structo WALL SYSTEMS

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

WOODEN DOORS

Structo Group OÜ

GENERAL INFORMATION

MANUFACTURER INFORMATION

Manufacturer	Structo Group OÜ
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Website	www.structo.ee

PRODUCT IDENTIFICATION

Product name	Wooden Doors: DOOR PORTA-53W WOODSLIDE
Place(s) of production	Estonia

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RTS EPD Committee secretary

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Managing Director

The Building Information Foundation RTS sr

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. 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.

EPD program operator	The Building Information Foundation RTS sr/ Building Information Ltd Malminkatu 16 A,
EPD standards	This EPD is in accordance with EN 15804+A2 and ISO 14025 standards.
Product category rules	The CEN standard EN 15804 serves as the core PCR. In addition, the RTS PCR (English version, 26.8.2020) is used.
EPD author	Mari Kirss and Anni Oviir Rangi Maja OÜ Tondi 22-4, Tallinn Estonia www.lcasupport.com
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☑ External verification
Verification date	5 August 2021
EPD verifier	Silvia Vilčeková, Silcert, s.r.o.
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Publishing date	7.9.2021
EPD valid until	16.08.2026

PRODUCT INFORMATION

PRODUCT DESCRIPTION

DOOR is a wooden door with wooden frame.

PORTA-53W is a wooden door with aluminum frame.

WOODSLIDE is a wooden sliding door with top rail.

PRODUCT APPLICATION

Wooden doors are interior elements that are mainly used in office buildings. They can be combined with different glass walls to create exciting and functional results.

PHYSICAL PROPERTIES OF THE PRODUCT

Product properties can be found on the manufacturer website at www.structo.ee

TECHNICAL SPECIFICATIONS

For this assessment one square meter of product shall be used.

Product	Width, mm	Height, mm	Door frame width, mm	Door frame height, mm	Element thickness, mm	Weight, kg
DOOR	-	-	927	2121	120	46
PORTA-53W	-	-	825	2241	54	43
WOODSLIDE	983	2352	-	-	58	28

ADDITIONAL TECHNICAL INFORMATION

Further information can be found at www.structo.ee

SUBSTANCES, REACH - VERY HIGH CONCERN

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

PRODUCT RAW MATERIAL COMPOSITION

	Quantity, mass %			Usability			Origin of the raw materials
	DOOR	PORTA-53W	WOODSLIDE	Re-newable	Non-renewable	Recycled	
Chipboard	53	54	33	X			non-EU
HDF	20	20	22	X			EU
Finger-jointed pine	20	7	10	X			EU
MDF	-	-	21	X			EU
Aluminum	-	12	6		X		non-EU
Paints, lacquers and primers	2	2	5		X		EU & non-EU
Steel	2	3	1		X		EU
Adhesives and sealants	2	2	2		X		EU & non-EU
Oak	1	-	-		X		EU & non-EU
TOTAL	100	100	100				

Raw material category	Amount, mass- %			Material origin
	DOOR	PORTA-53W	WOODSLIDE	
Metals	2	14	7	EU & non-EU
Minerals	-	-	-	-
Fossil materials	5	4	6	EU & non-EU
Bio-based materials	93	82	86	EU
TOTAL	100	100	100	

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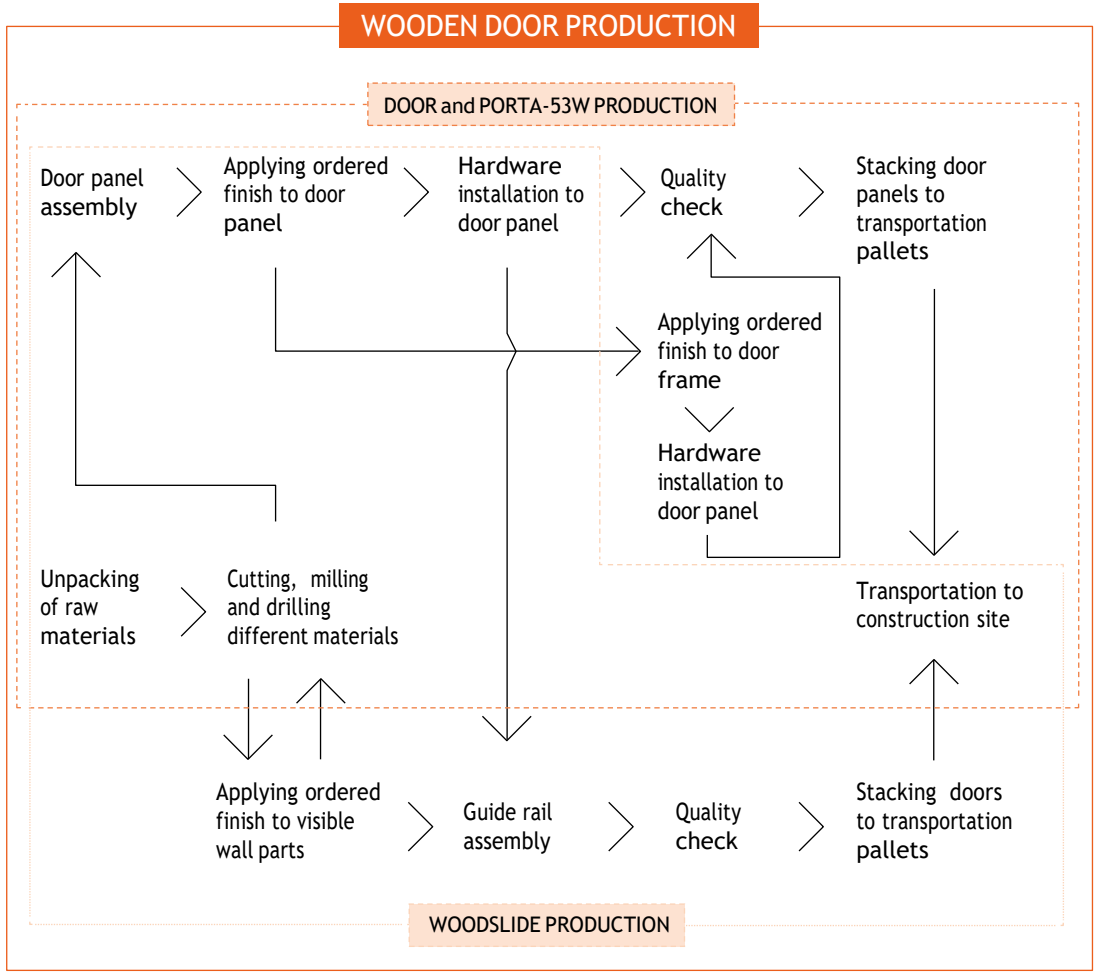
PRODUCT LIFE-CYCLE

MANUFACTURING AND PACKAGING (A1-A3)

DOOR and PORTA-53W production begins with unpacking the raw materials. After that, the materials are processed and assembled into door panels and frames. When the door panel is assembled, it will get the selected finish and will be left to dry. At the same time, the door frame will get the finish. DOOR will be assembled with a wooden frame and PORTA-53W with an aluminum frame. When the finish has dried, the door panel and frame will get preparations for hardware and seals installation, after which the hardware and seals will be fixed to the door panel and frame. Before packing and stacking door panels to transportation pallets, final quality checks will be conducted and the products will be ready for transportation to the construction site.

WOODSLIDE production begins with raw materials unpacking and processing in the same manner. Depending on the materials and their location, they will get the selected finish or will be used without finish if they are concealed. Some materials require additional processing after the finish has been applied. At the same time, the materials are processed and assembled into door panels. When the door panel is assembled, it will get the selected finish and will be left to dry. When the finish has dried, the door panel will get preparations for hardware installation. Hardware and rollers will be fixed to the door panel and the guide rail will be assembled. Before packing and stacking the doors to the transportation pallets, final quality checks will be concluded and the finished product will be sent to the construction site.

MANUFACTURING PROCESS:



TRANSPORT (A4)

Transportation impacts occurred from final product's delivery to construction site cover direct exhaust emissions of fuel, environmental impacts of fuel production, as well as related infrastructure emissions.

PRODUCT END OF LIFE (C1-C4, D)

At the end-of-life, in the demolition phase end-of-life product is collected as mixed waste (C1) and is assumed to be sent (C2) to recycling (C3). Around 2% is sent to land-fill (C4). Due to the recycling potential of aluminum, some of the end-of-life product is converted into recycled raw materials (D).

LIFE-CYCLE ASSESSMENT

LIFE-CYCLE ASSESSMENT INFORMATION

Period for data	2020

DECLARED AND FUNCTIONAL UNIT

Declared unit	1 m^2
Mass per declared unit	28 - 46 kg

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	6.66 - 9.98
Biogenic carbon content in packaging, kg C	0.54 - 0.88

SYSTEM BOUNDARY

This EPD covers the cradle to gate with options scope with following modules; A1 (Raw material supply), A2 (Transport) and A3 (Manufacturing), A4 (Transport), 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.

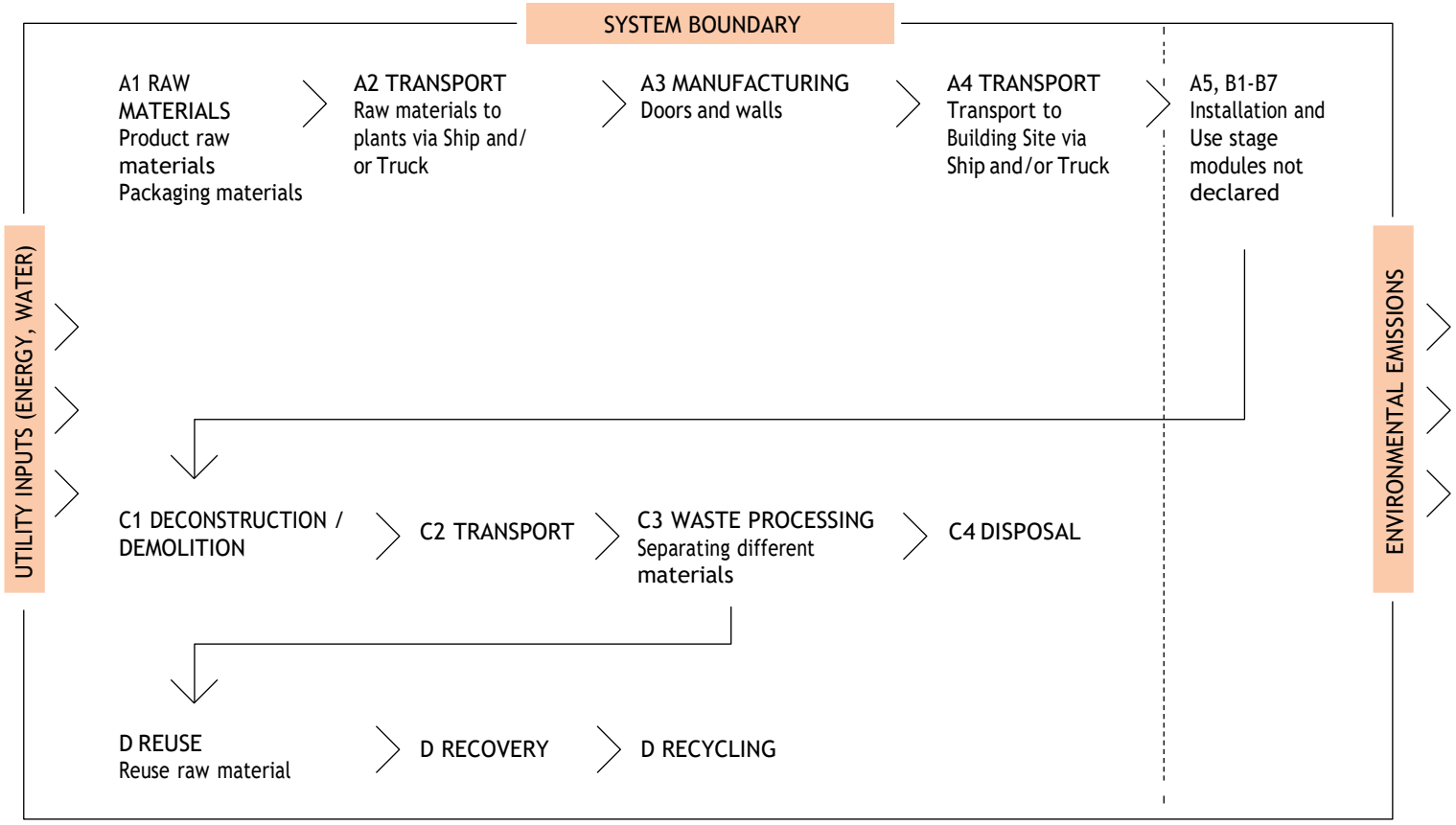
Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	D	D
x	x	x	x	MND	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	x	x	x

Geography, by two-letter ISO country code or regions. The International EPD System only.

Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstr./ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND

LIFE CYCLE STAGES DIAGRAM:



CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the EN 15804:2012+A2:2019 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

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.

ESTIMATES AND ASSUMPTIONS

This LCA study is conducted in accordance with all methodological considerations, such as performance, system boundaries, data quality, allocation procedures, and decision rules to evaluate inputs and outputs. All estimations and assumptions are given below:

Module A4: The transportation distance is defined according to RTS PCR. It was assumed that typical installation place is situated in Stockholm, Sweden. Average distance of transportation from production plant to building site is equal to 460 km. Transportation method is assumed to be ferry and lorry. The transportation doesn't cause losses as products are packaged properly. Also, volume capacity utilisation factor is assumed to be 1 for the nested packaged products.

Module C1: Energy consumption of demolition process is on the average 0 kWh/m2. It is assumed no machinery is needed for the process.

Module C2: 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 sent to the closest facilities such as recycling and landfill. Transportation distance to the closest disposal area is estimated as 15 km and the transportation method is assumed as lorry which is the most common.

Module A2, A4 & C2: Vehicle capacity utilization volume factor is assumed to be 1 which means full load. In reality, it may vary but as role of transportation emission in total results is small and so the variety in load assumed to be negligible. Empty returns are not taken into account as it is assumed that return trip is used by transportation company to serve needs of other clients.

Module C3: It is assumed that 98% of total waste is recycled or incinerated for heat production. This assumption was based on information from industry associations. App. 95% of metals. 98% of other waste is incinerated for heat generation. The process losses of the waste treatment plant are assumed to be negligible.

Module C4: The remaining 2% of is assumed to be send to landfill.

Module D: The recycled end-of-life product is assumed to be converted into a raw material after recycling. .

ENVIRONMENTAL IMPACT DATA

Note: ENVIRONMENTAL IMPACTS - EN 15804+A1, CML / ISO 21930 are presented in annex.

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

1) GWP = Global Warming Potential; EP = Eutrophication potential; POCP = Photochemical ozone formation; ADP = Abiotic depletion potential.

2) 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 experienced with the indicator.

3) Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e.

DOOR - CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP - total	kg CO2e	2,85E1	2,24E0	0E0	1,14E−1	5,58E1	9,57E−3	−1,29E0
GWP - fossil	kg CO2e	5,19E1	2,26E0	0E0	1,14E−1	2,28E1	9,49E−3	−1,3E0
GWP - biogenic	kg CO2e	−2,37E1	2,16E−4	0E0	6,1E−5	3,3E1	7,67E−5	9,65E−3
GWP - LULUC	kg CO2e	3,21E−1	1,15E−3	0E0	4,05E−5	4,8E−4	4,55E−6	3,6E−5
Ozone depletion pot.	kg CFC11e	5,96E−6	4,8E−7	0E0	2,6E−8	1,68E−7	2,94E−9	−3,45E−8
Acidification potential	mol H+e	3,08E−1	5,23E−2	0E0	4,67E−4	1,44E−2	8,09E−5	−5,02E−3
EP-freshwater[3)]	kg Pe	5,39E−3	1,25E−5	0E0	9,56E−7	2,81E−5	1,66E−7	−5,22E−5
EP-marine	kg Ne	6,25E−2	1,32E−2	0E0	1,39E−4	6,22E−3	2,74E−5	−9,87E−4
EP-terrestrial	mol Ne	6,43E−1	1,47E−1	0E0	1,53E−3	6,44E−2	3,02E−4	−1,04E−2
POCP (“smog”)	kg NMVOCe	2,18E−1	3,85E−2	0E0	4,69E−4	1,61E−2	8,73E−5	−6,82E−3
ADP-minerals & metals	kg Sbe	5E−2	2,3E−5	0E0	3,09E−6	2,79E−5	1,02E−7	−1,29E−6
ADP-fossil resources	MJ	7,75E2	3,1E1	0E0	1,72E0	1,38E1	2,23E−1	−9,6E0
Water use[2)]	m3e depr.	5,12E1	8,05E−2	0E0	5,55E−3	1,69E0	9,98E−3	−1,85E−1

PORTA-53W - CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP - total	kg CO2e	8,34E1	2,16E0	0E0	1,08E−1	5,11E1	7,97E−3	−3,23E1
GWP - fossil	kg CO2e	1E2	2,17E0	0E0	1,08E−1	2,35E1	7,91E−3	−3,22E1
GWP - biogenic	kg CO2e	−1,72E1	2,08E−4	0E0	5,77E−5	2,76E1	6,39E−5	1,93E−2
GWP - LULUC	kg CO2e	4,76E−1	1,11E−3	0E0	3,83E−5	5,19E−3	3,79E−6	−9,56E−2
Ozone depletion pot.	kg CFC11e	7,85E−6	4,62E−7	0E0	2,46E−8	5E−7	2,45E−9	−1,37E−6
Acidification potential	mol H+e	6,18E−1	5,03E−2	0E0	4,42E−4	3,48E−2	6,74E−5	−1,94E−1
EP-freshwater[3)]	kg Pe	7,17E−3	1,2E−5	0E0	9,05E−7	2,11E−4	1,38E−7	−1,39E−3
EP-marine	kg Ne	1,15E−1	1,27E−2	0E0	1,31E−4	9,25E−3	2,28E−5	−3,05E−2
EP-terrestrial	mol Ne	1,24E0	1,41E−1	0E0	1,45E−3	1,01E−1	2,52E−4	−3,41E−1
POCP (“smog”)	kg NMVOCe	3,85E−1	3,71E−2	0E0	4,44E−4	2,63E−2	7,27E−5	−1,11E−1
ADP-minerals & metals	kg Sbe	5,75E−2	2,21E−5	0E0	2,92E−6	1,96E−2	8,49E−8	4,72E−3
ADP-fossil resources	MJ	1,29E3	2,98E1	0E0	1,63E0	5,89E1	1,86E−1	−3,46E2
Water use[2)]	m3e depr.	3,65E1	7,75E−2	0E0	5,25E−3	5,74E0	8,32E−3	−4,54E0

WOODSLIDE - CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP - total	kg CO2e	3,85E1	1,39E0	0E0	7,09E−2	3,44E1	5,64E−3	−4,73E−1
GWP - fossil	kg CO2e	5,73E1	1,4E0	0E0	7,08E−2	1,49E1	5,59E−3	−4,77E−1
GWP - biogenic	kg CO2e	−1,9E1	1,34E−4	0E0	3,78E−5	1,95E1	4,51E−5	3,54E−3
GWP - LULUC	kg CO2e	2,65E−1	7,13E−4	0E0	2,51E−5	1,8E−3	2,68E−6	1,32E−5
Ozone depletion pot.	kg CFC11e	6,9E−6	2,98E−7	0E0	1,61E−8	2,1E−7	1,73E−9	−1,27E−8
Acidification potential	mol H+e	3,77E−1	3,24E−2	0E0	2,89E−4	1,56E−2	4,76E−5	−1,84E−3
EP-freshwater[3)]	kg Pe	5,07E−3	7,74E−6	0E0	5,93E−7	7,6E−5	9,77E−8	−1,91E−5
EP-marine	kg Ne	7,01E−2	8,18E−3	0E0	8,6E−5	4,89E−3	1,61E−5	−3,62E−4
EP-terrestrial	mol Ne	7,95E−1	9,09E−2	0E0	9,5E−4	5,23E−2	1,78E−4	−3,83E−3
POCP (“smog”)	kg NMVOCe	2,57E−1	2,39E−2	0E0	2,91E−4	1,34E−2	5,14E−5	−2,5E−3
ADP-minerals & metals	kg Sbe	5,87E−2	1,43E−5	0E0	1,92E−6	6,23E−3	6E−8	−4,73E−7
ADP-fossil resources	MJ	7,98E2	1,92E1	0E0	1,07E0	2,3E1	1,31E−1	−3,52E0
Water use[2)]	m3e depr.	7,96E1	4,99E−2	0E0	3,44E−3	2,37E0	5,88E−3	−6,78E−2

USE OF NATURAL RESOURCES

4) PER = Primary energy resources

DOOR - USE OF NATURAL RESOURCES

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Renew. PER as energy	MJ	3,13E2	2,69E−1	0E0	2,43E−2	4,32E−1	3,68E−3	1,27E−1
Renew. PER as material	MJ	3,48E2	0E0	0E0	0E0	-3,13E2	0E0	0E0
Total use of renew. PER	MJ	6,61E2	2,69E−1	0E0	2,43E−2	-3,12E2	3,68E−3	1,27E−1
Non-re. PER as energy	MJ	7,05E2	3,1E1	0E0	1,72E0	1,38E1	2,23E−1	−9,6E0
Non-re. PER as material	MJ	4,18E1	0E0	0E0	0E0	0E0	0E0	0E0
Total use of non-re. PER	MJ	7,47E2	3,1E1	0E0	1,72E0	1,38E1	2,23E−1	−9,6E0
Secondary materials	kg	5,37E−1	0E0	0E0	0E0	0E0	0E0	6,08E−1
Renew. secondary fuels	MJ	1,7E−2	0E0	0E0	0E0	0E0	0E0	0E0
Non-ren. secondary fuels	MJ	8,61E−3	0E0	0E0	0E0	0E0	0E0	0E0
Use of net fresh water	m3	8,24E−1	4,2E−3	0E0	2,94E−4	7,04E−2	2,52E−4	−8,62E−3

PORTA-53W - USE OF NATURAL RESOURCES

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Renew. PER as energy	MJ	3,49E2	2,59E−1	0E0	2,3E−2	5,58E0	3,07E−3	−4,31E1
Renew. PER as material	MJ	2,51E2	0E0	0E0	0E0	-2.14E2	0E0	0E0
Total use of renew. PER	MJ	6,01E2	2,59E−1	0E0	2,3E−2	-2.08E2	3,07E−3	−4,31E1
Non-re. PER as energy	MJ	1,25E3	2,98E1	0E0	1,63E0	5,89E1	1,86E−1	−3,46E2
Non-re. PER as material	MJ	2,86E1	0E0	0E0	0E0	0E0	0E0	0E0
Total use of non-re. PER	MJ	1,28E3	2,98E1	0E0	1,63E0	5,89E1	1,86E−1	−3,46E2
Secondary materials	kg	5,29E0	0E0	0E0	0E0	0E0	0E0	−3,2E0
Renew. secondary fuels	MJ	3,51E−3	0E0	0E0	0E0	0E0	0E0	0E0
Non-ren. secondary fuels	MJ	1,77E−3	0E0	0E0	0E0	0E0	0E0	0E0
Use of net fresh water	m3	1,07E0	4,04E−3	0E0	2,79E−4	2,44E−1	2,1E−4	−8,87E−2

WOODSLIDE - USE OF NATURAL RESOURCES

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Renew. PER as energy	MJ	3,35E2	1,67E−1	0E0	1,51E−2	1,91E0	2,17E−3	4,67E−2
Renew. PER as material	MJ	1,82E2	0E0	0E0	0E0	-1.60E2	0E0	0E0
Total use of renew. PER	MJ	5,17E2	1,67E−1	0E0	1,51E−2	-1,58E2	2,17E−3	4,67E−2
Non-re. PER as energy	MJ	7,4E2	1,92E1	0E0	1,07E0	2,3E1	1,31E−1	−3,52E0
Non-re. PER as material	MJ	2,69E1	0E0	0E0	0E0	0E0	0E0	0E0
Total use of non-re. PER	MJ	7,67E2	1,92E1	0E0	1,07E0	2,3E1	1,31E−1	−3,52E0
Secondary materials	kg	2,28E0	0E0	0E0	0E0	0E0	0E0	2,23E−1
Renew. secondary fuels	MJ	2,95E−2	0E0	0E0	0E0	0E0	0E0	0E0
Non-ren. secondary fuels	MJ	1,49E−2	0E0	0E0	0E0	0E0	0E0	0E0
Use of net fresh water	m3	3,86E0	2,6E−3	0E0	1,83E−4	1E−1	1,48E−4	−3,16E−3

END OF LIFE – WASTE

DOOR - END OF LIFE – WASTE

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Hazardous waste	Kg	3,11E0	3,22E−2	0E0	1,75E−3	0E0	3,91E−4	−1,56E−1
Non-hazardous waste	Kg	1,07E2	1,53E0	0E0	1,2E−1	0E0	9E−1	−1,76E0
Radioactive waste	Kg	3,05E−3	2,16E−4	0E0	1,18E−5	0E0	1,34E−6	7,03E−6

PORTA-53W - END OF LIFE – WASTE

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Hazardous waste	Kg	1,18E1	3,1E−2	0E0	1,66E−3	0E0	3,26E−4	−6,23E0
Non-hazardous waste	Kg	2,02E2	1,48E0	0E0	1,14E−1	0E0	7,5E−1	−5,85E1
Radioactive waste	Kg	4,15E−3	2,08E−4	0E0	1,12E−5	0E0	1,12E−6	−8,34E−4

WOODSLIDE - END OF LIFE – WASTE

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Hazardous waste	Kg	5,71E0	2E−2	0E0	1,08E−3	0E0	2,3E−4	−5,72E−2
Non-hazardous waste	Kg	1,13E2	9,5E−1	0E0	7,45E−2	0E0	5,3E−1	−6,45E−1
Radioactive waste	Kg	2,77E−3	1,34E−4	0E0	7,32E−6	0E0	7,9E−7	2,58E−6

END OF LIFE – OUTPUT FLOWS

DOOR - END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Components for re-use	Kg	0E0	0E0	0E0	0E0	0E0	0E0	0E0
Materials for recycling	Kg	1,19E-2	0E0	0E0	0E0	9E-1	0E0	0E0
Materials for energy rec	Kg	6,45E0	0E0	0E0	0E0	4,39E1	0E0	0E0
Exported energy	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0

PORTA-53W - END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Components for re-use	Kg	0E0	0E0	0E0	0E0	0E0	0E0	0E0
Materials for recycling	Kg	7,52E-1	0E0	0E0	0E0	5,86E0	0E0	0E0
Materials for energy rec	Kg	5,46E0	0E0	0E0	0E0	3,66E1	0E0	0E0
Exported energy	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0

WOODSLIDE - END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Components for re-use	Kg	0E0	0E0	0E0	0E0	0E0	0E0	0E0
Materials for recycling	Kg	2,61E-1	0E0	0E0	0E0	1,87E0	0E0	0E0
Materials for energy rec	Kg	3,73E0	0E0	0E0	0E0	2,59E1	0E0	0E0
Exported energy	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0

KEY INFORMATION TABLE (RTS) – KEY INFORMATION PER KG OF PRODUCT

5) Biog. C in product = Biogenic carbon content in product

DOOR - KEY INFORMATION TABLE (RTS) – KEY INFORMATION PER KG OF PRODUCT

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP - total	kg CO2e	6,24E-1	4,94E-2	0E0	2,5E-3	1,22E0	2,09E-4	-2,82E-2
ADP-minerals & metals	kg Sbe	1,09E-3	5,03E-7	0E0	6,76E-8	6,1E-7	2,23E-9	-2,82E-8
ADP-fossil	MJ	1,69E1	6,77E-1	0E0	3,77E-2	3,02E-1	4,88E-3	-2,1E-1
Water use	m3e depr.	1,12E0	1,76E-3	0E0	1,21E-4	3,7E-2	2,18E-4	-4,04E-3
Secondary materials	kg	1,18E-2	0E0	0E0	0E0	0E0	0E0	1,33E-2
Biog. C in product	kg C	9.98	N/A	N/A	N/A	N/A	N/A	N/A
Biog. C in packaging	kg C	0.85	N/A	N/A	N/A	N/A	N/A	N/A

PORTA-53W - KEY INFORMATION TABLE (RTS) – KEY INFORMATION PER KG OF PRODUCT

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP - total	kg CO2e	1,93E0	5,03E-2	0E0	2,5E-3	1,18E0	1,84E-4	-7,47E-1
ADP-minerals & metals	kg Sbe	1,33E-3	5,12E-7	0E0	6,76E-8	4,53E-4	1,96E-9	1,09E-4
ADP-fossil	MJ	2,99E1	6,89E-1	0E0	3,77E-2	1,36E0	4,3E-3	-8E0
Water use	m3e depr.	8,43E-1	1,79E-3	0E0	1,21E-4	1,33E-1	1,92E-4	-1,05E-1
Secondary materials	kg	1,22E-1	0E0	0E0	0E0	0E0	0E0	-7,39E-2
Biog. C in product	kg C	6.7	N/A	N/A	N/A	N/A	N/A	N/A
Biog. C in packaging	kg C	0.88	N/A	N/A	N/A	N/A	N/A	N/A

WOODSLIDE - KEY INFORMATION TABLE (RTS) – KEY INFORMATION PER KG OF PRODUCT

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP - total	kg CO2e	1,36E0	4,94E−2	0E0	2,5E−3	1,21E0	1,99E−4	−1,67E−2
ADP-minerals & metals	kg Sbe	2,07E−3	5,03E−7	0E0	6,76E−8	2,2E−4	2,12E−9	−1,67E−8
ADP-fossil	MJ	2,82E1	6,77E−1	0E0	3,77E−2	8,11E−1	4,63E−3	−1,24E−1
Water use	m3e depr.	2,81E0	1,76E−3	0E0	1,21E−4	8,38E−2	2,07E−4	−2,39E−3
Secondary materials	kg	8,04E−2	0E0	0E0	0E0	0E0	0E0	7,87E−3
Biog. C in product	kg C	7.69	N/A	N/A	N/A	N/A	N/A	N/A
Biog. C in packaging	kg C	0.54	N/A	N/A	N/A	N/A	N/A	N/A

SCENARIO DOCUMENTATION

MANUFACTURING ENERGY SCENARIO DOCUMENTATION

Scenario parameter	Value
Electricity data source and quality	Market for electricity, high voltage (Reference product: electricity, high voltage) Estonia, Ecoinvent 3,6, year: 2020
Electricity CO2e / kWh	0.84 kg CO2/kWh
Heating data source and quality (firewood)	Heat production, mixed logs, at wood heater 6kw, state-of-the-art 2014 (Reference product: heat, central or small-scale, other than natural gas) Global, Ecoinvent 3,6, year: 2020
Heating (firewood) CO2e / kWh	0.0184 kg CO2/MJ
Heating data source and quality (gas)	Heat production, natural gas, at industrial furnace >100kw (Reference product: heat, district or industrial, natural gas) Europe, Ecoinvent 3,6, year: 2020
Heating (gas) CO2e / kWh	0.0687 kg CO2/kWh

TRANSPORT SCENARIO DOCUMENTATION (A4)

Scenario parameter	
A4 specific transport CO2e emissions, kg CO2e / tkm, lorry	0.090
A4 specific transport CO2e emissions, kg CO2e / tkm, ferry	0.011
A4 average transport distance, lorry, km	175
A4 average transport distance, ferry, km	285
A4 Capacity utilization (including empty return) %	75
A4 Bulk density of transported products, kg/m2	28 - 46
A4 Volume capacity utilization factor	1

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END OF LIFE SCENARIO DOCUMENTATION

Scenario parameter	DOOR	PORTA-53W	WOODSLIDE
Collection process - kg collected separately	45.71	43.24	28.33
Collection process - kg collected with mixed waste	0.00	0.00	0.00
Recovery process - kg for re-use	0.00	0.00	0.00
Recovery process - kg for recycling	0.90	5.86	1.86
Recovery process - kg for energy recovery	43.91	36.64	25.93
Disposal (total) - kg for final deposition	0.90	0.75	0.53

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ABOUT THE MANUFACTURER

All our products are manufactured according to the customer's individual requirements. As a result, our products fit perfectly in the designated interior space and comply with all requirements of the building. Structo's products are practical, of high quality and stylish.

Not only do we manufacture products that look good, we also make them practical, long lasting and easy to handle. It is our greatest aim to provide all present and future customers with the satisfaction that can be guaranteed by our extensive experience and professional expertise.

Structo's products are characterised by innovative ideas and immaculate workmanship. Our constant product development makes sure you will get the best solutions for even your most complicated requirements.

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EPD program	The Building Information Foundation RTS sr
Background data	This EPD is based on Ecoinvent 3.6 and One Click LCA databases.
LCA software	One Click LCA

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

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

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Global Warming Pot.	kg CO2e	5,2E1	2,24E0	0E0	1,13E−1	2,28E1	9,3E−3	−1,24E0
Ozone depletion Pot.	kg CFC11e	5,57E−6	3,81E−7	0E0	2,07E−8	1,68E−7	2,34E−9	−3,06E−8
Acidification	kg SO2e	2,52E−1	4,07E−2	0E0	2,29E−4	9,65E−3	6,44E−4	−3,94E−3
Eutrophication	kg PO4 3e	9,8E−2	4,72E−3	0E0	4,71E−5	1,27E−2	1,31E−5	−2,18E−3
POCP (“smog”)	kg C2H4e	1,49E−2	1,1E−3	0E0	1,51E−5	2,76E−4	2,43E−6	−1,02E−3
ADP-elements	kg Sbe	5E−2	2,3E−5	0E0	3,09E−6	2,79E−5	1,02E−7	−1,29E−6
ADP-fossil	MJ	7,75E2	3,1E1	0E0	1,72E0	1,38E1	2,23E−1	−9,6E0

PORTA-53W - ANNEX 1 : ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Global Warming Pot.	kg CO2e	9,78E1	2,16E0	0E0	1,07E−1	2,34E1	7,75E−3	−3,08E1
Ozone depletion Pot.	kg CFC11e	7,21E−6	3,66E−7	0E0	1,95E−8	4,48E−7	1,95E−9	−1,36E−6
Acidification	kg SO2e	5,02E−1	3,92E−2	0E0	2,17E−4	3,22E−2	5,37E−4	−1,49E−1
Eutrophication	kg PO4 3e	1,84E−1	4,54E−3	0E0	4,45E−5	1,9E−2	1,09E−5	−5,59E−2
POCP (“smog”)	kg C2H4e	2,88E−2	1,06E−3	0E0	1,43E−5	1,05E−3	2,02E−6	−1,07E−2
ADP-elements	kg Sbe	5,75E−2	2,21E−5	0E0	2,92E−6	1,96E−2	8,49E−8	4,72E−3
ADP-fossil	MJ	1,29E3	2,98E1	0E0	1,63E0	5,89E1	1,86E−1	−3,46E2

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

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Global Warming Pot.	kg CO2e	5,72E1	1,39E0	0E0	7,02E−2	1,48E1	5,48E−3	−4,54E−1
Ozone depletion Pot.	kg CFC11e	6,54E−6	2,36E−7	0E0	1,28E−8	1,94E−7	1,38E−9	−1,12E−8
Acidification	kg SO2e	3,05E−1	2,52E−2	0E0	1,42E−4	1,34E−2	3,79E−4	−1,44E−3
Eutrophication	kg PO4 3e	1,03E−1	2,93E−3	0E0	2,92E−5	1,02E−2	7,73E−6	−7,99E−4
POCP (“smog”)	kg C2H4e	1,85E−2	6,84E−4	0E0	9,35E−6	4,22E−4	1,43E−6	−3,73E−4
ADP-elements	kg Sbe	5,87E−2	1,43E−5	0E0	1,92E−6	6,23E−3	6E−8	−4,73E−7
ADP-fossil	MJ	7,98E2	1,92E1	0E0	1,07E0	2,3E1	1,31E−1	−3,52E0

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