Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

Wood flooring 13-14 mm– Swedish production

from

Tarkett

Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Type of EPD:	EPD of multiple products, based on the average results of the product group
EPD registration number:	EPD-IES-0026262
Version date:	2025-10-14
Validity date:	2030-10-14
Version history:	Original version of the EPD *An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com*

GENERAL INFORMATION

Programme Information	
Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	support@environdec.com

Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): PCR 2019:14 version 2.0.1 Construction products. UN CPC code : 31600 APE/NAF - 2223Z
PCR review was conducted by: The Technical Committee of the International EPD System. A full list of members is available on www.environdec.com. The review panel may be contacted via support@environdec.com. Members of the Technical Committee were requested to state any potential conflict of interest with the PCR Committee, and if there were conflicts of interest they were excused from the review. Chairs of the PCR review are Rob Rouwette (chair), Noa Meron (co-chair).
c-PCR: c-PCR-006 - Wood and wood-based products for use in construction (EN 16485) version 1.0.0

Third-party Verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

☒ **Individual EPD verification without a pre-verified LCA/EPD tool**
Third-party verifier: Anni Oviir , LCA Support – Rangi Maja OÜ
Approved by: International EPD System

☐ **Individual EPD verification with a pre-verified LCA/EPD tool**
☐ **EPD process certification* without a pre-verified LCA/EPD tool**
☐ **EPD process certification* with a pre-verified LCA/EPD tool**
☐ **Fully pre-verified EPD tool**

*EPD process certification involves an accredited certification body certifying and periodically auditing the EPD process and conducting external and independent verification of EPDs that are regularly published. More information can be found in the General Programme Instructions on www.envrondec.com.

Procedure for follow-up of data during EPD validity involves third party verifier:

☒ Yes ☐ No

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

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison.
For further information about comparability, see EN 15804 and ISO 14025.

This EPD is a specific EPD, Cradle-to-grave with module D.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: Tarkett
Address: Tarkett La Défense, 1 Terrasse Bellini 92400 Paris
Contact: Perla Boumendil , perla.boumendil@tarkett.com
Address and contact information of the LCA practitioner commissioned by the EPD owner, if applicable:
Perla Boumendil , perla.boumendil@tarkett.com Tarkett La Défense, 1 Terrasse Bellini 92400 Paris
Description of the organisation:

With 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 flooring, 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.

PRODUCT INFORMATION

Product name: Professional (13-14mm), Pure, Shade

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

Visual representation (e.g., an image) of the product

UN CPC code: 31600 APE/NAF – 1622Z

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.

Name and location of production site(s): Hanaskog, Sweden and Kalush, Ukraine.

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

CONTENT DECLARATION

Products - EPD Name	Products – Commercial name	Moisture content (%)	Thickness (mm)	Weight (kg/m^2)	Representative product
HSG Ash 13 mm	Pure, Shade	28.0	1.30E+01	6.70E+00	HSG Average 13 – 14 mm
HSG Ash 14 mm	Pure, Shade, Professional 14 mm	31.4	1.40E+01	7.30E+00	
HSG Oak 13 mm	Pure, Shade, Professional 13 mm	12.3	1.30E+01	6.70E+00	
HSG Oak 14 mm	Pure, Shade, Professional 14 mm	11.8	1.40E+01	7.30E+00	
HSG Beech 14 mm	Pure	31.9	1.40E+01	7.30E+00	
HSG Birch 14 mm	Pure	23.7	1.40E+01	7.30E+00	

EPD Products are already representative products of different widths of commercial collections: HSG 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.

According to PCR 2019:14 version 2.0.1, several products can be included in the same EPD and variations above 10% are allowed. The products included are similar in terms of thickness and structure, which justifies the declaration of an average product. The results of this EPDs are based on an average product, weighted by sales that we will refer to as HSG Average 13-14 mm.

Average - EPD Name	Moisture content (%)	Thickness (mm)	Weight (kg/m^2)
HSG Average 13 – 14 mm	12.9	1.32E+01	6.72E+01

The components for HSG Average are detailed below :

Product content	Mass, kg/m^2	Range of content of the included products, kg/m^2	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material, kg C/m^2
Wood	6.26E+00	6.16 E+00 – 6.99 E+00	0	40.4%	2.71E+00
Urea Formaldehyde	3.35E-01	3.35E-01	0	0	0
Glue thread	2.30E-03	2.30E-03	0	0	0
Polypropylene	6.00E-03	6.00E-03	0	0	0
Surface treatment	1.10E-01	1.10E-01	0	0	0
TOTAL	6.71E+00	6.70 E+00 – 7.60E+00	0	40.4%	2.71E+00

Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/m^2
PELD (shrink foil)	2.65E-02	0.39%	0
Cardboard (banderoll)	3.87E-02	0.58%	1.19E-02
Wooden spacers and pallets	6.31E-02	0.94%	1.95E-02
PE (plastic strips)	5.95E-04	0.01%	0
Inlay	5.80E-03	0.09%	0
Sticker (label)	1.30E-03	0.02%	0
TOTAL	1.35E-01	2.03%	3.14E-02

1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of CO_2. Biogenic carbon intake during the growth of the various wood types have been calculated following EN16449:2014 standard and added to datasets.

LCA INFORMATION

Functional unit 1m^2 of floor covering with a reference service life (RSL) of 1 year for specified characteristics application and use areas according to EN 16845:2014.

Conversion factor to mass if mass is not used as functional/declared unit : 11.7 kg/m^2
Reference service life: 1 year

Time representativeness: 2024

Geographical scope: Modules A1-A5 as well as the use (module B) and end-of-life (module C) have been modelled to represent European technology and process coverage.

Database(s) and LCA software used: Ecoinvent 3.9.1, SimaPro 9.6

Description of system boundaries: Cradle-to-grave and module D

Expected product lifetime : 50 years

Cut-off rules : The cut-off criteria used for this study follow the guidelines set out in the PCR which conform to the EN 15804-A2, as following:

- All inputs and outputs to a (unit) process are included in the calculation where the data is available.
- A maximum of 1% of the total mass per unit process may be omitted.
- A maximum of 1% of the total renewable and non-renewable energy for a unit process may be omitted.
- A maximum of 5% of the total energy usage and mass per module may be omitted.

All input and output flows have been considered, including raw materials as per the product composition provided by the manufacturer and packaging of raw materials as well as the final product.
Energy and water consumptions have also been considered at 100% according to the data provided.

Allocations :

Allocation was applied in accordance with the requirements of EN 15804 and ISO 14044. Here is the list of allocations made:

Raw materials: Raw material inputs are directly measured per product formulation. No allocation was needed for raw material use, as each recipe is specific to the product.

Energy and water consumption: Site-specific consumption data were measured at factory level for one year, 2024. These totals were divided by the annual production output (m²/year) to allocate energy and water use to the declared unit

Manufacturing waste: Internal recycling of production waste (post-manufacturing scrap reintroduced into the process) remains within the system boundary and was not subject to allocation. External waste streams were allocated proportionally to the production volume. Wood sawdust is collected from the production waste of wood to power the biomass boilers in the two factories. This allocation is a co-product allocation

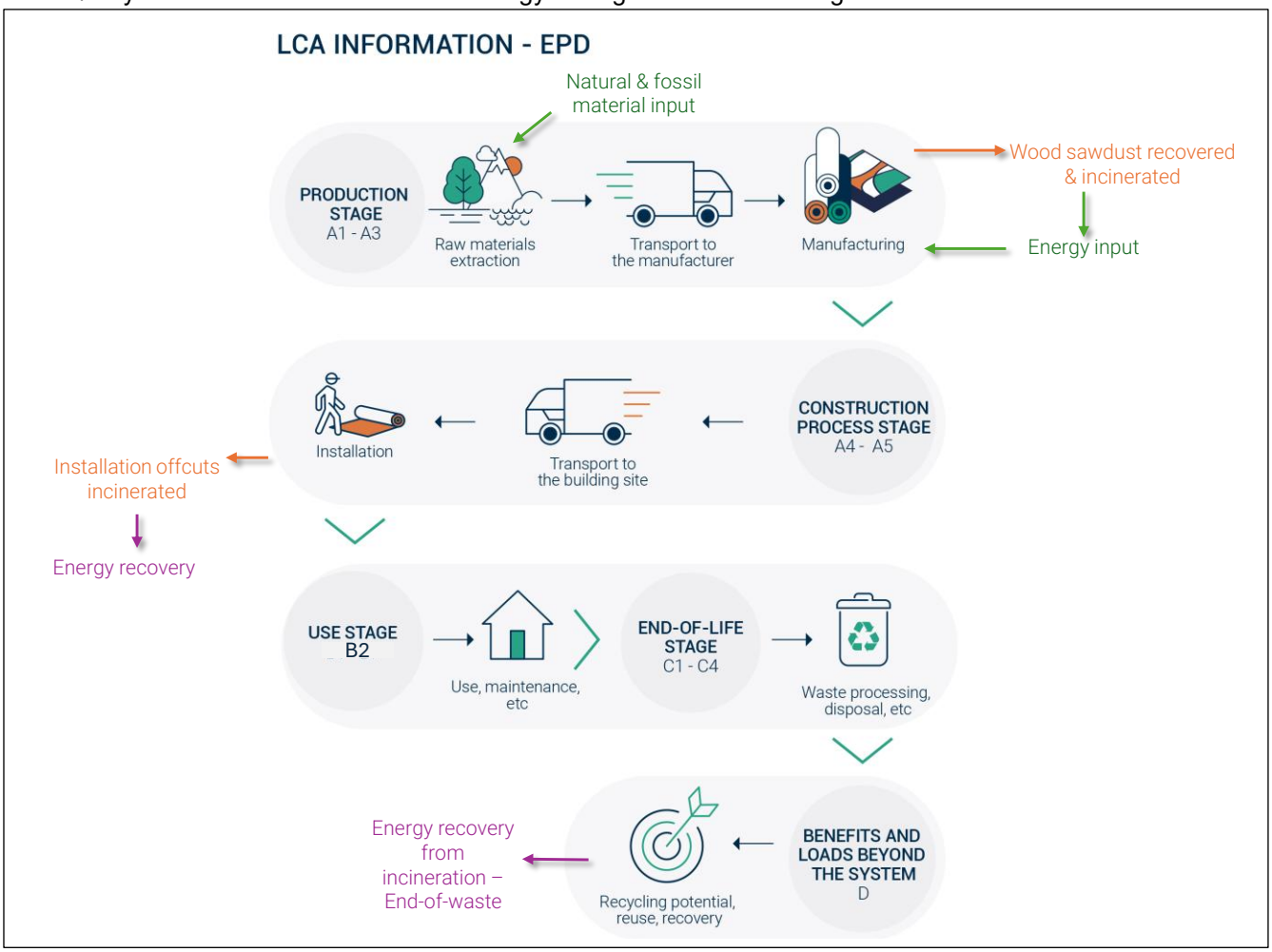
Other flows: Emissions and auxiliary inputs directly measured per unit of production were assigned without allocation.

No economic allocation was applied, since the factory produces only products of the same category, layered wood flooring, without co-products.

This physical allocation approach ensures a consistent distribution of energy, water, and waste flows to the functional unit.

Process flow diagram:

Process flow diagram of the product system, divided into the life-cycle stages and modules (or other division of the product life cycle, if defined in the PCR), showing the main processes included and the system boundary of the LCA. The diagram shall make it clear when the end-of-waste state is reached for main input flows of reused/recycled materials and recovered energy, and for output flows of reused/recycled materials and recovered energy exiting the end-of-life stage.



More information:

The results of this EPD are based on an average product weighted by sales.

Summary of the data quality assessment

A data quality assessment has been carried out in line with requirements of PCR in Section 4.6.4. Product raw material, energy consumption and transport of raw materials to the manufacturing site are all based on primary data.

The data has been collected by EPD owner on an entire year of production, the year 2024. The generic data is based on database Ecoinvent v3.9.1.
The data is representative of layered wood floor covering in Europe. Primary data reflects production processes in both Swedish and Ukrainian manufacturing sites.
The technology of layered wood flooring is accurately represented in this EPD for Swedish and Ukrainian manufacturing sites.
The relevant life cycle stages are included, A1-A3 are based on data collected from the manufacturer, and modules A4-C are declared based on generic transport and end-of-life scenarios. Module D is declared.
The same modeling principles, cut-off criteria, and allocation rules were applied throughout the study. All data were processed using the same LCA software and conform to EN 15804+A2 and ISO 14040/14044 standards.
The total share of primary data contributing to the declared GWP-GHG results of modules A1-A3) is 59%.

Processes contributing to more than 10% of the GWP-GHG results of module A1-A3 :

Process	Source type	Source	Reference year	Data category
Product raw materials	Collected data, database	EPD owner, Ecoinvent v3.9.1	2024	Secondary data
Electricity consumption	Collected data	EPD owner	2024	Primary data
Transport of raw material to production site	Collected data	EPD owner	2024	Primary data
Other processes	Database	EPD owner, Ecoinvent v.3.9.1	2024	Secondary data

The database used to model processes in modules A4-C that contributes more than 10% to the GWP-GHG over all included life-cycle stages is Ecoinvent version 3.9.1.

DATA QUALITY

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

	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	X	X	X	X	X	X
Geography	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU
Primary data used	59%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	-1%-7%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%					-	-	-	-	-	-	-	-	-	-	-	-

The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

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 in the Kalush factory. The rib-core for the middle layer is produced from softwood timber. The wear layers are sent to Hanaskog factory where products are assembled and shipped.
- 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.

Production waste

Waste type	Amount	Unit
Non-hazardous waste to landfilling	5.73E-04	kg/m²
Hazardous waste to incineration - no energy recovery	1.93E-03	kg/m²
Non-hazardous waste to incineration - energy recovery	2.39E-01	kg/m²
Hazardous waste to incineration - energy recovery	2.89E-02	kg/m²
Hazardous waste to external recycling	7.46E-03	kg/m²
Non-hazardous waste to external recycling	7.41E-02	kg/m²
Hazardous waste to external treatment	1.99E-03	kg/m²
Non-hazardous waste to external treatment	2.50E-02	kg/m²

NB: Post manufacturing recycling refers to the recycling of the losses inside the production plant. Therefore, this recycling is not included in end-of-life. The recycling process is taken into account in this module.

Electricity climate impact

Plant	Ecoinvent Module	$kgCO^2eq/kWh$
Hanaskog	Electricity, medium voltage {SE}| electricity, medium voltage, residual mix | Cut-off, U	6.96E-02
Kalush	Electricity, high voltage {UA}| production mix | Cut-off, U – Supplier mix	5.31E-01

Health, safety and environmental aspects during production

HSG Average 13-14 mm production sites complies with the ISO 14001 Environmental Management System and the ISO 9001 Quality Management System.

Delivery and installation

Delivery

The average distribution distance between the factory and the installation site is 684.5 km. It has been calculated considering the average distance between European countries where Tarkett is selling HSG Average 13 -14mm and the factory plant in Hanaskog (Sweden). The distribution is made by truck. Trucks are 16-32 ton lorry (EURO 5).

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/year/m^2

Waste

During the installation approximately 3% of the flooring is lost as off-cuts. These flooring losses are sent incineration with energy recovery. Energy is considered as not recovered during incineration.

Packaging

The wooden pallet goes to recycling, the rest of the packaging goes 50% to incineration, 50% goes to landfill. A distance of 100km to the incineration center has been considered (FD P01-015:2006).

USE STAGE

Refence 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 lifetime service 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 microfiber cloth and gentle detergents is done when needed to remove dirt and stains. Periodic maintenance involves using 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. The maintenance scenario is:

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

Description	Amount	Unit
Electricity consumption	2.28E-01	kWh/year/m^2
Water consumption	1.56E+00	L/year/m^2
Detergent consumption	6.00E-02	L/year/m^2

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

Incineration with energy recovery

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 facility modelled is taken from a study by the German Federal Environmental Agency from 2018.
The transport between construction site and waste treatment facility is by truck, with an estimated distance of 100 km to the incineration center (FD P01-015:2006).

Processes	Amount	Unit	Means of transport
Transport to incineration	1.00E+02	km	16-32 ton lorry (EURO 5)
Mass of product incinerated	6.72E+00	kg	

BENEFITS AND LOADS BEYOND SYSTEM BOUNDARIES

Incineration with energy recovery

Benefits from incineration energy recovery are calculated in D. Module D considers:

- Inputs of material : 1 m^2 of the wood flooring, 3% of offcuts during installation and the sawdust collected in the factory
- Exported energy : Electricity and thermal energy are recovered from the incineration of the material.

LCA INTERPRETATION

The results represent the cradle-to-grave environmental performance of 1m2 of installed wood flooring products for 1 year. The environmental impact of HSG Average 13-14 mm should be considered over the whole life cycle and beyond, including module A-D. The main contributors to the GWP total are the end-of-life (C4 and module D) and the production phase (A1-A3). The biogenic emissions release in C4 is the main driver of impact, as well as the use of wood. The impact of transport distance of raw material (A2) is moderate.
To decrease the GWP total of wood flooring, decision makers need to focus energy efficiency and renewable electricity during manufacturing as well as looking for lower impact raw materials.

ENVIRONMENTAL PERFORMANCE

LCA results of the product(s) - main environmental performance result

Mandatory impact category indicators according to EN 15804

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq.	-4.09E+00	8.79E-01	-2.13E-01	0.00E+00	8.90E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-01	0.00E+00	9.69E+00	-8.61E+00
GWP-fossil	kg CO_2 eq.	5.67E+00	8.78E-01	2.67E-01	0.00E+00	8.77E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-01	0.00E+00	6.20E-02	-8.59E+00
GWP-biogenic	kg CO_2 eq.	-9.78E+00	2.80E-04	-4.81E-01	0.00E+00	5.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-05	0.00E+00	9.63E+00	-1.47E-02
GWP-luluc	kg CO_2 eq.	1.83E-02	4.32E-04	1.40E-03	0.00E+00	6.89E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.19E-05	0.00E+00	2.15E-05	-6.32E-03
ODP	kg CFC 11 eq.	1.39E-07	1.91E-08	5.89E-09	0.00E+00	1.71E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E-09	0.00E+00	3.05E-09	-3.92E-07
AP	mol H^+ eq.	3.28E-02	2.83E-03	1.55E-03	0.00E+00	4.53E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-04	0.00E+00	2.07E-03	-3.01E-02
EP-freshwater	kg P eq.	1.42E-03	6.17E-05	5.79E-05	0.00E+00	7.77E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.85E-06	0.00E+00	4.04E-05	-2.94E-03
EP-marine	kg N eq.	4.35E-03	1.90E-04	1.78E-04	0.00E+00	2.39E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-05	0.00E+00	1.24E-04	-9.03E-03
EP-terrestrial	mol N eq.	8.02E-03	9.67E-04	6.44E-04	0.00E+00	1.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-04	0.00E+00	1.04E-03	-5.05E-03
POCP	kg NMVOC eq.	8.87E-02	1.02E-02	6.17E-03	0.00E+00	7.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-03	0.00E+00	1.12E-02	-5.02E-02
ADP-minerals&metals*	kg Sb eq.	3.09E-02	4.23E-03	2.06E-03	0.00E+00	2.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.16E-04	0.00E+00	2.96E-03	-1.98E-02
ADP-fossil*	MJ	2.83E-05	2.91E-06	1.20E-06	0.00E+00	2.33E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.16E-07	0.00E+00	2.02E-07	-9.28E-06
WDP*	m^3	1.87E+02	1.25E+01	3.87E+00	0.00E+00	1.99E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E+00	0.00E+00	6.21E-01	-1.33E+02
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															

** Disclaimer:*
The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.
If the EPD covers the end-of-life stage: "The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3)" For services, "A1-A3" shall be replaced by "A1-A5

If results based on an old EF version is used to develop an EPD, the EPD shall include a statement that clarifies that an EPD based on an old EF version has been used as a data source, and that this was assessed to yield identical or conservative results compared to fully using the current EF version.
If biogenic carbon leaving the product system in module A5 (see Annex 2 of PCR) or recovered energy leaving the product system in modules A5 or C (see Annex 3 of PCR) have been balanced out already in modules A1-A3, a statement in this regard shall be included.

Additional mandatory and voluntary impact category indicators

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[1]	kg CO_2 eq.	5.69E+00	8.79E-01	2.68E-01	0.00E+00	8.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-01	0.00E+00	6.21E-02	-8.60E+00

Disclaimers shall be added, if required by EN 15804.

Resource use indicators

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	2.48E+02	1.94E-01	1.43E+01	0.00E+00	3.85E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.78E-02	0.00E+00	2.89E-02	-1.03E+01
PERM	MJ	1.32E+02	0.00E+00	4.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.30E+02	0.00E+00
PERT	MJ	3.80E+02	1.94E-01	2.16E+01	0.00E+00	3.85E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.78E-02	0.00E+00	-1.30E+02	-1.03E+01
PENRE	MJ	1.87E+02	1.25E+01	3.87E+00	0.00E+00	1.99E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E+00	0.00E+00	6.21E-01	-1.33E+02

[1] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.

PENRM	MJ	4.01E+00	0.00E+00	1.26E-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	-2.87E+00	0.00E+00
PENRT	MJ	1.91E+02	1.25E+01	4.00E+00	0.00E+00	1.99E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E+00	0.00E+00	-2.25E+00	-1.33E+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^3	1.12E-01	1.78E-03	3.10E-03	0.00E+00	9.73E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-04	0.00E+00	3.22E-03	-4.70E-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 indicators

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2.63E-01	1.19E-02	1.02E-02	0.00E+00	1.94E-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	6.13E-02	-9.52E-02
Non-hazardous waste disposed	kg	3.24E+00	7.11E-01	1.98E-01	0.00E+00	2.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-01	0.00E+00	3.07E-02	-1.27E+00
Radioactive waste disposed	kg	1.72E-03	4.06E-06	7.89E-06	0.00E+00	1.35E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.83E-07	0.00E+00	4.39E-07	-3.75E-04

Output flow indicators

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
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	2.69E+00	0.00E+00	6.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	1.69E+00	0.00E+00	2.05E-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	0.00E+00	0.00E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	6.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E+02	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 LCA results (other environmental performance results) of the product(s)

For EPD of multiple products, if the EPD does not claim compliance with ISO 21930, variations above 10% are allowed. In such cases, the LCA report shall include an explanation of the variation and a justification of the grouping of products, and the EPD shall (in the LCA information section) declare the variation of each impact indicator results for which the variation is above 10% and include an explanation of the variation. EPDs based on worst-case results, that do not claim compliance with ISO 21930, are exempted from the requirement to declare the variation if above 10%.

LCA result of one declared unit product (A-C)	Unit	Max	Average 13-14 mm	Min
GWP-total	kg CO2 eq	7.67E+00	6.48E+00	7.03E+00
GWP-biogenic	kg CO2 eq	9.88E-03	-6.32E-01	-5.65E-02
PERE	MJ, net CV	2.83E+02	2.63E+02	2.27E+02
PERM	MJ, net CV	6.19E+00	5.58E+00	5.13E+00
PERT	MJ, net CV	2.89E+02	2.72E+02	2.33E+02
Exported energy, electricity	MJ, net CV	2.67E+02	2.15E+02	2.10E+02

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
EN	European Norm (Standard)
EPD	Environmental Product Declaration
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
LCA	Life Cycle Assessment
PCR	Product Category Rules
c-PCR	Complementary Product Category Rules
CEN	European Committee for Standardization
CLC	Co-location centre
CPC	Central product classification
GHS	Globally harmonized system of classification and labelling of chemicals
GRI	Global Reporting Initiative
Environmental Impact Indicators (EN 15804)	
GHG	Greenhouse gas
GWP	Global Warming Potential (kg CO_2 eq.)
GWP-fossil	Global Warming Potential from fossil sources (kg CO_2 eq.)
GWP-biogenic	Global Warming Potential from biogenic sources (kg CO_2 eq.)
GWP-luluc	Global Warming Potential from land use and land use change (kg CO_2 eq.)
GWP-total	Total Global Warming Potential (kg CO_2 eq.)
GWP-GHG	Global Warming Potential for greenhouse gases (kg CO_2 eq.)
ODP	Ozone Depletion Potential (kg CFC-11 eq.)
AP	Acidification Potential (mol H^+ eq.)
EP	Eutrophication Potential
EP-freshwater	Freshwater eutrophication potential (kg P eq.)
EP-marine	Marine eutrophication potential (kg N eq.)
EP-terrestrial	Terrestrial eutrophication potential (mol N eq.)
POCP	Photochemical Ozone Creation Potential (kg NMVOC eq.)
ADP	Abiotic Depletion Potential

ADP-minerals&metals	Abiotic depletion potential for non-fossil resources (kg Sb eq.)
ADP-fossil	Abiotic depletion potential for fossil resources (MJ)
WDP	Water Deprivation Potential (m^3)
Resource Use Indicators	
PERE	Use of renewable primary energy excluding renewable primary energy resources used as raw materials (MJ)
PERM	Use of renewable primary energy resources used as raw materials (MJ)
PERT	Total use of renewable primary energy resources (MJ)
PENRE	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (MJ)
PENRM	Use of non-renewable primary energy resources used as raw materials (MJ)
PENRT	Total use of non-renewable primary energy resources (MJ)
SM	Use of secondary material (kg)
RSF	Use of renewable secondary fuels (MJ)
NRSF	Use of non-renewable secondary fuels (MJ)
FW	Use of net fresh water (m^3)
Waste Indicators	
HW	Hazardous Waste (disposed) (kg)
NHW	Non-Hazardous Waste (disposed) (kg)
RW	Radioactive Waste (disposed) (kg)
Output Flow Indicators	
CFR	Components for Reuse (kg)
MR	Material for Recycling (kg)
MER	Materials for Energy Recovery (kg)
EEE	Exported Energy, Electricity (MJ)
EET	Exported Energy, Thermal (MJ)
Lifecycle Stages / Modules	
A1	Raw material supply
A2	Transport
A3	Manufacturing
A4	Transport to site
A5	Construction/Installation
B1	Use
B2	Maintenance
B3	Repair
B4	Replacement
B5	Refurbishment
B6	Operational energy use
B7	Operational water use
C1	Deconstruction/Demolition
C2	Transport to waste processing
C3	Waste processing
C4	Disposal
D	Reuse-Recovery-Recycling potential
Other Relevant Terms	
SVHC	Substances of Very High Concern
EC No.	European Community Number
CAS No.	Chemical Abstracts Service Number
MJ	Megajoule
kg	Kilogram
m^3	Cubic Meter
NMVOC	Non-Methane Volatile Organic Compounds
Sb eq.	Antimony Equivalents
P eq.	Phosphorus Equivalents
N eq.	Nitrogen Equivalents
CFC-11 eq.	Chlorofluorocarbon-11 Equivalents
CO_2 eq.	Carbon Dioxide Equivalents

kg C	Kilograms of Carbon
kg CO_2 eq.	Kilograms of Carbon Dioxide Equivalent
ND	Not Declared
Country abbreviation (ISO 3166 code)	
SE	Sweden
UA	Ukraine

REFERENCES

a) General Programme Instructions of International EPD System. Version.5.0.1
b) EN 15804:2012+A2:2019 – *Sustainability of construction works – Environmental Product Declarations – Core rules for the product category of construction products.* European Committee for Standardization (CEN), Brussels.
c) ISO 14025:2006 – *Environmental labels and declarations – Type III environmental declarations – Principles and procedures.* International Organization for Standardization (ISO), Geneva
d) PCR 2019:14. Construction products. Version 2.0.1
e) c-PCR-006 Wood and wood-based products for use in construction (EN 16485) (Version 1.0.0)
f) NF EN 16449:2014 - *Wood and wood-based products - Calculation of the biogenic carbon content of wood and conversion to carbon dioxide*. European Committee for Standardization. (CEN), Brussels.
g) FD P01-015:2006*. Environmental quality of construction products - Energy and transport data sheet.* AFNOR.
h) *Umweltbundesamt, Umweltbundesamt auf Basis Arbeitsgemeinschaft Energiebilanzen: Energiedaten, Stand Dezember 2018, 2018)* German Federal Environmental Agency.

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