EPD®
THE INTERNATIONAL EPD® SYSTEM

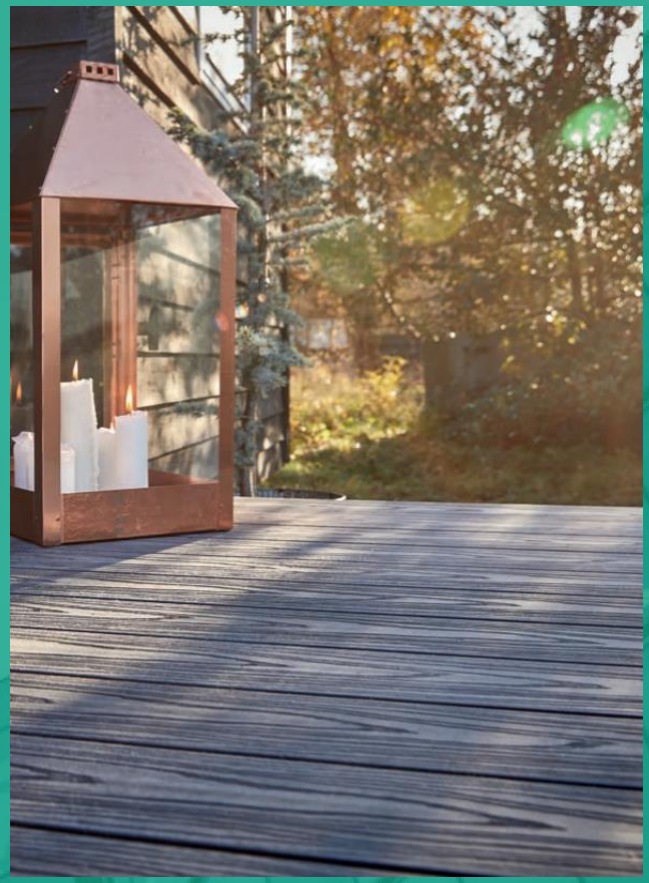
WIMEX

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

WOOD PLASTIC COMPOSITE (WPC) PRODUCTS

WIMEX A/S



Programme: The International EPD® System, www.environdec.com	Programme operator: EPD International AB	EPD registration number: S-P-10004	Publication date: 2023-07-25	Valid until: 2028-07-24	Geographical scope: China

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com.

One Click LCA

Environmental Product Declaration created with One Click LCA

ECO PLATFORM EPD VERIFIED

GENERAL INFORMATION

COMPANY INFORMATION

Owner of EPD	WIMEX A/S
Address	Strandvejen 16 DK-7800 Skive Denmark
Contact details	Henrik Danielsen, hd@moland.dk
Website	www.wimex.dk

PRODUCT IDENTIFICATION

Product name	Wood plastic composite (WPC) products
Additional label(s)	/
Place(s) of production	China

The International EPD System

EPDs within the same product category but from different programmes may not be comparable.

EPD INFORMATION

The EPD owner has the sole ownership, liability, and responsibility for the EPD. Construction products EPDs may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

EPD program operator	The International EPD System
EPD standards	This EPD is in accordance with EN 15804:2012 +A2:2019/AC:2021 and ISO 14025:2010 standards.
Product category rules	The CEN standard EN 15804 serves as the core PCR. In addition, Int'l EPD System PCR 2019:14 Construction products, version 1.2.5 (01.11.2022) is used.
EPD author	Shuting Fan, Intertek
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☑ External verification
Verification date	2023-07-12
EPD verifier	Elisabet Amat, GREENIZE
EPD number	S-P-10004
ECO Platform nr.	-
Publishing date	2023-07-25
EPD valid until	2028-07-24

PRODUCT INFORMATION

PRODUCT DESCRIPTION

Wood Plastic Composites (WPC) refers to a type of composite material made from polyethylene (PE/HDPE), mixed with a certain proportion of wood powder, and other additives, and then produced through plastic processing processes such as extrusion, moulding, and injection moulding.(30%PE/HDPE +60%WOOD POWDER+10%ADDITIVES)

PRODUCT APPLICATION

WPC products mainly focus on outdoor usage: such as WPC DECKING/WPC FENCING

TECHNICAL SPECIFICATIONS

WPC DECKING:140mm*25mm

WPC FENCING: 1800*1800mm

PRODUCT STANDARDS

GB/T 24508-2020，LY/T 3274-2021, ISO 9001:2005, ISO 14001:2015, ISO 45001:2018, GB/T 29490-2013

PHYSICAL PROPERTIES OF THE PRODUCT

No.	Clause	Test Item	Test Method	Test result
1	EN 13501-1 Class Cfl	Fire reaction	ISO 9239-1 & ISO 11925-2	Cfl-S1
2	EN 15534-4 4.5.5.3	Swelling and water absorption (28 days immersion)	EN 15534-1 8.3.1	Mean Swelling: 0.5% in thickness 0.1% in width 0.1% in length Water absorption: Mean: 0.5%
3	EN 15534-4 4.5.7.6	Resistance to indentation	EN 15534-1 7.5	Brinell hardness: Mean value: 104Mpa Rate of elastic recovery: Mean value: 74%
4	ASTM D7031 5.18	Linear thermal expansion	ASTM D696	42.5 x 10^{-6}/C
5	ASTM D638	Tensile strength (LW&CW) % Elongation (LW&CW) Tensile modulus (LW&CW) Stress-information graph	ASTM D638	Mean value: 23.20 Mpa
6	ASTM D7031 5.5	Bending	ASTM D4761	MOR Mean value: 39.3 Mpa MOE Mean value: 4168 Mpa
7	ASTM D7032 4.5	Temperature and moisture effects	ASTM D7032,D6109	168 hours at a temperature of 50C MOR Mean value: 30.3 Mpa MOE Mean value: 3145 Mpa 168 hours at a temperature of -29C MOR Mean value: 55.2Mpa MOE Mean value: 7306Mpa
8	ASTM D7032 4.6	UV resistance	ASTM G154, D6109	Grey Scale: 4
9	ASTM D7032 4.4	Flexural Test	ASTM D6109	MOR Mean value: 37.9 Mpa MOE Mean value: 4348 Mpa
10	ASTM D7032 4.7	Freeze-Thaw resistance	ASTM D7032,D6109	MOR Mean value: 36.7 Mpa MOE Mean value: 4386 Mpa
11	ASTM D792	Density and specific gravity	ASTM D792	1.317 g/cm3
12	EN 15534-1 7.1.1	Impact resistance (applicable to compounds)	EN ISO 179-1	Mean value: 4.4 KJ/m2
13	ASTM D7031 5.11	Mechanical Fastener Holding	ASTM D7031 D1761 orD1037	Mean value: 6519N
14	ASTM D7031 5.7	Compression Parallel to L	ASTM D7031 D4761	Mean value: 41.5 Mpa
15	ASTM D7031 5.8	Compression Perpendicular to L	ASTM D7031 D143	Mean value: 58.40 Mpa

ADDITIONAL TECHNICAL INFORMATION

Further information can be found at www.wimex.dk..

PRODUCT RAW MATERIAL COMPOSITION

Product and Packaging Material	Weight, kg	Post-consumer %	Renewable %	Country Region of origin
Recycled hardwood fiber	0.6	0	100	China
First-class recycled HDPE	0.3	100	0	China
ADDITIVES (COUPLING AGENT, PIGMENTS, PROCESS AIDS, UV ABSORBERS)	0.1	0	0	China
Wood pallet	0.2968	0	100	China
Packaging film	0.001	0	0	China
cardboard	0.0001	0	0	China
TOTAL product weight	1	30	60	China
TOTAL packaging	0.2988	0	99	China

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

The product stage of the Wood-polymer composite (WPC) products is divided into 3 modules: A1 “Raw material and supply”, A2 “Transport to the manufacturer” and A3 “Manufacturer”. The aggregation of the modules A1, A2 and A3 is a possibility considered by the EN 15804 standard. This rule is applied in this EPD.

A1 Raw material supply takes into account the extraction and processing of raw materials and energy which occur upstream to the studied manufacturing process. Specifically, WPC raw material supply covers sourcing of wood fibre, HDPE and other additives. Electricity and Heating is taken account for at least country specific mix.

A2 Transport to the manufacturer. The raw materials are transported to the manufacturing site.
In our case, the modelling includes leg 1 lorry (average values) of each raw material.

A3 Manufacturing. Manufacturing covers all processes linked to production, include: Mixing of all raw materials (including plant fibre, PE and additives); pelletizing; co-extrusion moulding; water cooling; polishing and cutting process. Then products are packaged. The environmental profile of these energy carriers (State Grid and Heat Corporation) is modelled for local conditions. Packaging-related flows in the production process and all up-stream packaging are included in the manufacturing module, i.e. wood pallet, packaging film and cardboard. Apart from production of packaging material, the supply and transport of packaging material are also considered in the LCA model.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

The construction process is divided into 2 modules: A4 “Transport to the building site” and A5 “Installation in the building.

A4 Transport to the building site. This module includes transport from the production gate to the building site. Transport is calculated on the basis of a scenario with the parameters described. The average transportation distance from production plant to building site is assumed as 500 km transported by lorry and 10000 nautical mile transported by ship.

A5:1 Installation in the building. occur in this stage. This module includes product installation losses and energy consumption during the installation of product, i.e. the additional production processes to compensate the loss. And the waste processing which occur in this stage.

In installation, the fasteners are considered as 0.002 kg/declare unit. It is lower than 1% of mass input, So considered to be cut-off flow.

The packaging waste includes packaging plastic, wood pallet and polyethylene foamed in A5.

The end of life of packaging are considered as: Wood: recycling 31.9%, landfill 19%, incineration 49.1%. Plastic: recycling 37.6%, landfill 19%, incineration 43.4% followed EU 27 waste management scenario.
The product losses during the installation and construction activities estimated as 1%.

The share of product lost during the installation and construction activities as 1%. It means the waste of products during the implementation, the additional production processes to compensate the loss processing which occur in this stage.

For data sets in this study, the allocation of the inputs is generally carried out via the mass. The consumption and transportation of raw materials was allocated by mass ratio.

During the production process, there is no other by-products produced from the production line. Hence there is no occasion that requires allocation for processes.

For energy and water and waste production is allocated equally among all products through mass allocation.

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

The end-of life stage is divided into 4 modules: C1 “De-construction, demolition”, C2 “Transport to waste processing”, C3 “Waste processing for reuse, recovery and/or recycling”, C4 “Disposal”.

C1, De-construction, demolition. For WPCs, the energy consumption considered as 0.001kWh

C2, Transport to waste processing. It is estimated that there is no mass loss during the use of the product, therefore the end-of-life product is assumed that it has the same weight with the declared product. All of the end-of-life product is assumed to be transported as separate construction waste back to the manufacturer.

C3, Waste processing for reuse, recovery and/or recycling. It is assumed that 100% of products are collected at demolition site. Losses in the sorting process are assumed to be very small and not considered in the assessment.

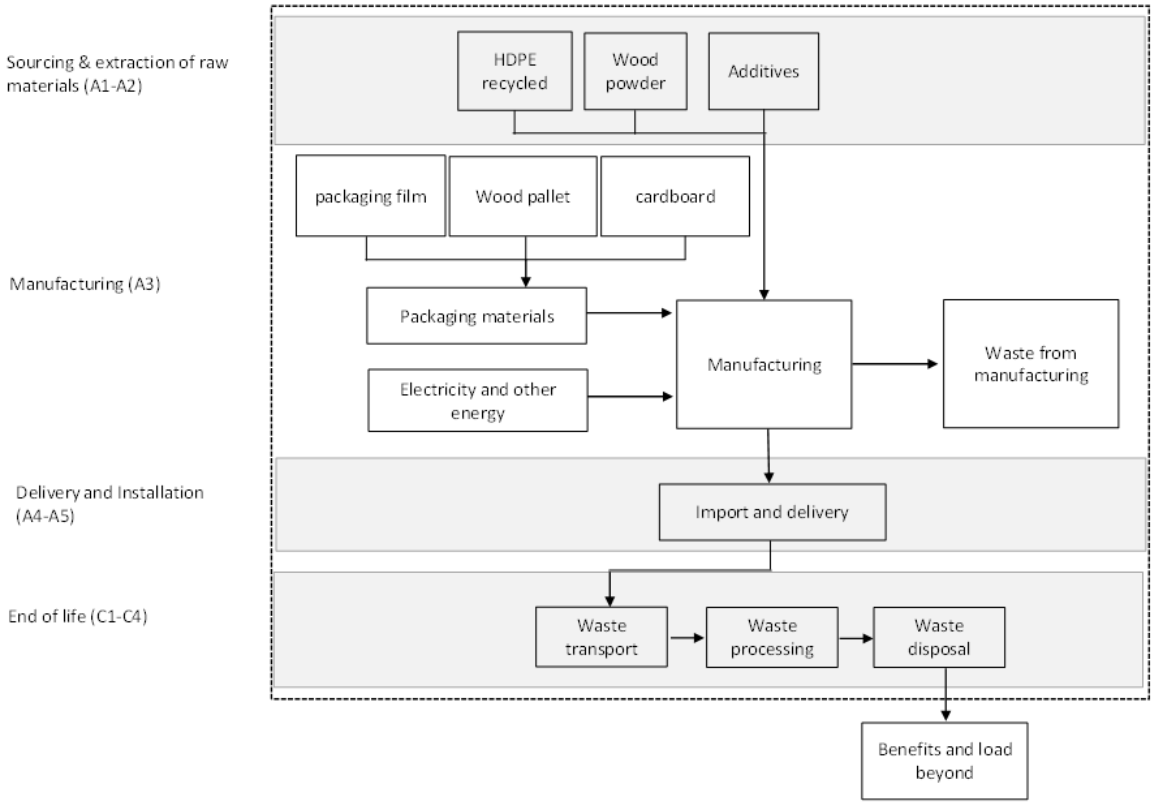
C4, Disposal.

Since there is not a readily available waste management scenario to follow in EU 27 waste management scenario, now 90% of the waste product will be recycled, for the rest 10% of waste product, incineration was considered in LCA modelling.

Waste WPC products can be melted and recycled through granulating and extrusion to make new WPC products.

D, Reuse/recovery/recycling potential.

MANUFACTURING PROCESS



LIFE-CYCLE ASSESSMENT

LIFE-CYCLE ASSESSMENT INFORMATION

Period for data	2021

DECLARED AND FUNCTIONAL UNIT

Declared unit	1 kg
Mass per declared unit	1 kg
Functional unit	/
Reference service life	20 years

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0.04
Biogenic carbon content in packaging, kg C	0.13

SYSTEM BOUNDARY

This EPD covers the cradle to gate with options scope with the following modules; A1 (Raw material supply), A2 (Transport) and A3 (Manufacturing), A4 (Transport), A5 (Assembly) as well as C1 (Deconstruction), C2 (Transport at end-of-life), C3 (Waste processing) and C4 (Disposal). In addition, module D - benefits and loads beyond the system boundary is included.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	D	D
x	x	x	x	x	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	x	x	x
Geography, by two-letter ISO country code or regions. The International EPD System only.																		
China	China	China	EU	EU	-	-	-	-	-	-	-	EU	EU	EU	EU	EU		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstr./demol.	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND. Modules not relevant = MNR.

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the EN 15804:2012 +A2:2019/AC:2021 and the applied PCR. The study does not exclude any hazardous materials or substances.

The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation.

In this study, as per EN 15804, allocation is conducted in the following order;

1. Allocation should be avoided.
2. Allocation should be based on physical properties (e.g. mass, volume) when the difference in revenue is small.

3. Allocation should be based on economic values.

Allocation used in Ecoinvent 3.6 environmental data sources follows the methodology 'allocation, cut-off by classification'. This methodology is in line with the requirements of the EN 15804 -standard.

For data sets in this study, the allocation of the inputs is generally carried out via the mass. The consumption and transportation of raw materials was allocated by mass ratio.

During the production process, there is no other by-products produced from the production line. Hence there is no occasion that requires allocation for processes.

For this project, there is only one production site. So, there is no allocation among plants. For incoming energy, water, and waste which support production allocation equally among all product through mass allocation data for year 2021.

AVERAGES AND VARIABILITY

The International EPD System additional data requirements

Data specificity and GWP-GHG variability for GWP-GHG for A1-A3.

Supply-chain specific data for GWP-GHG	>90%
Variation in GWP-GHG between products	N/A
Variation in GWP-GHG between sites	N/A

The results are for one EPD product for one manufacturing site. Variation in GWP-GHG between products and Variation in GWP-GHG between sites are not considered.

ENVIRONMENTAL IMPACT DATA

Note: additional environmental impact data may be presented in annexes.

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total	kg CO_2e	2,66E-1	6,23E-2	-1,67E-1	1,61E-1	2,54E-1	5,02E-1	MND	MND	MND	MND	MND	MND	MND	9,5E-4	1,98E-1	1,43E-1	0E0	5,86E-1
GWP – fossil	kg CO_2e	3,93E-1	6,23E-2	3,17E-1	7,72E-1	2,55E-1	1,98E-2	MND	MND	MND	MND	MND	MND	MND	9,5E-4	1,98E-1	6,79E-2	0E0	-1,28E-1
GWP – biogenic	kg CO_2e	-1,28E-1	2,27E-6	-4,84E-1	-6,12E-1	-4,09E-5	4,83E-1	MND	MND	MND	MND	MND	MND	MND	4,05E-7	-3,56E-5	1,28E-1	0E0	7,15E-1
GWP – LULUC	kg CO_2e	4,28E-4	2,08E-5	2,84E-4	7,32E-4	1,61E-4	1,35E-5	MND	MND	MND	MND	MND	MND	MND	3,51E-8	1,25E-4	3,1E-5	0E0	-7,23E-4
Ozone depletion pot.	kg $CFC_{-11}e$	2,47E-8	1,43E-8	1,09E-8	4,99E-8	5,24E-8	2,3E-9	MND	MND	MND	MND	MND	MND	MND	1,88E-10	4,04E-8	9,23E-10	0E0	-1,06E-8
Acidification potential	mol H^+e	1,78E-3	2,6E-4	2,83E-3	4,87E-3	7,3E-3	1,8E-4	MND	MND	MND	MND	MND	MND	MND	9,15E-6	5,63E-3	1,11E-4	0E0	-1,0E-3
EP-freshwater[2)]	kg Pe	3,18E-5	5,45E-7	1,76E-5	4,99E-5	1,28E-6	6,58E-7	MND	MND	MND	MND	MND	MND	MND	1,81E-9	1,03E-6	8,69E-7	0E0	-1,06E-5
EP-marine	kg Ne	3,27E-4	7,72E-5	4,07E-4	8,1E-4	1,8E-3	4,74E-5	MND	MND	MND	MND	MND	MND	MND	1,33E-6	1,39E-3	2,77E-5	0E0	-1,38E-4
EP-terrestrial	mol Ne	3,51E-3	8,53E-4	4,62E-3	8,98E-3	2E-2	5,01E-4	MND	MND	MND	MND	MND	MND	MND	1,36E-5	1,55E-2	2,98E-4	0E0	-1,58E-3
POCP (“smog”)	kg NMVOCe	1,18E-3	2,72E-4	1,42E-3	2,86E-3	5,22E-3	1,39E-4	MND	MND	MND	MND	MND	MND	MND	3,89E-6	4,03E-3	7,76E-5	0E0	-5,82E-4
ADP-minerals & metals	kg Sbe	9,27E-6	1,3E-6	1,66E-6	1,22E-5	2,24E-6	2,33E-7	MND	MND	MND	MND	MND	MND	MND	9,37E-10	1,73E-6	9,68E-8	0E0	-7,96E-7
ADP-fossil resources	MJ	7,13E0	9,54E-1	3,86E0	1,19E1	3,36E0	2,61E-1	MND	MND	MND	MND	MND	MND	MND	1,16E-2	2,6E0	2,21E-1	0E0	-1,6E0
Water use[1)]	m^3e depr.	1,65E-1	3,65E-3	1,26E-1	2,95E-1	7,95E-3	2,55E-3	MND	MND	MND	MND	MND	MND	MND	3,12E-5	6,37E-3	7,23E-3	0E0	-1,58E-2

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy	MJ	4,97E-1	1,21E-2	1,56E0	2,07E0	2,59E-2	2,42E-2	MND	MND	MND	MND	MND	MND	MND	4,65E-5	1,92E-2	2,05E-2	0E0	-4,11E0
Renew. PER as material	MJ	1,57E0	0E0	4,7E0	6,27E0	0E0	-4,7E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	-1,57E0	0E0	-4,12E0
Total use of renew. PER	MJ	2,07E0	1,21E-2	6,26E0	8,34E0	2,59E-2	-4,68E0	MND	MND	MND	MND	MND	MND	MND	4,65E-5	1,92E-2	-1,55E0	0E0	-1,00E1
Non-re. PER as energy	MJ	4,89E0	9,54E-1	3,81E0	9,66E0	3,36E0	2,38E-1	MND	MND	MND	MND	MND	MND	MND	1,16E-2	2,6E0	2,21E-1	0E0	-1,58E0
Non-re. PER as material	MJ	2,24E0	0E0	4,77E-2	2,29E0	0E0	-4,71E-2	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	-2,24E0	0E0	2,08E-4

Total use of non-re. PER	MJ	7,13E0	9,54E-1	3,86E0	1,19E1	3,36E0	1,91E-1	MND	MND	MND	MND	MND	MND	MND	1,16E-2	2,6E0	-2,02E0	0E0	-1,58E0
Secondary materials	kg	2,82E-1	0E0	7,22E-5	2,82E-1	0E0	2,82E-3	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	2,53E-4
Renew. secondary fuels	MJ	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Non-ren. secondary fuels	MJ	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Use of net fresh water	m3	3,26E-3	1,92E-4	1,44E-3	4,9E-3	3,79E-4	1,24E-4	MND	MND	MND	MND	MND	MND	MND	1,49E-6	2,94E-4	2,26E-4	0E0	-5,08E-4

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	2,4E-2	1,03E-3	1,88E-2	4,39E-2	3,81E-3	1,5E-3	MND	MND	MND	MND	MND	MND	MND	3,74E-6	3,05E-3	0E0	0E0	-0,88E-2
Non-hazardous waste	kg	7,41E-1	9,5E-2	6,78E-1	1,51E0	1,01E-1	2,28E-1	MND	MND	MND	MND	MND	MND	MND	6,73E-5	7,91E-2	0E0	0E0	-2,72E-1
Radioactive waste	kg	1,66E-5	6,48E-6	8,76E-6	3,18E-5	2,35E-5	1,11E-6	MND	MND	MND	MND	MND	MND	MND	8,44E-8	1,81E-5	0E0	0E0	-7,25E-6

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Materials for recycling	kg	0E0	0E0	6E-5	6E-5	0E0	1,16E-1	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	1,8E0	0E0	0E0
Materials for energy rec	kg	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Exported energy	MJ	0E0	0E0	0E0	0E0	0E0	1,72E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	1,89E-1	0E0	0E0

ENVIRONMENTAL IMPACTS – GWP-GHG - THE INTERNATIONAL EPD SYSTEM

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG	kg CO2e	3,93E-1	6,23E-2	3,17E-1	7,72E-1	2,55E-1	1,98E-2	MND	MND	MND	MND	MND	MND	MND	9,5E-4	1,98E-1	6,79E-2	0E0	-1,28E-1

This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product as defined by IPCC AR 5 (IPCC 2013) This indicator Is almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation

Scenario parameter	Value
Electricity data source and quality	LCA study for country specific electricity mixes based on IEA, OneClickLCA 2023
Electricity kg CO_2e / kWh	0.81
District heating data source and quality	LCA study for Reference product: heat, district or industrial, other than natural gas. Ecoinvent, year: 2019
District heating kg CO_2e / kWh	0.12

BIBLIOGRAPHY

ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations. Principles and procedures.

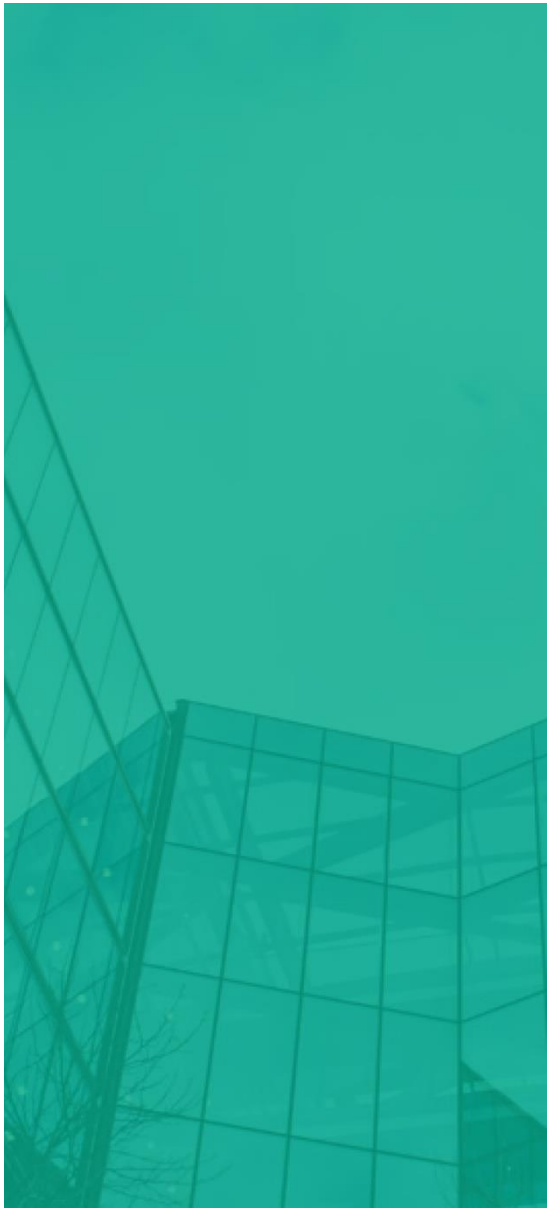
ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.

ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.

Ecoinvent database v3.6 (2019) and One Click LCA database.

EN 15804:2012 +A2:2019/AC:2021 Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.

Wood plastic composite (WPC) products LCA background report 12.06.2023



ABOUT THE COMPANY

Wimex is a Danish supplier of building materials for outdoor use, mainly terraces and fence.The spirit in Wimex is framing good life and Wimex aim to put coziness in pride of place. With Wimex you will get WPC products in a high quality which may last for many years.

EPD AUTHOR AND CONTRIBUTORS

Owner of EPD	WIMEX A/S
EPD author	Shuting Fan, Intertek
EPD verifier	Elisabet Amat, GREENIZE
EPD program operator	The International EPD System
Background data	This EPD is based on Ecoinvent 3.6 (cut-off) and One Click LCA databases.
LCA software	The LCA and EPD have been created using One Click LCA Pre-Verified EPD Generator for Construction products

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with EN 15804, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The background report (project report) for this EPD

Why does verification transparency matter? Read more online.

VERIFICATION OVERVIEW

Following independent third party has verified this specific EPD:

EPD verification information	Answer
Independent EPD verifier	Elisabet Amat, GREENIZE
EPD verification started on	2023-07-12
EPD verification completed on	2023-07-24
Supply-chain specific data %	>90%
Approver of the EPD verifier	The International EPD System

Author & tool verification	Answer
EPD author	Shuting Fan, Intertek
EPD author training completion	2022.11.24
EPD Generator module	Construction products
Independent software verifier	Ugo Pretato, Studio Fieschi & soci
Software verification date	2021.5.11

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of

- the data collected and used in the LCA calculations,
- the way the LCA-based calculations have been carried out,
- the presentation of environmental data in the EPD, and
- other additional environmental information, as present

with respect to the procedural and methodological requirements in ISO 14025:2010 and EN 15804:2012 +A2:2019/AC:2021.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

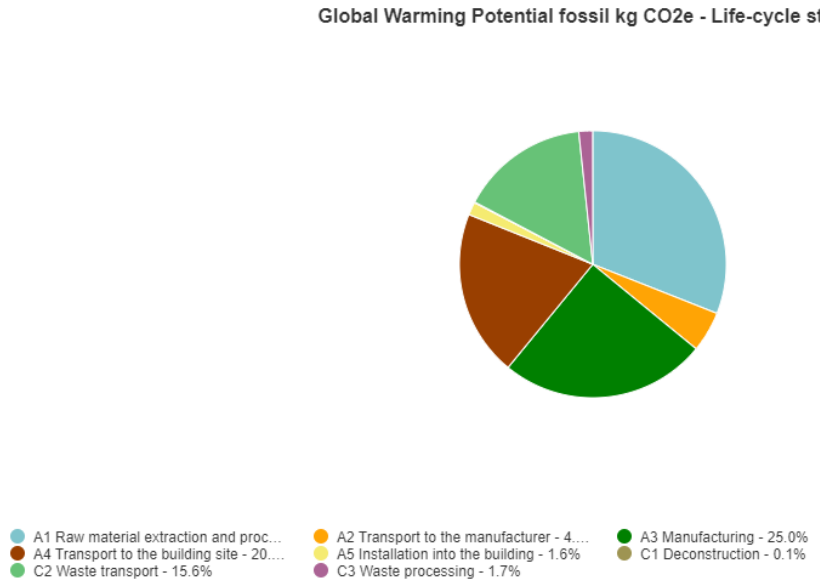
I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification

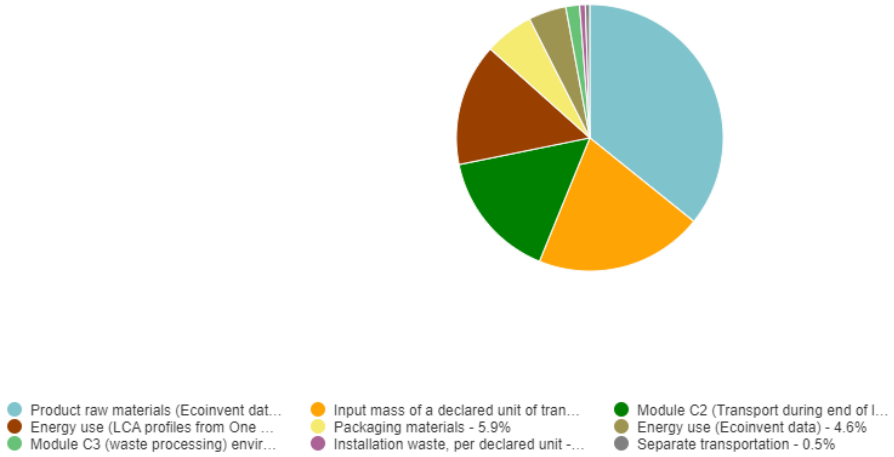
ANNEX 1 : ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	3,83E-1	6,17E-2	3,13E-1	7,57E-1	2,54E-1	2,21E-2	MND	MND	MND	MND	MND	MND	MND	9,44E-4	1,96E-1	6,73E-2	0E0	-1,26E-1
Ozone depletion Pot.	kg CFC_{-11}e	2,35E-8	1,14E-8	9,13E-9	4,4E-8	4,15E-8	1,88E-9	MND	MND	MND	MND	MND	MND	MND	1,49E-10	3,2E-8	8,87E-10	0E0	-1,00E-8
Acidification	kg SO_2e	1,48E-3	1,41E-4	2,42E-3	4,04E-3	5,79E-3	1,39E-4	MND	MND	MND	MND	MND	MND	MND	7,81E-6	4,49E-3	8,91E-5	0E0	-7,72E-4
Eutrophication	kg PO_4^3e	7,58E-4	2,98E-5	5,92E-4	1,38E-3	6,51E-4	1,93E-4	MND	MND	MND	MND	MND	MND	MND	5,49E-7	5,09E-4	5,61E-5	0E0	-2,32E-4
POCP (“smog”)	kg C_2H_4e	1,01E-4	8,11E-6	1,08E-4	2,17E-4	1,53E-4	5,96E-6	MND	MND	MND	MND	MND	MND	MND	2,96E-7	1,18E-4	3,3E-6	0E0	-5,98E-5
ADP-elements	kg Sbe	9,27E-6	1,3E-6	1,66E-6	1,22E-5	2,24E-6	2,33E-7	MND	MND	MND	MND	MND	MND	MND	9,37E-10	1,73E-6	9,68E-8	0E0	-7,96E-7
ADP-fossil	MJ	7,13E0	9,54E-1	3,86E0	1,19E1	3,36E0	2,61E-1	MND	MND	MND	MND	MND	MND	MND	1,16E-2	2,6E0	2,21E-1	0E0	-1,6E0

ANNEX 6 : LIFE-CYCLE ASSESSMENT RESULT VISUALIZATION



Global Warming Potential fossil kg CO2e - Classifications



Global Warming Potential fossil kg CO2e - Resource types

This is a drilldown chart. Click on the chart to view details