Environmental Product Declaration

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

Solid wood kitchen door with lacquer

Ballingslöv AB

Programme:	The International EPD® System, www.environdec.com
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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

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
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Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): *Construction products 2019:14, version 1.3.4, valid until 2025-06-20, c-PCR-021 Furniture and components of furniture, version 2.0.1, valid until 2027-10-08.*
PCR review was conducted by: *The Technical Committee of the International EPD System.* *See www.environdec.com for a list of members.* *Review chair: Claudia A. Peña, University of Concepción, Chile.* *The review panel may be contacted via the Secretariat www.environdec.com/contact*
Life Cycle Assessment (LCA)
LCA accountability: Oline Haggren, Miljögiraff AB
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ EPD verification by individual verifier Third-party verifier: Hüdai Kara, Metsims Approved by: The International EPD® System
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 registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same 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 equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD: Ballingslöv AB
Contact: Fredrik Nyberg, fredrik.nyberg@ballingslov.se
Description of the organisation: Ballingslöv AB is a Swedish kitchen company within the Ballingslöv International group. They specialize in kitchen, bathroom, and storage solutions. They design and manufacture high-quality cabinetry and furniture, focusing on Scandinavian design, functionality, and sustainability. Their vision is to be the obvious choice for conscious customers within kitchen, bathroom and storage. Their core values are inspiration, quality, sustainability and everyday joy.
Product-related or management system-related certifications: Ballingslöv are convinced that sustainability performance will be an important aspect for reaching their vision. During 2018 the group formulated a sustainability strategy with related targets, aimed at improving ethical, social and environmental performance. The manufacturing is certified according to:

- ISO 9001: Kvalitetsstandard
- ISO 14001: Miljöledningssystem

Name and location of production site(s): All included products are produced in Ballingslöv, Sweden.

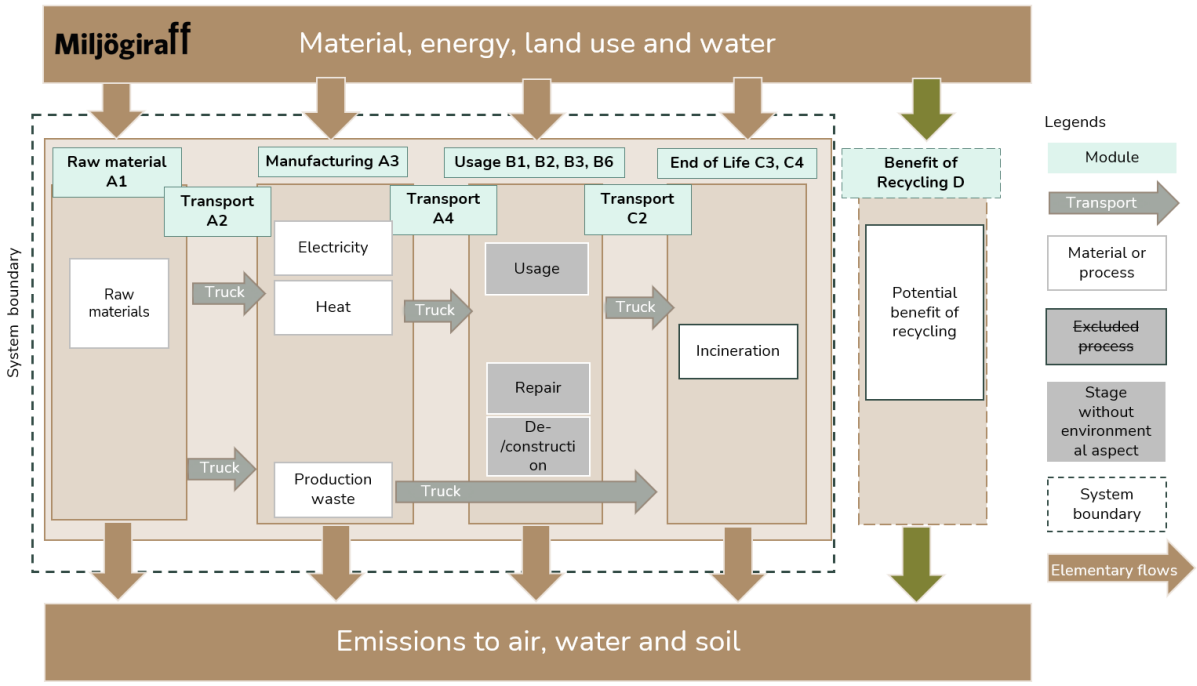
Product information

Product name: Wood
Product identification of included kitchen doors: The product is a solid wood kitchen door with lacquer.
Product description: The product included on this EPD are a kitchen door of solid wood with lacquer. These are used indoor in a kitchen.
UN CPC code: 38130
Geographical scope: Sweden

LCA information

Functional unit: 1 piece of door used for 15 years. The total weight is 6,2kg.
Time representativeness: The collected data is representative of the year 2024 and was obtained directly from the supplier.
Database(s) and LCA software used: Ecoinvent 3.10 and SimaPro Craft 10.1.
Description of system boundaries: Type b, Cradle to gate with options, module C1-C4, module D and optional modules A4-A5 & B1-B7.
Reference Package used: EN 15804 reference package based on EF 3.1.
Allocation: Allocation of specific data was applied to the A3 module. Electricity was allocated based on actual consumption per product group, while heat was evenly distributed across all groups. Direct emissions from surface treatment were allocated based on the painted or lacquered surface area. Consumables were allocated according to product volume relative to a reference door and total annual production per group. Production waste was allocated by material type and process characteristics, and paint waste by painted surface area. Where primary data was missing, comparable products were used as references. As all products within the product group share identical material composition and production processes, A2 and A3 are assumed constant across the group.
Cut-off: The cut-off criteria established by the PCR is 1% of all material and energy flows to a single unit process and 5% of total inflows (mass and energy) per module. No cut-offs exceeding this limit have been made. In this study, the infrastructure and capital goods are included in the LCA analysis since it is not possible within reasonable effort to subtract the data on infrastructure/capital goods.

System diagram:



Raw material and manufacturing A1-A3:
The product is manufactured in Ballingslöv, Sweden. Manufacturing includes wood processing, painting and finishing. The door consists of Glued solid wood, lacquer and stain.

The electricity used at Ballingslöv for the production of the door is 100% renewable, consisting of a mix of wind, sun, and hydropower. This is represented using the ecoinvent dataset "*Electricity, high voltage {SE}| electricity production, wind, >3MW turbine, onshore | Cut-off*". The electricity accounts for less than 30% of the GWP-GHG results of module A1-A3 and the climate footprint of the electricity mix is 0,0286 kg CO2-eq per kWh.

All manufacturing processes, such as electricity use, production waste, direct emissions, and consumables have been calculated from the total production per year at Ballingslöv and then allocated to one product based on production of that product.

Transport to customer and product packaging A4-A5:
The finished products are transported by truck to various locations across northern Europe. As Sweden represents the largest market by sales volume, Stockholm has been selected as the representative delivery location for the end customer. The distance from the production site in Ballingslöv to Stockholm is approximately 514 km.

91% of the transport is conducted using fossil-free fuels such as HVO100, RME100, or biogas. This portion is modelled using the ecoinvent dataset "*Transport, freight, lorry 28 metric ton, fatty acid methyl ester 100% {CH}| transport, freight, lorry 28 metric ton, fatty acid methyl ester 100% | Cut-off, U*". The remaining 9% of the fuel is conventional diesel, due to limited availability of fossil-free alternatives. This is represented by the ecoinvent dataset "*Transport, freight, lorry 16-32 metric ton, EURO6 {RER}| transport, freight, lorry 16-32 metric ton, EURO6 | Cut-off, U*".

Use phase (B1-B7):
It is assumed that there are no significant environmental aspects during the installation or use of the product.

Product End-of-Life (C1-C4, D):
After use, the product is transported to a waste treatment facility. Dismantling and deconstruction are assumed to be done manually, and therefore any environmental impacts related to deconstruction or demolition are excluded. It is assumed that the product is transported 25 km to the nearest waste treatment facility. The transport is modelled using the ecoinvent 3.10 dataset "*Transport, freight, lorry 16-32 metric ton, EURO6 {RER}| transport, freight, lorry 16-32 metric ton, EURO6 | Cut-off, U*".

It is assumed that 100% of the product waste is incinerated. This assumption is based on current Swedish waste management practices, where the recycling of kitchen components is limited due to the use of materials such as medium density fibreboard and surface treatments like paint or lacquer, which reduce the potential for material recycling.

Module D accounts for the potential environmental benefits or burdens resulting from material recycling and energy recovery. In this case, it includes the benefits of energy recovered during incineration.

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	EUR	EUR	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE
Specific data used	20,6%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	0%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%					-	-	-	-	-	-	-	-	-	-	-	-

Content information

Product components	Mass, kg	Post-consumer material, mass-%	Biogenic material, mass-% of product	Biogenic material, mass-% of product
Glued solid wood	6,08	0%	99%	2,65
Lacquer	0,1	0%	0%	0
Stain	0,025	0%	0%	0
TOTAL	6,21	0%	97%	2,65
Packaging materials	**Mass, kg**	**Mass-% (versus the product)**	**Biogenic material kg C/product**	
-	-	-	-	

No Substances of Very High Concern (SVHC) has been reported.

Results of the environmental performance indicators

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. It should be noted that the EPD results of modules A1-A3 without considering the results of module C is discouraged.

Mandatory impact category indicators according to EN 15804 + A2

Results per functional unit										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	kg CO2 eq	**-8,08E+00**	4,21E-01	0,00E+00	0,00E+00	0,00E+00	2,95E-02	1,09E+01	0,00E+00	-3,34E-01
GWP-fossil	kg CO2 eq	**2,45E+00**	4,20E-01	0,00E+00	0,00E+00	0,00E+00	2,94E-02	3,76E-01	0,00E+00	-3,08E-01
GWP-biogenic	kg CO2 eq	**-1,06E+01**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,06E+01	0,00E+00	0,00E+00
GWP-luluc	kg CO2 eq	**1,77E-02**	3,76E-04	0,00E+00	0,00E+00	0,00E+00	9,78E-06	1,34E-05	0,00E+00	-2,06E-02
ODP	kg CFC11 eq	**3,37E-08**	1,95E-08	0,00E+00	0,00E+00	0,00E+00	5,86E-10	1,15E-09	0,00E+00	-2,02E-08
AP	mol H+ eq	**8,92E-03**	9,23E-03	0,00E+00	0,00E+00	0,00E+00	6,13E-05	9,59E-04	0,00E+00	-2,86E-03
EP-freshwater	kg P eq	**1,06E-04**	5,17E-05	0,00E+00	0,00E+00	0,00E+00	2,30E-07	1,27E-06	0,00E+00	-2,13E-05
EP-marine	kg N eq	**8,25E-03**	7,63E-03	0,00E+00	0,00E+00	0,00E+00	1,44E-05	4,70E-04	0,00E+00	-7,80E-04
EP-terrestrial	mol N eq	**8,22E-02**	4,28E-02	0,00E+00	0,00E+00	0,00E+00	1,59E-04	5,00E-03	0,00E+00	-1,12E-02
POCP	kg NMVOC eq	**1,15E-01**	5,82E-03	0,00E+00	0,00E+00	0,00E+00	1,02E-04	1,25E-03	0,00E+00	-2,45E-03
ADP-minerals & metals*	kg Sb eq	**2,11E-05**	3,14E-06	0,00E+00	0,00E+00	0,00E+00	9,58E-08	1,36E-07	0,00E+00	-2,55E-06
ADP-fossil*	MJ	**3,52E+01**	5,47E+00	0,00E+00	0,00E+00	0,00E+00	4,14E-01	6,71E-01	0,00E+00	-2,62E+01
WDP*	m3 depriv.	**1,35E+00**	7,56E-02	0,00E+00	0,00E+00	0,00E+00	1,72E-03	1,39E-02	0,00E+00	-3,59E-01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption									

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

Additional mandatory and voluntary impact category indicators

Results per functional unit										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG**	kg CO2 eq	**2,48E+00**	4,21E-01	0,00E+00	0,00E+00	0,00E+00	2,95E-02	3,76E-01	0,00E+00	-3,33E-01
PM	disease inc.	**1,81E-07**	8,70E-08	0,00E+00	0,00E+00	0,00E+00	2,16E-09	1,04E-08	0,00E+00	-5,57E-08
IR***	kBq U-235 eq	**3,16E-02**	8,33E-03	0,00E+00	0,00E+00	0,00E+00	1,91E-04	4,65E-04	0,00E+00	-8,71E-01
ETP-FW*	CTUe	**2,99E+01**	3,50E+00	0,00E+00	0,00E+00	0,00E+00	1,13E-01	1,15E+00	0,00E+00	-2,90E+00
HTTP-C*	CTUh	**1,37E-08**	5,35E-09	0,00E+00	0,00E+00	0,00E+00	2,09E-10	1,77E-09	0,00E+00	-6,22E-09
HTTP-NC*	CTUh	**1,25E-07**	3,03E-08	0,00E+00	0,00E+00	0,00E+00	2,60E-10	1,06E-08	0,00E+00	-8,81E-09
Land use, SQP*	Pt	**8,55E+02**	2,84E+01	0,00E+00	0,00E+00	0,00E+00	2,50E-01	1,76E-01	0,00E+00	-4,17E+01
Acronyms	PM: Particulate Matter, IRP: Ionizing Radiation - Human Health, ETP-FW: Ecotoxicity Potential – Freshwater, HTP-C: Human Toxicity Potential – Cancer, HTP-NC: Human Toxicity Potential – Non-Cancer, SQP: Soil Quality Potential Index									

Disclaimer: The results of the impact categories land use, human toxicity (cancer), human toxicity, non-cancer and ecotoxicity (freshwater) may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes.

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

*** Disclaimer: 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 CO2 is set to zero.*

**** Disclaimer: 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.*

Resource use indicators

The use of primary energy resources is calculated according to option B in Annex 3 in PCR Construction Products v.1.3.4

Results per functional unit										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	**1,34E+02**	7,04E+00	0,00E+00	0,00E+00	0,00E+00	7,11E-03	2,35E-02	0,00E+00	-2,66E+01
PERM	MJ	**1,17E+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
PERT	MJ	**2,51E+02**	7,04E+00	0,00E+00	0,00E+00	0,00E+00	7,11E-03	2,35E-02	0,00E+00	-2,66E+01
PENRE	MJ	**3,50E+01**	5,86E+00	0,00E+00	0,00E+00	0,00E+00	4,40E-01	7,30E-01	0,00E+00	-2,63E+01
PENRM	MJ	**7,75E-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
PENRT	MJ	**3,58E+01**	5,86E+00	0,00E+00	0,00E+00	0,00E+00	4,40E-01	7,30E-01	0,00E+00	-2,63E+01
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
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
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
FW	m^3	**6,17E-02**	2,68E-02	0,00E+00	0,00E+00	0,00E+00	6,23E-05	1,54E-03	0,00E+00	-7,17E-03
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 unit										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	**0,00**	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Non-hazardous waste disposed	kg	**0,00**	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Radioactive waste disposed	kg	**0,00**	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

Output flow indicators

Results per functional unit										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Material for recycling	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Materials for energy recovery	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Exported energy, electricity	MJ	3,05	0,00	0,00	0,00	0,00	0,00	28,65	0,00	31,70
Exported energy, thermal	MJ	7,12	0,00	0,00	0,00	0,00	0,00	66,86	0,00	73,98

References

General Programme Instructions of the International EPD® System. Version 4.0.
PCR 2019:14. Construction products. Version 1.3.4
c-PCR-021 Furniture and components of furniture, version 2.0.1 (EPD International AB, 2025)
NPCR 026: Part B for Furniture and components of furniture, version 3.0 (EPD Norge, 2024)
EN 15804:2012+A2:2019/AC 2021
ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedures
ISO 14040:2006, Environmental management — Life cycle assessment — Principles and framework
ISO 14044:2006, Environmental management — Life cycle assessment — Requirements and guidelines (pp. 1–54)
Life Cycle Assessment of kitchen doors and kitchen cabinets by Ballingslöv AB, Oline Haggren, Pär Lindman, Miljögiraff AB, May 2025

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