-04	3.30E-05	0.00E+00	2.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-05	0.00E+00	1.66E-06	-6.73E-04

**Results per functional or declared unit - Total thickness of 16mm from ORZ plant.**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
Hazardous waste disposed	kg	3.13E-01	3.68E-02	3.50E-02	0.00E+00	1.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-03	0.00E+00	8.21E-02	-1.23E-01
Non-hazardous waste disposed	kg	7.05E+00	2.91E+00	8.47E-01	0.00E+00	1.73E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-01	0.00E+00	4.10E-02	-2.20E+00
Radioactive waste disposed	kg	1.04E-03	3.44E-04	1.14E-04	0.00E+00	2.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-05	0.00E+00	1.98E-06	-7.88E-04

**Output flows**

**Results per functional or declared unit - Total thickness of 8.5 mm with Walnut and Oak wood from ORZ plant**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	2.30E-02	0.00E+00	2.49E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	2.45E+00	0.00E+00	3.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E+00	0.00E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**Results per functional or declared unit - Total thickness of 10mm from ORZ plant.**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00





Material for recycling	kg	2.30E-02	0.00E+00	1.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	7.18E+00	0.00E+00	3.95E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.00E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**Results per functional or declared unit - Total thickness of 13mm and 14 mm with Ash, Oak and Oak AM wood from ORZ plant.**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	2.19E-02	0.00E+00	2.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	6.83E+00	0.00E+00	4.47E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.73E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**Results per functional or declared unit - Total Thickness of 13mm (3-strips) and 14mm (3-strips) with Oak wood from ORZ plant.**

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	1.70E+00	0.00E+00	1.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	6.97E+00	0.00E+00	4.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.55E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



Results per functional or declared unit - Total thickness of 16mm from ORZ plant.																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	1.70E+00	0.00E+00	3.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	7.07E+00	0.00E+00	1.29E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.00E+00	0.00E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

#### Additional indicator

Results per functional or declared unit - Total thickness of 8.5 mm with Walnut and Oak wood from ORZ plant																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> eq.	1.21E+01	2.91E+00	4.70E-01	0.00E+00	3.95E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01	0.00E+00	7.10E-02	-9.19E+00

Results per functional or declared unit - Total thickness of 10mm from ORZ plant.																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> eq.	7.50E+00	2.26E+00	3.12E-01	0.00E+00	3.95E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.98E-02	0.00E+00	5.53E-02	-8.39E+00

Results per functional or declared unit - Total thickness of 13mm and 14 mm with Ash, Oak and Oak AM wood from ORZ plant.																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> eq.	8.36E+00	2.91E+00	3.59E-01	0.00E+00	3.95E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-01	0.00E+00	7.13E-02	-1.01E+01

Results per functional or declared unit - Total Thickness of 13mm (3-strips) and 14mm (3-strips) with Oak wood from ORZ plant.																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> eq.	9.75E+00	2.81E+00	3.54E-01	0.00E+00	3.95E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	0.00E+00	6.96E-02	-1.01E+01

Results per functional or declared unit - Total thickness of 16mm from ORZ plant.																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1/1	C2/1	C3/1	C4/1	D/1
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> eq.	1.05E+01	3.35E+00	1.14E+00	0.00E+00	3.95E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-01	0.00E+00	8.30E-02	-1.18E+01

<sup>1</sup> GWP-GHG is the sum of GWP-Fossil and GWP-LULUC indicators



## Information on biogenic carbon content for all groups

Results per functional or declared unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in product	kg C	<3.8
Biogenic carbon content in packaging	kg C	<0.025

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO<sub>2</sub>.

## References

### General Programme Instructions of the International EPD® System. Version 3.0.1

PCR 2019:14 version 1.11 and Sub-PCR-E Wood and wood-based products for use in construction (EN 16485:2014).

