ENVIRONMENTAL PRODUCT DECLARATION

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

Laminate flooring (6-14mm)
Kronoflooring GmbH

EPD HUB, HUB-1164
Publishing date 22 February 2024, last updated on 22 February 2024, valid until 22 February 2029.

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Kronoflooring GmbH
Address	Mühlbacher Straße 1; 01561 Lampertswalde
Contact details	sustainability@kronospan.de
Website	www.krono-original.de

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.0, 1 Feb 2022
Sector	Manufactured product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Daniel Grantham
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☑ External verification
EPD verifier	Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	Laminate flooring (6 - 14mm)
Additional labels	-
Product reference	-
Place of production	Lampertswalde, Germany
Period for data	01.10.2020 - 30.09.2021
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	0 %

ENVIRONMENTAL DATA SUMMARY

Declared unit	m2
Declared unit mass	7.516 kg
GWP-fossil, A1-A3 (kgCO2e)	5.11
GWP-total, A1-A3 (kgCO2e)	-5.98
Secondary material, inputs (%)	12.7
Secondary material, outputs (%)	100.0
Total energy use, A1-A3 (kWh)	62.1
Total water use, A1-A3 (m3e)	0.149

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Kronoflooring GmbH is the worldwide leading producer of high-quality laminate floorings and panels. We are represented in DIY stores, the specialist flooring trade as well as in specialist store segments with a wide range of wood-based material products for floors, walls and ceilings.

PRODUCT DESCRIPTION

Laminate flooring is a floor covering constructed in layers. Instead of real or solid wood, the individual laminate panels are made of a carrier HDF board (3). A thin decorative layer (2) and a robust seal (1) are applied to this and the counteracting layer (4) keeps the board in balance.

Further information can be found at www.krono-original.de.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	0	-
Minerals	0	-
Fossil materials	10 - 15	
Bio-based materials	80 - 85	
Moisture Content	5	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	2.864
Biogenic carbon content in packaging, kg C	0.168

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	m2
Mass per declared unit	7.516 kg
Functional unit	-
Reference service life	-

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

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

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
x	x	x	x	x	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	x
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.

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.

Raw material/energy supply (A1):

The timber supply for laminate flooring is a combination of small round wood not suitable for sawmills and sawmill residues in the form of wood chips. The chemical component is made of resin, wax, hardener, and urea.

The wasted materials are either burnt onsite in our biomass plant, or recycled for use in particleboard production.

Each pack of laminate flooring is packaged in a cardboard box and shrink wrapped and then stacked onto a wooden pallet. A top board made of HDF is used to protect the products, PET banding made from 100% post-consumer recycled plastic is used to strap the packs to the pallet and the entire pallet if stretch wrapped for further protection of the product.

Transportation to manufacturing site (A2):

- Transportation of the timber to the Lampertswalde site (considers both road and rail deliveries).
- Transportation of chemicals and packaging from manufacturer/supplier to the production site.
- Transportation of raw paper from manufacturer/supplier.

Manufacturing (A3):

The proper manufacturing of the boards and treatment of waste generated from the manufacturing process up to the end-of waste state during manufacturing is included in module A3.

All installation waste is modelled as leaving the system in A3. German Government figures have been used for determining the rates of recycling

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.

Transport (A4):

This covers the 2397 km average distance travelled from site to customer, which is done by EURO 6 32t lorry.

Installation (A5):

Installation is done manually with no need for additional materials or energy.

Of the packaging materials:
- Wooden pallet assumed 21% are re-used and remaining 79% are then chipped either for recycling or for use as secondary fuel for energy recovery. The split has been attributed from national recycling figures published for 2020.

- Plastic (shrink wrap / stretch wrap / PET banding) assumed 60.4% recycled (from national recycling figures 2020) whilst the remaining amount is sent for energy recovery.

- Cardboard packaging assumed 89.4% recycled (from national recycling figures, 2020) and the remaining amount is assumed to be sent for energy recovery.

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)

Module C1:
Disassembly is done by hand at use-site, therefore creating no additional loads.

Module C2:
The material is transported to waste treatment site, which is assumed to be within 50km, of the local waste collection centre and treated as municipal wood waste.

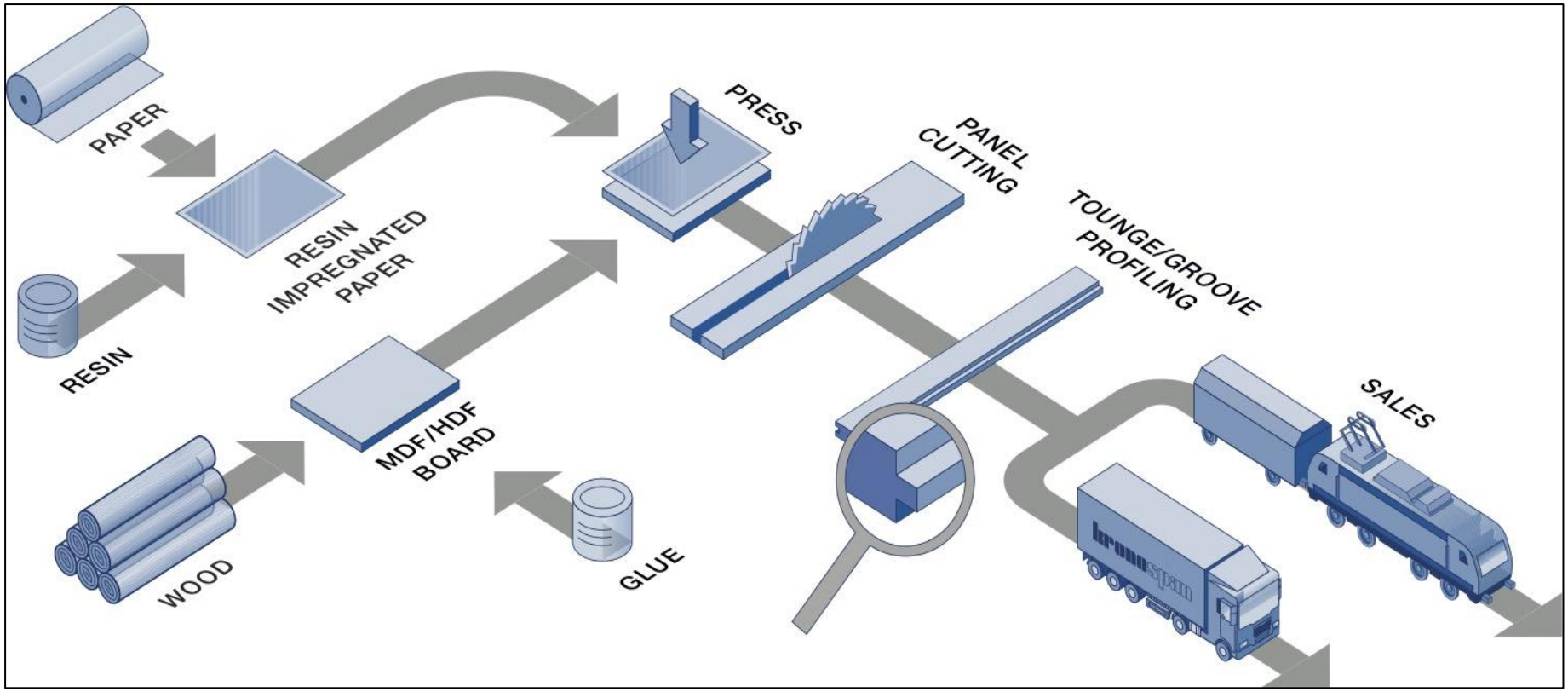
Module C3:
The scenario at the end of life assumes use as secondary fuel for energy recovery of the product. The end-of-waste status for the wood board is achieved at the waste treatment site.

Module C4:
Within the EoL scenario no disposal to landfill will occur, thus this module will show Zero values.

Module D:
The benefits for the secondary fuel will be calculated and shown in module D. The utilization of the boards in an incineration plant and the resulting energy is assigned to module D.

It is also assumed that the energy production from biomass meets an R1 value > 0.6. Energy produced in the form of electricity and thermal energy replaces thermal energy from natural gas (DE) and electrical energy (DE).

MANUFACTURING PROCESS



Water, water vapour and high pressure soften the wood chips. These are then pressed through a grinder which breaks up the wood fibres. The moist wood fibres are glued and transported to a drier. The glued and dried wood fibres are scattered onto a conveyor belt. The fibres bond with the glue at a compression temperature of 200 °C to form a homogeneous board. After pressing, the hot boards are cooled and then transported automatically to a storage area.

When impregnating the paper, rollers and doctor blades ensure the even or asymmetrical application of resin to one or both sides. The impregnated paper is then conveyed through a drying channel. Pre-arranged packages with abrasion proof overlay, decor paper, base board and counteracting paper are put into the press. Heat and pressure liquefy the resin in the press and bond the papers and base board together to form a solid unit.

Longitudinal and latitudinal saws cut the large format boards into individual panels along the markings on the decor paper. Tongue and groove profiles are cut into the edges of the panels.

The panels are stacked in boxes and wrapped in moisture-repellent foil which are then transported to customer by either road or rail.

LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard 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. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging materials	No allocation
Ancillary materials	No allocation
Manufacturing energy and waste	No allocation

AVERAGES AND VARIABILITY

Type of average	No averaging
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3	0 %

This EPD is product and factory specific and does not contain average calculations.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. Ecoinvent v3.8 and One Click LCA databases were used as sources of environmental data.

ENVIRONMENTAL IMPACT DATA

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[1)]	kg CO_2e	-7,73E+00	7,11E-02	1,67E+00	-5,98E+00	1,64E+00	6,30E-01	MND	MND	MND	MND	MND	MND	MND	MNR	6,53E-02	1,06E+01	0,00E+00	-4,65E-01
GWP – fossil	kg CO_2e	2,76E+00	7,11E-02	2,28E+00	5,11E+00	1,64E+00	1,77E-02	MND	MND	MND	MND	MND	MND	MND	MNR	6,53E-02	6,18E-02	0,00E+00	-4,62E-01
GWP – biogenic	kg CO_2e	-1,05E+01	0,00E+00	-6,12E-01	-1,11E+01	0,00E+00	6,12E-01	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	1,05E+01	0,00E+00	0,00E+00
GWP – LULUC	kg CO_2e	1,42E-02	2,66E-05	3,17E-03	1,74E-02	6,37E-04	4,08E-06	MND	MND	MND	MND	MND	MND	MND	MNR	2,66E-05	1,40E-04	0,00E+00	-3,10E-03
Ozone depletion pot.	kg CFC_{-11}e	4,73E-07	1,65E-08	1,24E-07	6,13E-07	3,86E-07	9,03E-10	MND	MND	MND	MND	MND	MND	MND	MNR	1,44E-08	3,13E-09	0,00E+00	-2,26E-07
Acidification potential	mol H^+e	1,58E-02	2,83E-04	1,78E-02	3,39E-02	5,34E-03	9,34E-05	MND	MND	MND	MND	MND	MND	MND	MNR	2,70E-04	3,32E-04	0,00E+00	-1,52E-02
EP-freshwater[2)]	kg Pe	1,63E-04	5,88E-07	2,79E-04	4,42E-04	1,39E-05	1,47E-07	MND	MND	MND	MND	MND	MND	MND	MNR	5,50E-07	6,36E-06	0,00E+00	-4,30E-05
EP-marine	kg Ne	3,64E-03	7,94E-05	1,66E-03	5,38E-03	1,17E-03	4,00E-05	MND	MND	MND	MND	MND	MND	MND	MNR	7,88E-05	4,67E-05	0,00E+00	-4,67E-03
EP-terrestrial	mol Ne	4,14E-02	8,77E-04	6,91E-02	1,11E-01	1,30E-02	4,56E-04	MND	MND	MND	MND	MND	MND	MND	MNR	8,69E-04	5,27E-04	0,00E+00	-7,42E-02
POCP ("smog")[3)]	kg NMVOCe	1,13E-02	2,91E-04	3,74E-03	1,54E-02	5,05E-03	1,21E-04	MND	MND	MND	MND	MND	MND	MND	MNR	2,65E-04	1,48E-04	0,00E+00	-1,31E-02
ADP-minerals & metals[4)]	kg Sbe	4,11E-05	1,68E-07	5,04E-06	4,63E-05	3,99E-06	4,62E-08	MND	MND	MND	MND	MND	MND	MND	MNR	2,27E-07	1,71E-07	0,00E+00	-1,69E-06
ADP-fossil resources	MJ	6,22E+01	1,08E+00	3,39E+01	9,72E+01	2,57E+01	8,11E-02	MND	MND	MND	MND	MND	MND	MND	MNR	9,44E-01	1,29E+00	0,00E+00	-5,02E+00
Water use[5)]	m^3e depr.	5,83E+00	4,83E-03	5,31E-01	6,36E+00	1,15E-01	6,39E-03	MND	MND	MND	MND	MND	MND	MND	MNR	4,13E-03	3,46E-02	0,00E+00	-7,94E-01

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.

ADDITIONAL (OPTIONAL) 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
Particulate matter	Incidence	1,36E-07	8,17E-09	1,17E-07	2,61E-07	1,86E-07	9,58E-10	MND	MND	MND	MND	MND	MND	MND	MNR	5,55E-09	1,25E-09	0,00E+00	-2,07E-07
Ionizing radiation[6)]	kBq U235e	2,06E-01	5,15E-03	3,36E-01	5,47E-01	1,23E-01	7,91E-04	MND	MND	MND	MND	MND	MND	MND	MNR	4,39E-03	3,42E-02	0,00E+00	-2,52E-02
Ecotoxicity (freshwater)	CTUe	9,61E+01	9,69E-01	1,93E+01	1,16E+02	2,28E+01	1,32E-01	MND	MND	MND	MND	MND	MND	MND	MNR	8,70E-01	7,78E-01	0,00E+00	-1,40E+02
Human toxicity, cancer	CTUh	3,11E-09	2,38E-11	1,09E-09	4,22E-09	5,59E-10	7,42E-11	MND	MND	MND	MND	MND	MND	MND	MNR	2,44E-11	3,81E-11	0,00E+00	-1,95E-09
Human tox. non-cancer	CTUh	5,48E-08	9,52E-10	2,21E-08	7,78E-08	2,20E-08	3,26E-10	MND	MND	MND	MND	MND	MND	MND	MNR	8,10E-10	7,72E-10	0,00E+00	-7,19E-08
SQP[7)]	-	4,18E+02	1,24E+00	3,81E+01	4,57E+02	2,95E+01	6,12E-02	MND	MND	MND	MND	MND	MND	MND	MNR	6,54E-01	1,99E-01	0,00E+00	-2,98E+02

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

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[8)]	MJ	7,61E+01	1,22E-02	7,15E+00	8,33E+01	2,89E-01	7,48E-03	MND	MND	MND	MND	MND	MND	MND	MNR	1,11E-02	2,23E-01	0,00E+00	-6,92E+01
Renew. PER as material	MJ	7,08E+01	0,00E+00	5,02E+00	7,58E+01	0,00E+00	-5,02E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	-7,08E+01	0,00E+00	0,00E+00
Total use of renew. PER	MJ	1,47E+02	1,22E-02	1,22E+01	1,59E+02	2,89E-01	-5,01E+00	MND	MND	MND	MND	MND	MND	MND	MNR	1,11E-02	-7,06E+01	0,00E+00	-6,92E+01
Non-re. PER as energy	MJ	5,47E+01	1,08E+00	3,31E+01	8,89E+01	2,57E+01	8,11E-02	MND	MND	MND	MND	MND	MND	MND	MNR	9,44E-01	1,28E+00	0,00E+00	-4,86E+00
Non-re. PER as material	MJ	7,62E+00	0,00E+00	7,95E-01	8,41E+00	0,00E+00	-7,95E-01	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	-7,62E+00	0,00E+00	0,00E+00
Total use of non-re. PER	MJ	6,23E+01	1,08E+00	3,39E+01	9,73E+01	2,57E+01	-7,14E-01	MND	MND	MND	MND	MND	MND	MND	MNR	9,44E-01	-6,33E+00	0,00E+00	-4,86E+00
Secondary materials	kg	9,53E-01	3,00E-04	1,10E-01	1,06E+00	7,12E-03	1,40E-04	MND	MND	MND	MND	MND	MND	MND	MNR	3,11E-04	4,85E-04	0,00E+00	4,65E-02
Renew. secondary fuels	MJ	4,74E-03	3,02E-06	5,15E+01	5,15E+01	7,18E-05	7,04E-07	MND	MND	MND	MND	MND	MND	MND	MNR	4,03E-06	7,78E-07	0,00E+00	-1,27E-04
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	1,35E-01	1,40E-04	1,34E-02	1,49E-01	3,32E-03	1,45E-04	MND	MND	MND	MND	MND	MND	MND	MNR	1,12E-04	1,08E-03	0,00E+00	1,03E-03

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	1,22E-01	1,43E-03	1,42E-01	2,65E-01	3,38E-02	5,53E-04	MND	MND	MND	MND	MND	MND	MND	MNR	1,36E-03	5,29E-03	0,00E+00	-1,52E-02
Non-hazardous waste	kg	2,71E+00	2,35E-02	1,28E+01	1,55E+01	5,55E-01	2,37E-01	MND	MND	MND	MND	MND	MND	MND	MNR	2,17E-02	2,88E-01	0,00E+00	-7,75E+00
Radioactive waste	kg	1,07E-04	7,24E-06	1,11E-04	2,25E-04	1,73E-04	3,94E-07	MND	MND	MND	MND	MND	MND	MND	MNR	6,24E-06	9,25E-06	0,00E+00	-2,32E-05

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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,69E-02	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,87E-01	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	7,52E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,43E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00

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	2,70E+00	7,04E-02	2,28E+00	5,04E+00	1,62E+00	1,76E-02	MND	MND	MND	MND	MND	MND	MND	MNR	6,46E-02	6,12E-02	0,00E+00	-4,48E-01
Ozone depletion Pot.	kg CFC_{-11}e	4,06E-07	1,30E-08	1,08E-07	5,27E-07	3,05E-07	7,51E-10	MND	MND	MND	MND	MND	MND	MND	MNR	1,14E-08	2,71E-09	0,00E+00	-1,89E-07
Acidification	kg SO_2e	1,20E-02	2,22E-04	1,08E-02	2,31E-02	4,33E-03	6,51E-05	MND	MND	MND	MND	MND	MND	MND	MNR	2,10E-04	2,80E-04	0,00E+00	-9,67E-03
Eutrophication	kg PO_4^3e	6,64E-03	5,01E-05	1,16E-02	1,83E-02	9,47E-04	7,57E-05	MND	MND	MND	MND	MND	MND	MND	MNR	4,83E-05	2,23E-04	0,00E+00	-4,26E-03
POCP (“smog”)	kg C_2H_4e	1,17E-03	9,01E-06	2,67E-04	1,45E-03	2,00E-04	2,68E-06	MND	MND	MND	MND	MND	MND	MND	MNR	8,55E-06	1,21E-05	0,00E+00	-6,14E-04
ADP-elements	kg Sbe	4,08E-05	1,63E-07	4,89E-06	4,58E-05	3,88E-06	4,36E-08	MND	MND	MND	MND	MND	MND	MND	MNR	2,22E-07	1,70E-07	0,00E+00	-1,63E-06
ADP-fossil	MJ	6,23E+01	1,08E+00	3,39E+01	9,73E+01	2,57E+01	8,11E-02	MND	MND	MND	MND	MND	MND	MND	MNR	9,44E-01	1,28E+00	0,00E+00	-5,02E+00

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 reference standard, 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 digital background data for this EPD

Why does verification transparency matter? Read more online
This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

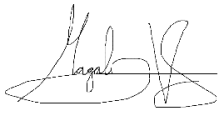
I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried 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 reference standard.

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.

Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited
22.02.2024



VERIFIED ISO 14025