Environmental Product Declaration

In accordance with ISO 14025 and EN 15804+A1 and EN 16485 for:

Wood flooring – TARKETT

Swedish Production

Programme:	The International EPD® System www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	S-P-01509
ECO EPD Ref. number:	00000906
Publication date:	2020-07-23
Revision date :	2022-09-23 (version 2.0)
Validity date:	2025-07-07
Geographical scope:	Europe

General information

Information about the organization

Owner of the EPD: Tarkett France. Vincent MONTI, vincent.monti@tarkett.com, Tarkett La Défense, 1 Terrasse Bellini 92400 Paris.
Description of the organisation: ISO 9001, ISO 14001, ISO 50001, WCM manufacturing site
Name and location of production sites: Hanaskog (Sweden), Orzechowo (Poland)

About the company

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.

Differences versus previous version
2020-07 Version 1

2022-09 Version 2.0.
Editorial change : *Removal of all informations concerning Polish production from the EPD.*

Product information

Products name: Pure, Shade, Prestige, Professional.

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. More than 60% of the wood is FSC or PEFC certified. 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.

The following figure shows an example of Wood flooring:

Wood flooring

UN CPC code: APE/NAF – 1622Z

Geographical scope: Europe

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^2 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:

1 year

Time representativeness:

2019

Database(s) and LCA software used:

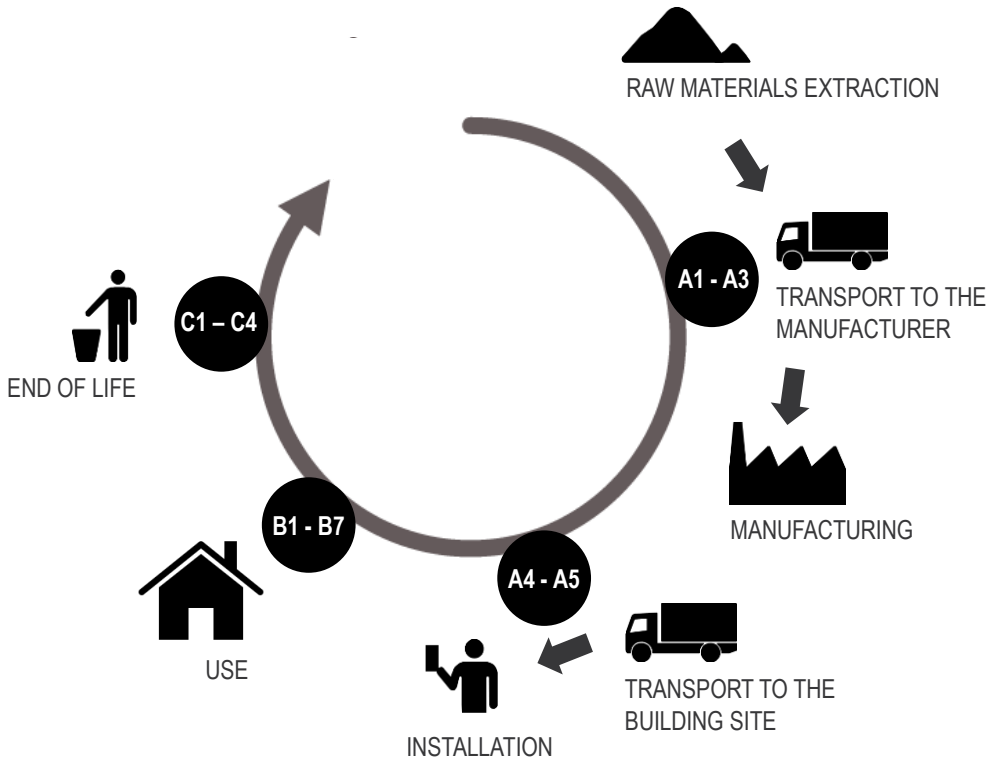
SimaPro 8.5 database Ecoinvent 3.4

Description of system boundaries:

Cradle to grave

System boundaries

The system boundary is based on the EN 15804 description.
Production stage : A1 – A3: includes the provision of all raw materials, transport to the production site and energy consumption during the manufacturing of the product, packaging of final product, the different air emissions, as well as processing of waste generated by the factory.
Construction stage: A4 – A5: includes the transport from the factory to the final customer, the installation of the product, as well as all consumables and energy required and processing of waste generated during the installation.
Use stage B1 – B7: includes provision and transport of all materials, products and services related to the use phase of the product, as well as their related energy and water consumption, and the processing of any resulting waste.
End of life stage C1 – C4: includes provision and transport of all materials, products and services related to the end of life phase of the product, including energy and water consumption, as well as the end of life processing of the product.



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Included/excluded life stages

	Production Stage			Construction Process Stage		Use Stage							End-of-Life Stage				Benefits and loads beyond system boundary
	Raw material supply (extraction, processing, recycled material)	Transport to manufacturer	Manufacturing	Transport to building site	Installation into building	Use / application	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction / demolition	Transport to EoL	Waste processing for reuse, recovery or recycling	Disposal	Reuse – Recovery – Recycling Potential
Modules	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Accounted for:	X	X	X	X	X	MND	X	MND	MND	MND	MND	MND	X	X	X	X	MND

X Module included in the study
MND : Module not declared

Use stage: Floor coverings do not contribute to modules B1 and B3 to B7, because they are not relevant during the service life of floor coverings, and are therefore not declared.

Cut-off criteria

The cut-off criteria shall be 1% of renewable and non-renewable primary energy usage and 1% of the total mass of that unit process. The total neglected input flows per module shall be a maximum of 5% of energy usage and mass.
For this study, all input and output flows have been considered at 100%, including raw materials as per the product composition provided by the manufacturer and packaging of raw materials as well as the final product.

LCA data

As a general rule, specific data derived from specific production processes or average data derived from specific production processes have been used as the first choice as a basis for calculating an EPD.
To model the life cycle of the product in question, the software SimaPro 8.5, developed by PRé, has been used in conjunction with the LCA database ecoinvent v3.4.

Data quality

The objective of this evaluation is to evaluate the environmental impacts generated by the product floor covering Wood products throughout its entire life cycle. To this end, ISO 14040:2006, ISO 14044:2014 and EN 15804:2014 have been met regarding the quality of data on different following criteria:

The time factor, the life cycle inventory data used come from:

- Data collected specifically for this study on Tarkett sites. Data sets are based on 1 year averaged data.

- In the absence of collected data, generic data from the ecoinvent V3.4 cut-off by classification database. This is regularly updated and is representative of current processes

Technological Coverage

- Tarkett technologies used for the manufacture methods of the product.
- European technology in the case of use of generic data.

Geographical Coverage

- Data come from production sites of Tarkett
- The generic data come from the ecoinvent database, representative of the European processes.

Allocation

The overall values for the factory's material and energy consumptions during a period of one year have been divided by the annual production of each product to supply a value per square meter of flooring produced. All factory data are measured in square meters, and it is assumed that the process consumptions are governed by area of flooring processed rather than mass.

Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to /EN 15804/ and the building context, respectively the product-specific characteristics of performance, are taken into account.

Content declaration

Product

Products – EPD name	Products – Commercial name	Thickness (mm)	Mass (kg/m²)	Factories city
HSG Ash 13 mm	Pure, Shade	1.30E+01	7.30E+00	Hanaskog (Sweden)
HSG Oak 13 mm	Professional, Pure, Shade	1.30E+01	7.30E+00	
HSG Ash 14 mm	Pure, Shade, Professional	1.40E+01	7.90E+00	
HSG Beech 14 mm	Pure	1.40E+01	7.90E+00	
HSG Birch 14 mm	Pure	1.40E+01	7.60E+00	
HSG Oak 14 mm	Professional, Pure, Shade, Prestige	1.40E+01	7.90E+00	
HSG Maple 14 mm	Pure	1.40E+01	8.10E+00	
HSG Walnut 14 mm	Pure	1.40E+01	7.90E+00	
HSG Ash 22 mm	Professional	2.20E+01	1.14E+01	
HSG Beech 22 mm	Professional	2.20E+01	1.14E+01	
HSG Oak 22 mm	Professional	2.20E+01	1.14E+01	

Products with the HSG name come from Hanaskog plant (HSG).
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 2012:01v2.3, several similar products can be included in the same EPD if "differences between the mandatory impact indicators lower than ±10% (conerning A1-A3) could be presented using the impacts of a representative product". The next table presents how products are grouped:

Products	Representative average product	Category Identification
HSG Ash 13 mm	Total thickness between 13 and 14 mm from HSG plant	A
HSG Oak 13 mm		
HSG Ash 14 mm		
HSG Beech 14 mm		
HSG Birch 14 mm		
HSG Oak 14 mm		
HSG Maple 14 mm	Total thickness of 14 mm with Walnut and Maple wood from HSG plant	B
HSG Walnut 14 mm		
HSG Ash 22 mm	Total thickness of 22 mm from HSG plant	C
HSG Beech 22 mm		
HSG Oak 22 mm		

Characteristics	Product Weight [kg/m²]	Emission of formaldehyde	Reaction to fire	Dimension stability	Thermal conductivity
Total thickness between 13 and 14 mm from HSG plant	7.66E+00	E1 (EN 14342)	Dfl-s1 (EN 14342 – Table 1)	0.2 % (EN 13329)	≤ 0.15 (EN ISO 10456:2007)
Total thickness of 14 mm with Walnut and Maple wood from HSG plant	7.97E+00				
Total thickness of 22 mm from HSG plant	1.14E+01				

Chemical composition for all representative products are presented in the following table:

	Chemical substances for each representative product					
Representative products	Wood layer	Adhesive – Urea formaldehyde	Glue thread	Putty	PP	Surface treatment
Total thickness between 13 and 14 mm from HSG plant	94%	4%	<0.1%	<0.5%	<0.1%	1%
Total thickness of 14 mm with Walnut and Maple wood from HSG plant	93%	4%	<0.1%	<0.5%	<0.1%	1%
Total thickness of 22 mm from HSG plant	95%	3%	<0.1%	<0.5%	0%	1%
Substance concerned with REACH	/	/	/	/	/	/

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.
- 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 Hanaskog for assembling.

Product Groups	Plants involved
Total thickness between 13 and 14 mm from HSG plant	HSG
Total thickness of 14 mm with Walnut and Maple wood from HSG plant	HSG
Total thickness of 22 mm from HSG plant	HSG

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	HSG plant	Unit
Non-hazardous waste to external incineration	1.57E-02	kg/m^2
Hazardous waste to external incineration	7.14E-03	kg/m^2
Non hazardous waste to external recycling	1.23E+00	kg/m^2
Hazardous waste to external recycling	1.32E-04	kg/m^2
Non hazardous waste-water to external treatment	0	kg/m^2
Hazardous waste-water to external treatment	0	kg/m^2

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.

Packaging

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

Type	Total thickness between 13 and 14 mm from HSG plant	Total thickness of 14 mm with Walnut and Maple wood from HSG plant	Total thickness of 22 mm from HSG plant	Unit
Product Packaging PELD	2.62E-02		3.70E-02	kg/m^2 of product
Product Packaging Cardboard	5.62E-02		6.90E-02	kg/m^2 of product
Product Packaging Wood	7.94E-02		9.13-02	kg/m^2 of product
Product Packaging PE	3.20E-03		3.20E-03	kg/m^2 of product
Product Packaging Paper	2.80E-03		2.80E-03	kg/m^2 of product
Product Packaging Sticker	2.30E-03		2.30E-03	kg/m^2 of product

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

Delivery and installation

Delivery

The average distribution distance between the factory and the installation site is 614 km. It has been calculated considering the average distance between European countries where Tarkett is selling the Wood products and the factory 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/m²

Waste

During the installation approximately 5% of the flooring is lost as off-cuts. 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 incineration with energy recovery.

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 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.[1]

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^2
Water consumption	1.45E+00	L/year/m^2
Detergent consumption	2.65E-01	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

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.

[1] See your Tarkett certified installer to evaluate the overall condition of your floor and have the work done – Parquet catalogue, 2017, p.95

Data Validation

To validate data, a validity framework has been established. A specific average product has been determined for each category. These thirteen average products are formed by every element of LCI. Based on results on all environmentals indicators, it has been shown that these average products are representative of, respectively, six, two, three, one, one, one, one, one, one, one, one, one and one products each. Because there is only one product in ten categories, impacts of their representative product are the same as the product itself. So, following figures do not show them. These are data from these average products which are presented in this EPD.

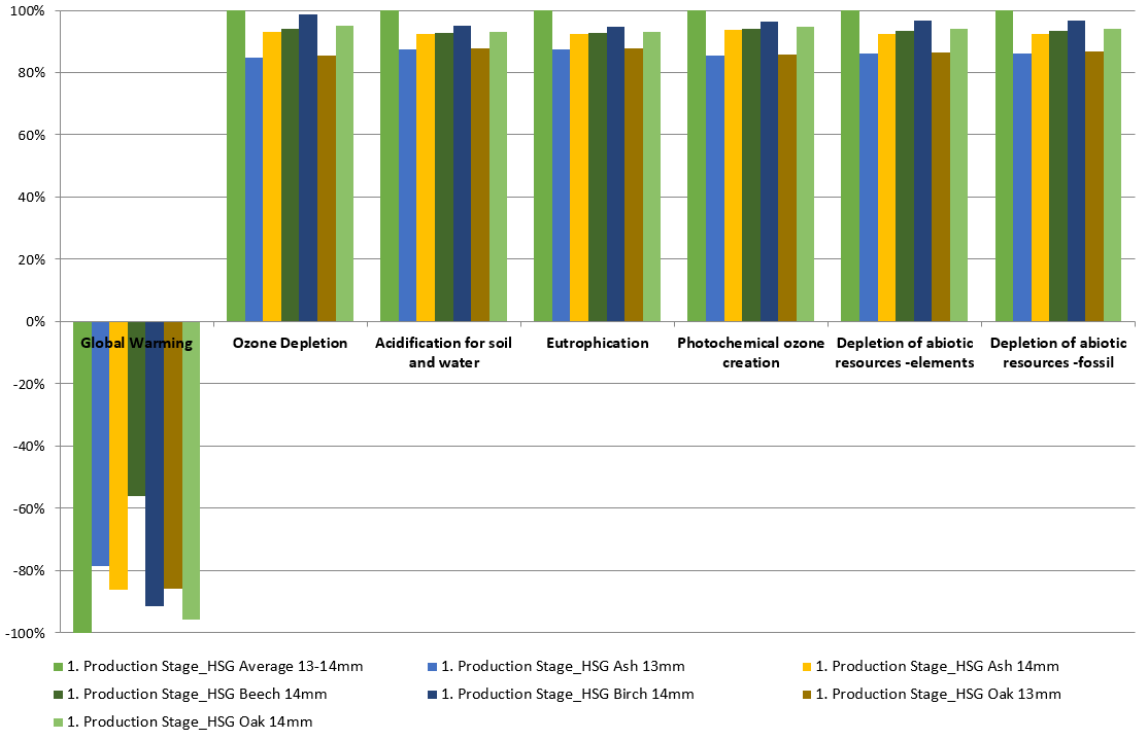

Figure 1: Comparison of product stage between products and their average one (Total thickness between 13 and 14 mm from HSG plant)

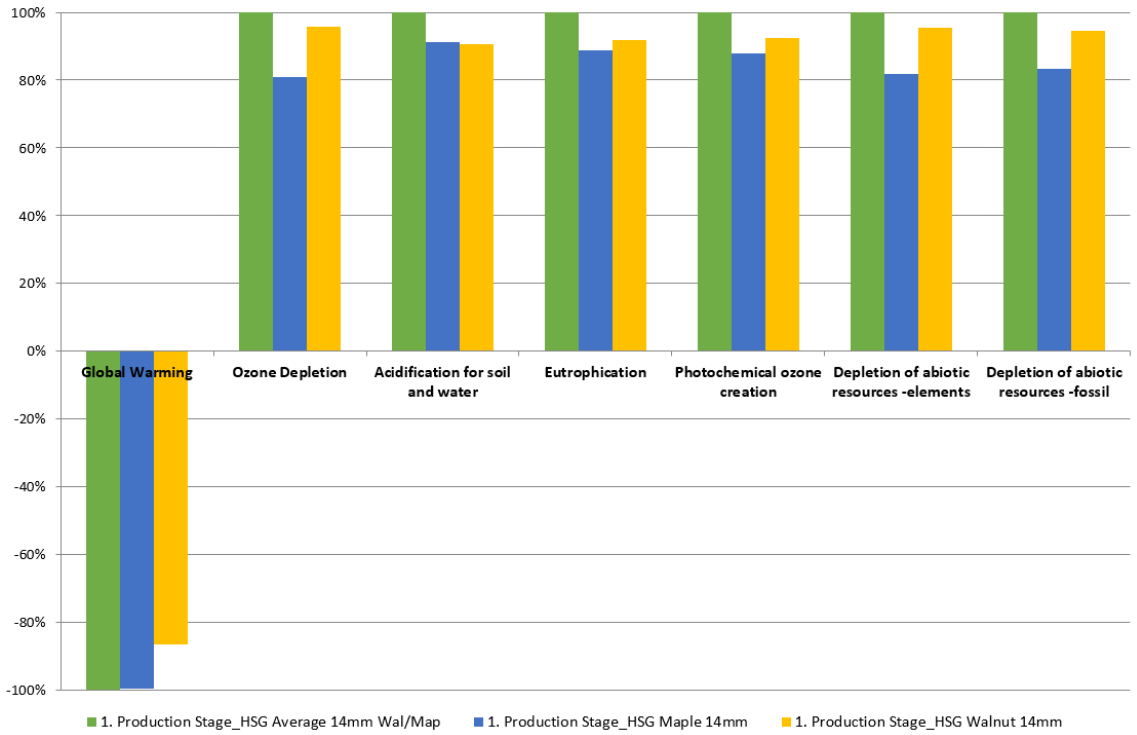

Figure 2: Comparison of product stage between products and their average one (Total thickness of 14 mm with Walnut and Maple wood from HSG plant)

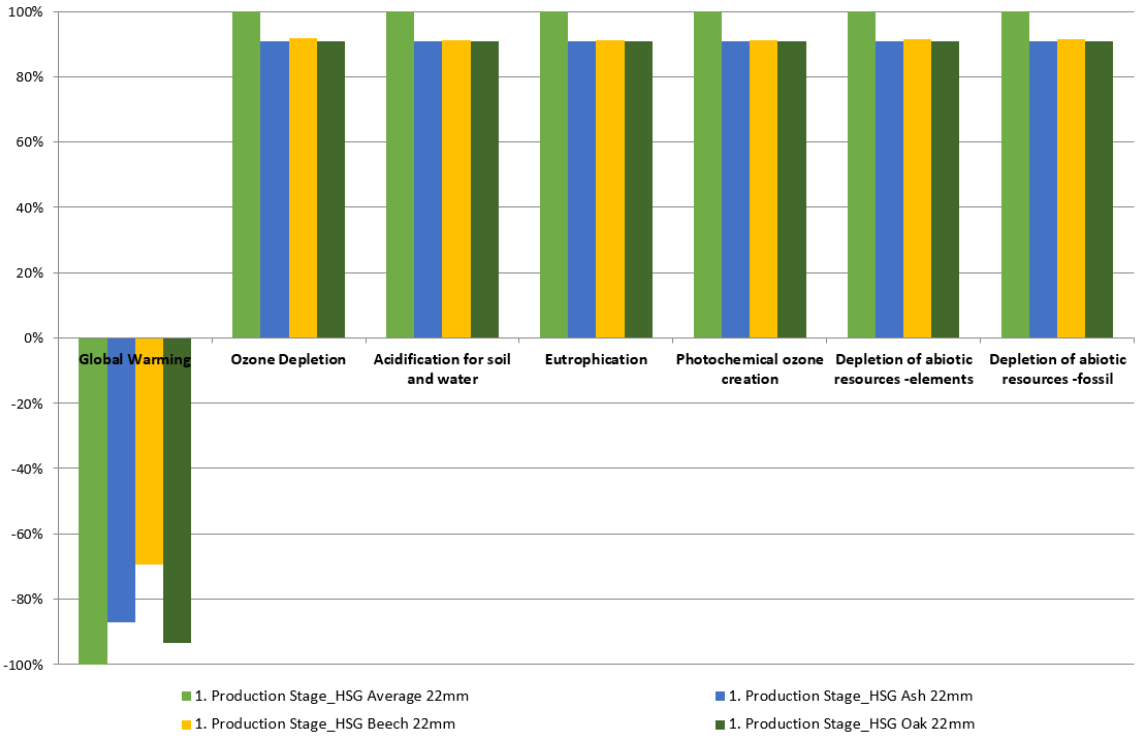

Figure 3: Comparison of product stage between products and their average one (Total thickness of 22 mm from HSG plant)

Environmental performance

Potential environmental impact

A – Total thickness between 13 and 14 mm from HSG plant															
PARAMETER	UNIT	Product stage	Construction stage		Use stage							End of life stage			
		Total Production	Transport	installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction	Transport	Waste processing	Disposal
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
Global Warming	kg CO2 eq	-7,49E+00	7,77E-01	3,26E-01	MND	8,23E-01	MND	MND	MND	MND	MND	0,00E+00	1,25E-01	0,00E+00	1,21E+01
Ozone Depletion	kg CFC-11 eq	6,65E-07	1,45E-07	4,37E-08	MND	5,62E-08	MND	MND	MND	MND	MND	0,00E+00	2,32E-08	0,00E+00	7,75E-09
Acidification of soil and water	kg SO2 eq.	2,52E-02	2,46E-03	1,56E-03	MND	3,12E-03	MND	MND	MND	MND	MND	0,00E+00	3,97E-04	0,00E+00	1,63E-03
Eutrophication	kg PO4--- eq	6,67E-03	5,52E-04	6,74E-04	MND	2,70E-03	MND	MND	MND	MND	MND	0,00E+00	8,95E-05	0,00E+00	2,26E-03
Photochemical ozone creation	kg ethylene	3,73E-03	4,01E-04	2,42E-04	MND	5,25E-04	MND	MND	MND	MND	MND	0,00E+00	6,46E-05	0,00E+00	3,41E-04
Depletion of abiotic resources - elements	kg antimony	1,46E-05	2,43E-06	8,93E-07	MND	2,43E-06	MND	MND	MND	MND	MND	0,00E+00	3,88E-07	0,00E+00	1,47E-07
Depletion of abiotic resources - fossil	MJ. net CV	7,03E+01	1,17E+01	4,39E+00	MND	4,55E+00	MND	MND	MND	MND	MND	0,00E+00	1,88E+00	0,00E+00	6,82E-01

MND: Module not declared

B – Total thickness of 14 mm with Walnut and Maple wood from HSG plant															
PARAMETER	UNIT	Product stage	Construction stage		Use stage							End of life stage			
		Total Production	Transport	installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction	Transport	Waste processing	Disposal
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
Global Warming	kg CO2 eq	-3,92E+00	8,08E-01	3,23E-01	MND	8,23E-01	MND	MND	MND	MND	MND	0,00E+00	1,30E-01	0,00E+00	8,44E+00
Ozone Depletion	kg CFC-11 eq	6,39E-07	1,50E-07	4,28E-08	MND	5,62E-08	MND	MND	MND	MND	MND	0,00E+00	2,41E-08	0,00E+00	8,06E-09
Acidification of soil and water	kg SO2 eq.	2,92E-02	2,56E-03	1,77E-03	MND	3,12E-03	MND	MND	MND	MND	MND	0,00E+00	4,14E-04	0,00E+00	1,70E-03
Eutrophication	kg PO4--- eq	6,99E-03	5,74E-04	6,95E-04	MND	2,70E-03	MND	MND	MND	MND	MND	0,00E+00	9,32E-05	0,00E+00	2,35E-03
Photochemical ozone creation	kg ethylene	3,94E-03	4,17E-04	2,54E-04	MND	5,25E-04	MND	MND	MND	MND	MND	0,00E+00	6,73E-05	0,00E+00	3,55E-04
Depletion of abiotic resources - elements	kg antimony	1,36E-05	2,53E-06	8,50E-07	MND	2,43E-06	MND	MND	MND	MND	MND	0,00E+00	4,04E-07	0,00E+00	1,53E-07
Depletion of abiotic resources - fossil	MJ. net CV	6,84E+01	1,22E+01	4,33E+00	MND	4,55E+00	MND	MND	MND	MND	MND	0,00E+00	1,96E+00	0,00E+00	7,10E-01

MND: Module not declared

C – Total thickness of 22 mm from HSG plant															
PARAMETER	UNIT	Product stage	Construction stage		Use stage							End of life stage			
		Total Production	Transport	installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction	Transport	Waste processing	Disposal
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
Global Warming	kg CO2 eq	-1,27E+01	1,15E+00	4,33E-01	MND	8,23E-01	MND	MND	MND	MND	MND	0,00E+00	1,85E-01	0,00E+00	1,88E+01
Ozone Depletion	kg CFC-11 eq	8,57E-07	2,15E-07	5,78E-08	MND	5,62E-08	MND	MND	MND	MND	MND	0,00E+00	3,45E-08	0,00E+00	1,15E-08
Acidification of soil and water	kg SO2 eq.	3,17E-02	3,65E-03	2,00E-03	MND	3,12E-03	MND	MND	MND	MND	MND	0,00E+00	5,92E-04	0,00E+00	2,43E-03
Eutrophication	kg PO4--- eq	8,53E-03	8,19E-04	8,83E-04	MND	2,70E-03	MND	MND	MND	MND	MND	0,00E+00	1,33E-04	0,00E+00	3,36E-03
Photochemical ozone creation	kg ethylene	5,03E-03	5,94E-04	3,30E-04	MND	5,25E-04	MND	MND	MND	MND	MND	0,00E+00	9,61E-05	0,00E+00	5,08E-04
Depletion of abiotic resources - elements	kg antimony	1,83E-05	3,60E-06	1,15E-06	MND	2,43E-06	MND	MND	MND	MND	MND	0,00E+00	5,77E-07	0,00E+00	2,18E-07
Depletion of abiotic resources - fossil	MJ. net CV	9,00E+01	1,74E+01	5,74E+00	MND	4,55E+00	MND	MND	MND	MND	MND	0,00E+00	2,79E+00	0,00E+00	1,02E+00

MND: Module not declared

Use of resources

A – Total thickness between 13 and 14 mm from HSG plant															
PARAMETER	UNIT	Product stage	Construction stage		Use stage							End of life stage			
		Total Production	Transport	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction	Transport	Waste processing	Disposal
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
Renewable primary energy excl. RM	MJ. net CV	6,30E+01	1,75E-01	3,19E+00	MND	3,07E+00	MND	MND	MND	MND	MND	0,00E+00	2,79E-02	0,00E+00	2,61E-02
Renewable primary energy used as RM	MJ. net CV	1,53E+02	0,00E+00	6,38E+00	MND	2,76E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total renewable primary energy	MJ. net CV	2,16E+02	1,75E-01	9,57E+00	MND	5,83E+00	MND	MND	MND	MND	MND	0,00E+00	2,79E-02	0,00E+00	2,61E-02
Non renewable primary energy excl. RM	MJ. net CV	7,45E+01	1,20E+01	4,72E+00	MND	6,44E+00	MND	MND	MND	MND	MND	0,00E+00	1,92E+00	0,00E+00	7,17E-01
Non renewable primary energy used as RM	MJ. net CV	1,02E+01	0,00E+00	5,09E-01	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total non renewable primary energy	MJ. net CV	8,47E+01	1,20E+01	5,23E+00	MND	6,44E+00	MND	MND	MND	MND	MND	0,00E+00	1,92E+00	0,00E+00	7,17E-01
Use of secondary material	kg	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable secondary fuels	MJ. net CV	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of non renewable secondary fuels	MJ. net CV	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3	8,36E-02	2,26E-03	4,75E-03	MND	3,63E-02	MND	MND	MND	MND	MND	0,00E+00	3,61E-04	0,00E+00	3,55E-03

B – Total thickness of 14 mm with Walnut and Maple wood from HSG plant															
PARAMETER	UNIT	Product stage	Construction stage		Use stage							End of life stage			
		Total Production	Transport	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction	Transport	Waste processing	Disposal
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
Renewable primary energy excl. RM	MJ. net CV	6,77E+01	1,82E-01	3,43E+00	MND	3,07E+00	MND	MND	MND	MND	MND	0,00E+00	2,91E-02	0,00E+00	2,72E-02
Renewable primary energy used as RM	MJ. net CV	1,56E+02	0,00E+00	6,55E+00	MND	2,76E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total renewable primary energy	MJ. net CV	2,24E+02	1,82E-01	9,97E+00	MND	5,83E+00	MND	MND	MND	MND	MND	0,00E+00	2,91E-02	0,00E+00	2,72E-02
Non renewable primary energy excl. RM	MJ. net CV	7,27E+01	1,25E+01	4,65E+00	MND	6,44E+00	MND	MND	MND	MND	MND	0,00E+00	2,00E+00	0,00E+00	7,46E-01
Non renewable primary energy used as RM	MJ. net CV	1,01E+01	0,00E+00	5,07E-01	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total non renewable primary energy	MJ. net CV	8,28E+01	1,25E+01	5,16E+00	MND	6,44E+00	MND	MND	MND	MND	MND	0,00E+00	2,00E+00	0,00E+00	7,46E-01
Use of secondary material	kg	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable secondary fuels	MJ. net CV	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of non renewable secondary fuels	MJ. net CV	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3	8,32E-02	2,35E-03	4,74E-03	MND	3,63E-02	MND	MND	MND	MND	MND	0,00E+00	3,76E-04	0,00E+00	3,69E-03

MND: Module not declared

C – Total thickness of 22 mm from HSG plant															
PARAMETER	UNIT	Product stage	Construction stage		Use stage							End of life stage			
		Total Production	Transport	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction	Transport	Waste processing	Disposal
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
Renewable primary energy excl. RM	MJ. net CV	9,60E+01	2,60E-01	4,85E+00	MND	3,07E+00	MND	MND	MND	MND	MND	0,00E+00	4,16E-02	0,00E+00	3,88E-02
Renewable primary energy used as RM	MJ. net CV	2,43E+02	0,00E+00	1,07E+01	MND	2,76E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total renewable primary energy	MJ. net CV	3,39E+02	2,60E-01	1,55E+01	MND	5,83E+00	MND	MND	MND	MND	MND	0,00E+00	4,16E-02	0,00E+00	3,88E-02
Non renewable primary energy excl. RM	MJ. net CV	9,52E+01	1,78E+01	6,12E+00	MND	6,44E+00	MND	MND	MND	MND	MND	0,00E+00	2,86E+00	0,00E+00	1,07E+00
Non renewable primary energy used as RM	MJ. net CV	1,08E+01	0,00E+00	5,38E-01	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total non renewable primary energy	MJ. net CV	1,06E+02	1,78E+01	6,66E+00	MND	6,44E+00	MND	MND	MND	MND	MND	0,00E+00	2,86E+00	0,00E+00	1,07E+00
Use of secondary material	kg	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable secondary fuels	MJ. net CV	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of non renewable secondary fuels	MJ. net CV	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh water	m3	9,38E-02	3,35E-03	5,44E-03	MND	3,63E-02	MND	MND	MND	MND	MND	0,00E+00	5,37E-04	0,00E+00	5,28E-03

MND: Module not declared

Waste production and output flows

A – Total thickness between 13 and 14 mm from HSG plant															
PARAMETER	UNIT	Product stage	Construction stage		Use stage							End of life stage			
		Total Production	Transport	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction	Transport	Waste processing	Disposal
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
Hazardous waste disposed	kg	1,23E-01	7,11E-03	1,14E-02	MND	4,72E-02	MND	MND	MND	MND	MND	0,00E+00	1,13E-03	0,00E+00	6,20E-02
Non hazardous waste disposed	kg	2,38E+00	6,28E-01	2,09E-01	MND	1,93E-01	MND	MND	MND	MND	MND	0,00E+00	1,00E-01	0,00E+00	3,10E-02
Radioactive waste disposed	kg	4,45E-04	8,25E-05	2,89E-05	MND	2,69E-05	MND	MND	MND	MND	MND	0,00E+00	1,32E-05	0,00E+00	2,19E-06
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	1,23E+00	0,00E+00	1,41E-01	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	3,83E-01	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	7,66E+00
Exported energy (electricity)	MJ	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy (steam)	MJ	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00

MND: Module not declared

B – Total thickness of 14 mm with Walnut and Maple wood from HSG plant															
PARAMETER	UNIT	Product stage	Construction stage		Use stage							End of life stage			
		Total Production	Transport	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction	Transport	Waste processing	Disposal
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
Hazardous waste disposed	kg	1,23E-01	7,39E-03	1,15E-02	MND	4,72E-02	MND	MND	MND	MND	MND	0,00E+00	1,18E-03	0,00E+00	6,45E-02
Non hazardous waste disposed	kg	2,15E+00	6,53E-01	1,99E-01	MND	1,93E-01	MND	MND	MND	MND	MND	0,00E+00	1,04E-01	0,00E+00	3,23E-02
Radioactive waste disposed	kg	4,31E-04	8,58E-05	2,84E-05	MND	2,69E-05	MND	MND	MND	MND	MND	0,00E+00	1,37E-05	0,00E+00	2,28E-06
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	1,23E+00	0,00E+00	1,41E-01	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	3,99E-01	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	7,97E+00
Exported energy (electricity)	MJ	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy (steam)	MJ	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00

MND: Module not declared

C – Total thickness of 22 mm from HSG plant															
PARAMETER	UNIT	Product stage	Construction stage		Use stage							End of life stage			
		Total Production	Transport	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction	Transport	Waste processing	Disposal
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
Hazardous waste disposed	kg	1,54E-01	1,05E-02	1,51E-02	MND	4,72E-02	MND	MND	MND	MND	MND	0,00E+00	1,69E-03	0,00E+00	9,23E-02
Non hazardous waste disposed	kg	3,25E+00	9,30E-01	2,83E-01	MND	1,93E-01	MND	MND	MND	MND	MND	0,00E+00	1,49E-01	0,00E+00	4,62E-02
Radioactive waste disposed	kg	5,59E-04	1,22E-04	3,70E-05	MND	2,69E-05	MND	MND	MND	MND	MND	0,00E+00	1,96E-05	0,00E+00	3,26E-06
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	1,23E+00	0,00E+00	1,53E-01	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	5,70E-01	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	1,14E+01
Exported energy (electricity)	MJ	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy (steam)	MJ	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00

MND: Module not declared

Programme-related information and verification

The EPD owner has the sole ownership, liability, and responsibility for the flooring EPD. EPDs within the same product category but from different programmes may not be comparable. EPDs of floor products may not be comparable if they do not comply with EN 15804.

Programme:	The International EPD® System EPD International AB Box 210 60 SE-100 31 Stockholm Sweden www.environdec.com info@environdec.com
EPD registration number:	S-P-01509
ECO EPD Ref. number	00000906
Published:	2020-07-23
Valid until:	2025-07-07
Product Category Rules:	PCR 2012:01v2.3 and Sub-PCR-E Wood and wood-based products for use in construction (EN 16485:2014)
Product group classification:	UN CPC APE/NAF - 1622Z
Reference year for data:	2019
Geographical scope:	Europe

CEN standard EN 15804 and EN 16485 serve as the Core Product Category Rules (PCR)
Product category rules (PCR): EN 15804 and EN 16485
Independent third-party verification of the declaration and data. according to ISO 14025:2010: ☐ EPD process certification ■ EPD verification
Third party verifier: Damien PRUNEL. BUREAU VERITAS LCIE
Procedure for follow-up of data during EPD validity involves third party verifier: ☒ Yes ☐ No

References

General Programme Instructions of the International EPD® System. Version 3.0.
PCR 2012:01v2.3 and Sub-PCR-E Wood and wood-based products for use in construction (EN 16485:2014).

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