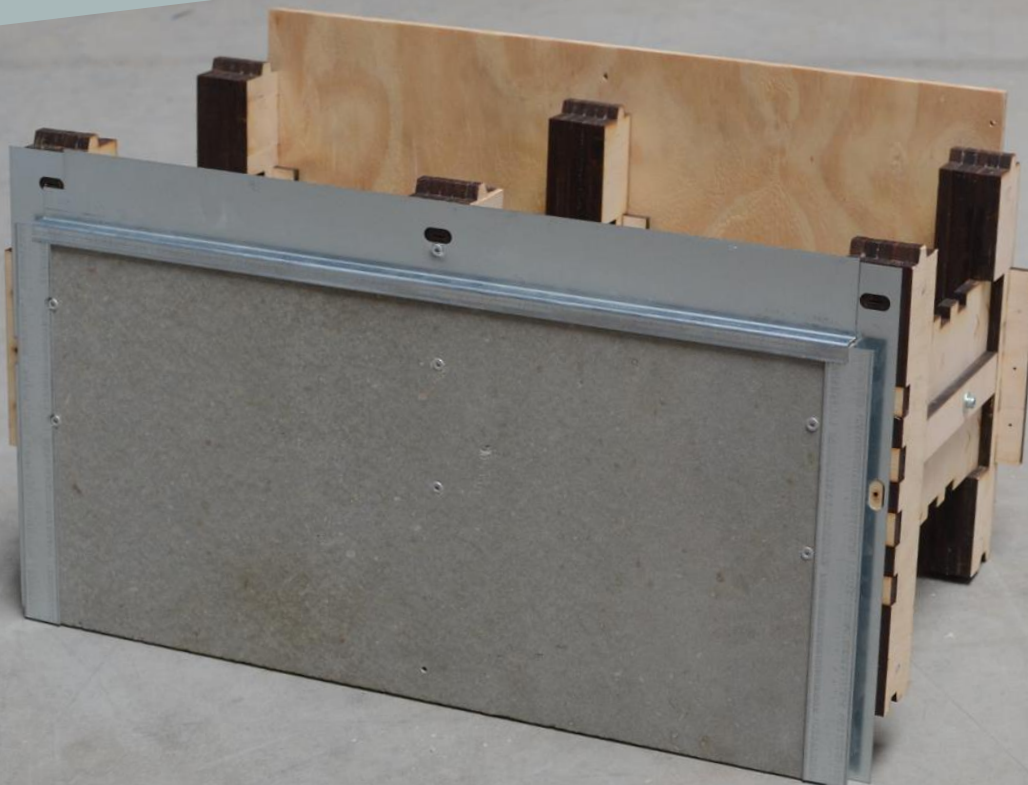


Owner: REXCON System Aps
No.: MD-23156-EN
Issued: 28-11-2023
Valid to: 28-11-2028

3rd PARTY VERIFIED

EPD

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | ISO 14025 & EN 15804



Owner of declaration
 REXCON System ApS
 Lysholt Allé 8, 7100 Vejle,
 Denmark
 CVR nr.: 38 03 90 40



Issued:
28-11-2023

Valid to:
28-11-2028

Programme
 EPD Danmark
www.epddanmark.dk



- Industry EPD
- Product EPD

Basis of calculation
 This EPD is developed in accordance with the European standard EN 15804+A2.

Comparability
 EPDs of construction products may not be comparable if they do not comply with the requirements in EN 15804. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database.

Validity
 This EPD has been verified in accordance with ISO 14025 and is valid for 5 years from the date of issue.

Use
 The intended use of an EPD is to communicate scientifically based environmental information for construction products, for the purpose of assessing the environmental performance of buildings.

Declared product(s)
 Prefabricated REXCON's ReBLOCK which consists of materials with three main materials: wooden, metallic, and cement-bonded particle board.

Number of declared datasets/product variations: 1

- EPD type**
- Cradle-to-gate with modules C1-C4 and D
 - Cradle-to-gate with options, modules C1-C4 and D
 - Cradle-to-grave and module D
 - Cradle-to-gate
 - Cradle-to-gate with options

Production site
 REXCON System ApS
 Danmarksvej 2, 8722 Hedensted,
 Denmark


Product(s) use
 REXCON ReBLOCK is used as external load-bearing façade system designed to construct smaller or bigger residential structures.

CEN standard EN 15804 serves as the core PCR

Independent verification of the declaration and data, according to EN ISO 14025

internal external

Third party verifier:


 [Linda Høiby]

Declared/ functional unit
 Declared unit is 1 m² of external load-bearing façade system.

Year of production site data (A3)
 2021/2022

EPD version
 First version – version 1.0



Martha Katrine Sørensen
 EPD Danmark

Life cycle stages and modules (MND = module not declared)

Product			Construction process		Use								End of life			Beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Re-use, recovery and recycling potential
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

Product information

Product description

REXCON ReBLOCK consists of materials with three main backgrounds: wooden, metallic, and cement-bonded particle board.

REXCON ReBLOCK inner side is made of plywood board and the outer side of cement-bonded particle board and galvanized steel profiles. The inner and outer sides relate to wooden hinge system. The hinges are made of plywood glued together. Remaining parts are assembled with screws and fixing materials.

The main product components are shown in the table below. These make up to 100 weights % of declared product.

Material	Weight-% of declared product
Plywood (birch)	33.2
Plywood (pine)	13.1
Cement-bonded particleboard	43.6
Glue for wood	0.30
Steel profiles	8.73
Screws ReBLOCK (steel)	0.21
Mounting screws (steel)	0.16
Fixing materials (steel)	0.72

Product packaging:

The composition of the sales - and transport packaging of the product is shown in the table below.

Material	Weight-% of packaging
EUR pallet	29.11
Plywood (pine)	63.17
Plywood (birch)	7.56
Packaging screws (steel)	0.16

Representativity

This declaration, including data collection and the modelled foreground system including results, represents the production of 1 m² of REXCON ReBLOCK external load-bearing façade system on the production site located in Danmarksvej 2, 8722 Hedensted, Denmark. Product specific data are based on average values collected in the

period 2021 - 2022. Background data are based on GaBi databases version 2023.1 and are less than 10 years old. Generally, the used background datasets are of high quality, and the majority of the datasets are only a couple of years old.

Hazardous substances

The REXCON ReBLOCK does not contain substances listed on the "Candidate List of Substances of Very High Concern for authorisation" as declared by the producer.

(<http://echa.europa.eu/candidate-list-table>)

Essential characteristics

The REXCON ReBLOCK is not covered by the scope of any harmonized technical specifications (hEN or EAD) according to the construction products regulation (EU regulation 305/2011).

In practice, REXCON ReBLOCK is manufactured using materials that is CE-certified, PEFC and FSC-certified.

Load-bearing capacity, [kN/m]:

- REXCON ReBLOCK: 194

Thermal conductivity, [W/m²K]:

- REXCON ReBLOCK: 0.09 ($\lambda=0.037$)

Maximum thickness of insulation, [mm]:

- REXCON ReBLOCK: 320

Fire resistance:

- REXCON ReBLOCK: REI 60; K₁10.

Further technical information can be obtained by contacting the manufacturer or on the manufacturer's website:

<https://www.rexconsystem.com/>

Reference Service Life (RSL)

According to EN 15804:2012+A2:2019, RSL is only mandatory for EPD's that include either use stage (B) or a functional unit. Therefore, RSL is not applicable in this EPD.

Picture of product(s)

The illustrated product (REXCON ReBLOCK) below is an example of product and its application covered by this EPD.



Figure 1: Example of REXCON ReBLOCK application.

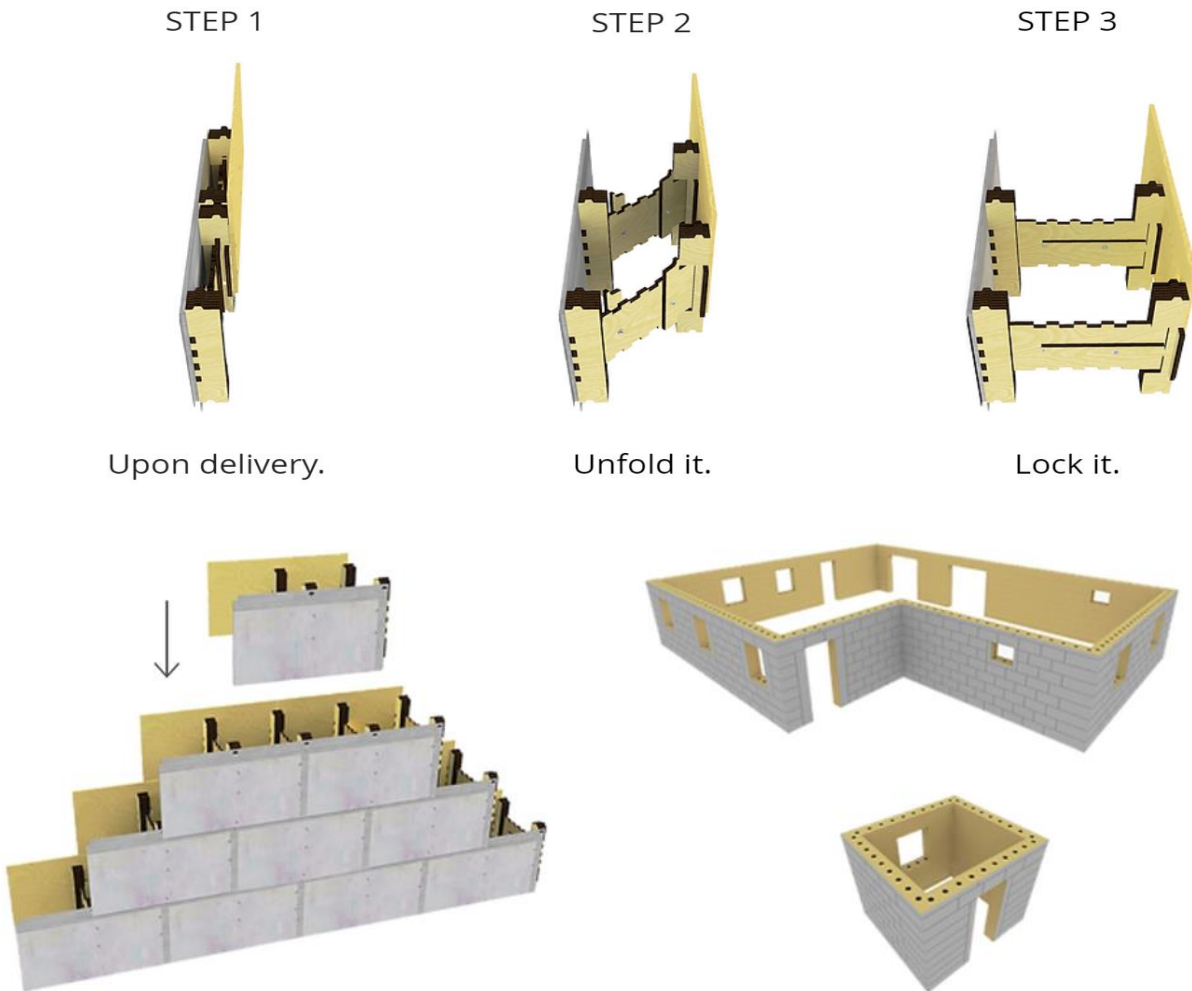


Figure 2: Example of REXCON ReBLOCK installation principle.

LCA background

Declared unit

The LCI and LCIA results in this EPD relates to 1 m² of REXCON ReBLOCK external load-bearing façade system with maximum load capacity of 194kN/m.

Name	Value	Unit
Declared unit	1	m ²
Area density	40.21	kg/m ²
Conversion factor to 1 kg.	0.0248	-

Functional unit

Not defined

PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804:2012+A2:2019, and the following complementary PCR standards:

- DS/EN 16485:2014 – Product category rules for wood and wood-based products for use in construction
- NPCR 013 Part B v3.0 – Steel and aluminium construction products

Geographical area

The set geographical boundary is Denmark.

Allocation

Allocation method used at supplier (raw materials) in module A1 is based on mass, economic, net calorific value, and exergetic content according to data from GaBi/LCA for Experts. Allocation method used at subcontractor in module A1 is based on mass.

A conservative approach is used in module A3 by allocating environmental impacts to the main product (= the declared unit).

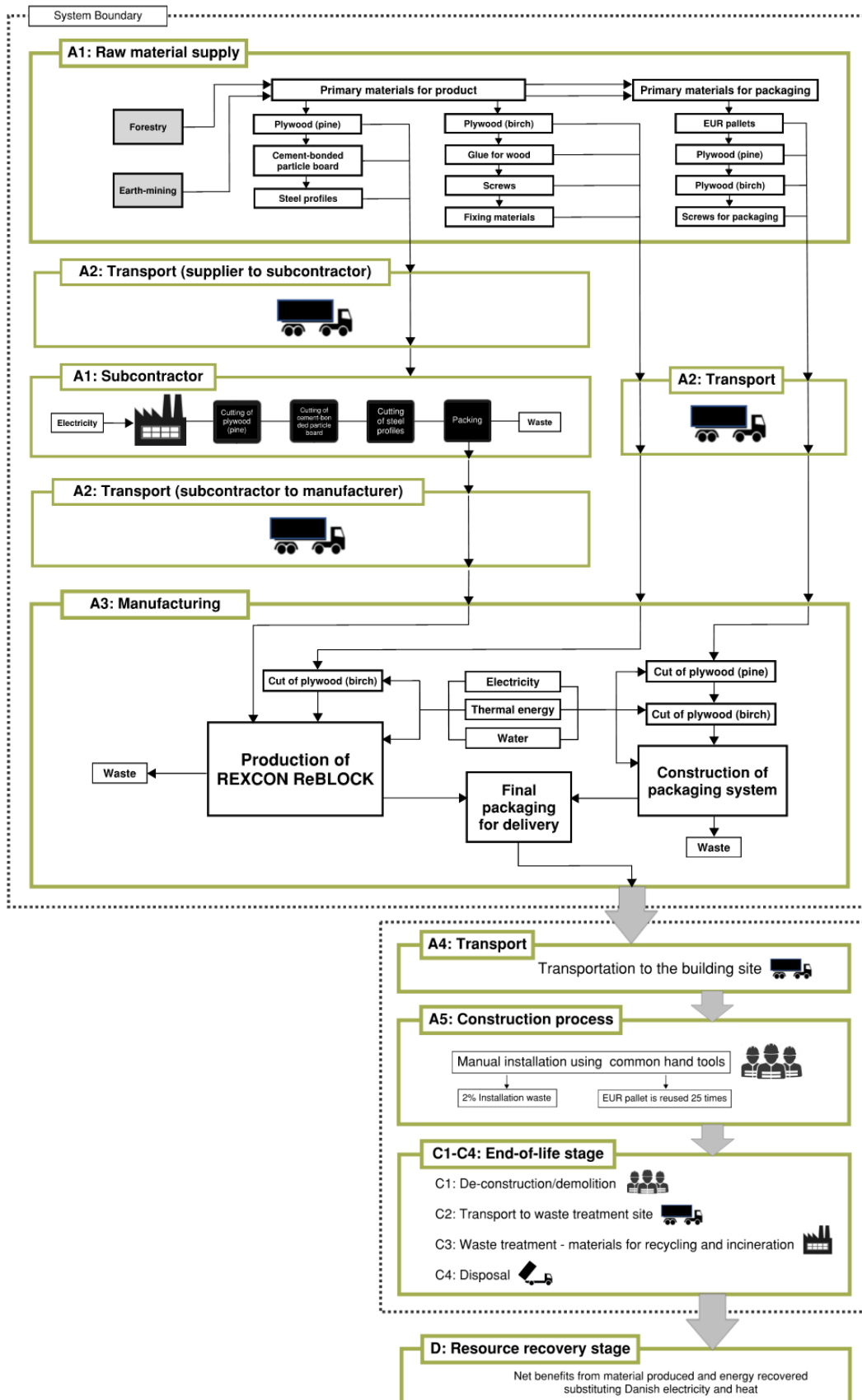
Guarantee of Origin – certificates

Foreground system: The product is produced without the use of energy covered by GO. Instead, the energy processes are modelled using the residual grid mix for Denmark with data from 2020.

Background system: Upstream and downstream processes are modelled using the electricity sources, which the applied datasets are based on without the use of certified green energy.

Upstream processes in A1 are modelled using electricity grid mix with reference year 2018. Residual grid mix is applied in A3 with data from reference year of 2020 as followed. Downstream processes are modelled using electricity grid mix in Denmark with data from 2018.

Flow diagram



System boundary

Key assumptions are described in each life cycle phase. The LCA for this product specific EPD has been completed based on scenario that expresses different environmental effects in the end-of-life stage (C1-C4), and potential benefits in module D, which is out of the system boundaries.

Product stage (A1-A3) includes:

- A1 – Extraction and processing of raw materials
- A2 – Transport to the production site
- A3 – Manufacturing processes

The LCA results are declared in aggregated form for the product stage, which means, that the submodules A1, A2 and A3 are declared as one module A1-A3. The REXCON ReBLOCK is manufactured using primarily pre-manufactured components, such as steel profiles, plywood sheets, cement-bonded particleboards, wood glue, and fixing materials in form of bolts and nuts. The main and final production of REXCON ReBLOCK takes place in Hedensted, Denmark. Pre-fabricated materials such as plywood (pine) sheets, cement bonded particleboards and steel profiles are cut to REXCON ReBLOCK shapes at subcontractors. Plywood (birch) sheets is cut into REXCON ReBLOCK shape at REXCON System ApS warehouse. Machines such as drill, circular saw, compressor, laser cutter, laser compressor, water cooler and extraction are used for the production of REXCON ReBLOCK. Manufacturing of components in the upstream are modelled using database processes that are representative of the full production of the component, including the extraction and processing of raw materials, transport, and manufacturing.

Construction process stage (A4-A5) includes:

- A4 – Transport to the building site
- A5 – Installation into the building

Transport includes driving elements from the production site to the construction site. The transportation distance is assumed as 300km to the customer which covers whole geographical area of Denmark. The REXCON ReBLOCK is typically transported with a 20-26t EURO 6 truck. The REXCON ReBLOCK is sold in Denmark, which is the set geographical boundary. When installing

a REXCON ReBLOCK, only common hand tools are used, and no waste of significance is produced. The packaging system is incinerated after reuse.

End of Life (C1-C4) includes:

- C1 – De-construction, demolition
- C2 – Transport to waste processing
- C3 – Processing for reuse, recovery/recycling
- C4 – Disposal

REXCON ReBLOCK is de-constructed entirely using the same type of common hand tools in module C1. Module C2 comprise the impacts from transportation of waste from the deconstructed product after end-of-life to the waste handling site. Average distances for transport to recycling and waste incineration plants is used accordingly. Module C3 comprise the impacts from waste handling. All wood and wood-based materials, as plywood and cement-bonded particle boards is sent to incineration. Steel-based materials, such as, steel profiles, bolts and nuts are sent to recycling with 95% recycling rate, where the rest 5% is sent to landfill (World Steel Association, 2021).

Re-use, recovery, and recycling potential (D) includes:

D – Potential benefits from energy recovery, and recycling potentials, expressed as net impacts and benefits is modelled. To calculate the amount of net-scrap for credit in module D, the input of 25% scrap steel has been deducted from the amount of steel for recycling. The credit is calculated as the difference between production of new primary steel using the blast furnace route (BF) and production of secondary steel from scrap using the electric arc furnace route (EAF).

Note

It should be noted that the biogenic carbon in the wood is balanced across the life cycle, as carbon included in the wood is released again, when the wood is incinerated. The uptake of the biogenic carbon from the packaging material (EUR pallet of wood and plywood sheets) in module A3 is released again in module A5. The uptake carbon in accumulated waste from production is released again in module A1-A3. The rest biogenic carbon from product is released in module C3.

LCA results

The tables below cover the environmental impacts from 1m² of REXCON ReBLOCK.

ENVIRONMENTAL IMPACTS PER 1 M ² OF REXCON ReBLOCK									
Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	-6.26E+00	4.32E-01	1.67E+00	3.42E-03	3.61E-01	4.20E+01	1.37E-04	-1.08E+01
GWP-fossil	[kg CO ₂ eq.]	3.57E+01	4.34E-01	7.55E-01	3.39E-03	3.62E-01	1.02E+00	1.41E-04	-1.07E+01
GWP-biogenic	[kg CO ₂ eq.]	-4.20E+01	-5.67E-03	9.15E-01	3.19E-05	-4.74E-03	4.10E+01	-4.37E-06	-1.09E-01
GWP-luluc	[kg CO ₂ eq.]	3.78E-02	3.97E-03	7.65E-04	7.17E-07	3.31E-03	2.29E-04	4.38E-07	-5.06E-03
ODP	[kg CFC 11 eq.]	1.13E-07	3.76E-14	2.27E-09	8.51E-14	3.13E-14	5.84E-12	3.62E-16	-1.09E-10
AP	[mol H ⁺ eq.]	9.47E-02	5.57E-04	2.28E-03	6.38E-06	4.65E-04	9.66E-03	9.99E-07	-4.40E-02
EP-freshwater	[kg P eq.]	4.22E-04	1.56E-06	8.51E-06	2.71E-08	1.30E-06	1.65E-06	2.85E-10	-1.49E-04
EP-marine	[kg N eq.]	3.08E-02	1.96E-04	7.27E-04	2.13E-06	1.63E-04	2.77E-03	2.58E-07	-1.33E-02
EP-terrestrial	[mol N eq.]	3.18E-01	2.35E-03	7.96E-03	2.05E-05	1.96E-03	4.00E-02	2.84E-06	-1.15E-01
POCP	[kg NMVOC eq.]	9.65E-02	4.83E-04	2.24E-03	4.97E-06	4.03E-04	7.62E-03	7.79E-07	-3.24E-02
ADPm ¹	[kg Sb eq.]	9.68E-05	2.77E-08	1.94E-06	1.40E-09	2.31E-08	5.48E-08	6.51E-12	-2.84E-06
ADPf ¹	[MJ]	4.02E+02	5.83E+00	8.64E+00	4.55E-02	4.87E+00	1.48E+01	1.87E-03	-1.10E+02
WDP ¹	[m ³ world eq. deprived]	5.78E+00	4.95E-03	3.75E-01	4.00E-04	4.12E-03	6.48E+00	1.54E-05	-1.69E+00
Caption	GWP-total = Global Warming Potential - total; 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 = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential								
	The numbers are declared in scientific notation, fx 1.95E+02. This number can also be written as: 1.95*10 ² or 195, while 1.12E-11 is the same as 1.12*10 ⁻¹¹ or 0.0000000000112.								
Disclaimer									

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1 M ² OF REXCON ReBLOCK									
Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	[Disease incidence]	2.88E-06	3.71E-09	6.02E-08	5.24E-11	3.09E-09	6.49E-08	1.23E-11	-4.04E-07
IRP ²	[kBq U235 eq.]	2.32E+00	1.09E-03	5.19E-02	5.45E-04	9.10E-04	1.34E-01	2.40E-06	-7.35E-01
ETP-fw ¹	[CTUe]	3.16E+02	4.07E+00	6.59E+00	1.74E-02	3.40E+00	6.96E+00	1.02E-03	-3.54E+01
HTP-c ¹	[CTUh]	1.74E-08	8.28E-11	3.73E-10	2.33E-12	6.91E-11	6.27E-10	1.58E-13	-1.25E-08
HTP-nc ¹	[CTUh]	5.39E-07	4.40E-09	1.25E-08	2.30E-11	3.67E-09	4.18E-08	1.73E-11	-1.53E-07
SQP ¹	-	1.07E+04	2.43E+00	2.13E+02	7.95E-02	2.03E+00	4.50E+00	4.73E-04	-7.23E+02
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)								
	The numbers are declared in scientific notation, fx 1.95E+02. This number can also be written as: 1.95*10 ² or 195, while 1.12E-11 is the same as 1.12*10 ⁻¹¹ or 0.0000000000112.								
Disclaimers	¹ The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.								
	² 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 PER 1 M ² OF REXCON ReBLOCK									
Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	[MJ]	2.62E+02	4.13E-01	7.82E+01	1.21E-01	3.44E-01	4.23E+02	3.07E-04	-3.31E+02
PERM	[MJ]	4.74E+02	0.00E+00	-6.38E+01	0.00E+00	0.00E+00	-4.19E+02	0.00E+00	0.00E+00
PERT	[MJ]	7.36E+02	4.13E-01	1.44E+01	1.21E-01	3.44E-01	3.69E+00	3.07E-04	-3.31E+02
PENRE	[MJ]	2.51E+02	5.85E+00	6.00E-01	4.55E-02	4.88E+00	1.72E+02	1.88E-03	-1.11E+02
PENRM	[MJ]	1.57E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.57E+02	0.00E+00	0.00E+00
PENRT	[MJ]	4.08E+02	5.85E+00	6.00E-01	4.55E-02	4.88E+00	1.48E+01	1.88E-03	-1.11E+02
SM	[kg]	9.87E-01	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
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
FW	[m ³]	1.81E-01	4.55E-04	9.72E-03	3.47E-05	3.79E-04	1.52E-01	4.73E-07	-8.00E-02
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water								

WASTE CATEGORIES AND OUTPUT FLOWS PER 1 M ² OF REXCON ReBLOCK									
Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	[kg]	6.00E-07	2.16E-11	1.20E-08	-4.30E-11	1.80E-11	3.34E-10	4.04E-14	6.19E-08
NHWD	[kg]	1.24E+00	8.43E-04	7.46E-02	1.83E-04	7.03E-04	1.16E+00	9.38E-03	-4.83E-01
RWD	[kg]	1.99E-02	7.56E-06	4.32E-04	4.78E-06	6.31E-06	8.37E-04	2.11E-08	-6.39E-03
CRU	[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
MFR	[kg]	8.80E-01	0.00E+00	8.43E-02	0.00E+00	0.00E+00	3.75E+00	0.00E+00	0.00E+00
MER	[kg]	3.70E+00	0.00E+00	1.52E+00	0.00E+00	0.00E+00	3.63E+01	0.00E+00	0.00E+00
EEE	[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
EET	[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
Caption	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy The numbers are declared in scientific notation, fx 1.95E+02. This number can also be written as: 1.95*10 ² or 195, while 1.12E-11 is the same as 1.12*10 ⁻¹¹ or 0.0000000000112.								

BIOGENIC CARBON CONTENT PER 1 M ² OF REXCON ReBLOCK		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	1.12E+01
Biogenic carbon content in accompanying packaging	[kg C]	2.50E-01
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO ₂	

Additional information

LCA interpretation

The components in the REXCON ReBLOCK are steel, wooden, and wood-based materials including cement-bonded particle board. LCIA are relative expressions and do not predict impacts category endpoints, the exceeding of thresholds, safety margins or risks.

The table below therefore shows the processes contributing the most to the specific impact categories, and how much they contribute to the given impact category. The major contribution of the environmental impacts categories occurs in the product stage (A1-A3). Here the production of the raw materials and their transportation is crucial.

The biogenic carbon in the wood is balance across the life cycle, as carbon included in the wood is released again, when the wood is incinerated.

Impact category	Unit	Total	Dominant	% of Category	Process
GWP-total	[kg CO2 eq.]	7.88E+01	4.37E+01	55.52	C3: Incineration
GWP-fossil	[kg CO2 eq.]	4.85E+01	2.94E+01	60.61	A1: Raw material
GWP-biogenic	[kg CO2 eq.]	-8.68E+01	4.27E+01	49.22	C3: Incineration
GWP - luluc	[kg CO2 eq.]	5.11E-02	2.87E-02	56.14	A1 Raw material
ODP	[kg CFC 11 eq.]	1.13E-07	1.13E-07	99.87	A1 Raw material
AP	[mol H+ eq.]	1.52E-01	8.90E-02	58.71	A1 Raw material
EP - fresh water	[kg P eq.]	5.82E-04	4.18E-04	71.77	A1 Raw material
EP - marine	[kg N eq.]	4.80E-02	2.86E-02	59.57	A1 Raw material
EP - terrestrial	[mole of N eq.]	4.86E-01	2.94E-01	60.49	A1 Raw material
POCP	[kg NMVOC eq.]	1.40E-01	9.04E-02	64.72	A1 Raw material
ADP - mm	[kg Sb eq.]	9.98E-05	9.65E-05	96.74	A1 Raw material
ADP - fossils	[MJ]	5.44E+02	3.10E+02	56.98	A1 Raw material
WDP	[m ³]	1.43E+01	6.48E+00	45.35	C3 Incineration

Based on weight REXCON ReBLOCK consist of approximately 72.5% wood and wood-based materials, whereas the rest consists of galvanized steel, and the data environmental impacts highly reflects the environmental impacts of the production of plywood sheets, cement-bonded particle boards, and galvanized steel profiles. The quality and representativeness of the LCA-data for these materials are therefore very high.

Production of raw materials alone accounts for approximately 76.9% of the environmental impacts in 10 out of 13 impact categories. The most dominant module is therefore module A1, as this module includes the production of primary materials.

The main contribution to the environmental impacts in module A3 is the electricity and heat consumption for the manufacturing of REXCON ReBLOCK at the REXCON System ApS manufacturing site in Denmark. In module A3 the highest environmental impacts are seen in the indicator's climate change - fossils and resource use - fossils.

The transportation to construction site from REXCON System ApS occurring in module A4 has the highest impact on GWP - land use and land use change. The dominant process in regard to GWP - land use and land use change is Diesel mix at refinery.

The negative environmental impact for GWP biogenic is caused by wood and wood-based materials used in for packaging system and REXCON ReBLOCK in module A1. The CO₂ is then released again during incineration in module A3, A5, and C3.

Technical information on scenarios

Reference service life

RSL information		Unit
Reference service Life	Not relevant	Years
Declared product properties	Information on the technical characteristics, design, and construction guidelines, as well as conditions during use can be found on the website of REXCON ReBLOCK at www.rexconsystem.com/	
Design application parameters		
Assumed quality of work		
Outdoor environment		
Indoor environment		
Usage conditions		
Maintenance		

Transport to the building site (A4)

Scenario information	Value	Unit
Fuel	0.485	L Diesel
Vehicle type	GLO: Truck Euro 6, 20 - 26t gross weight / 17.3t payload capacity	-
Transport distance	300	km
Capacity utilization (including empty runs)	23.6	%
Gross density of products transported	426.04	kg/m ³
Capacity utilization volume factor	1	-

Installation of the product in the building (A5)

Scenario information	Value	Unit
Ancillary materials	0	kg
Water use	0	m ³
Other resource use	0	kg
Energy type and consumption – el. hand tools	0.00274	kWh
Waste materials – packaging for incineration	0.713	kg
Product waste – for incineration	0.7228	kg
Product waste – for recycling	0.0667	kg
Product waste – for landfilling	0.0035	kg
Substitution of product waste materials	0.793	kg
Output materials	0	kg
Direct emissions to air, soil or water	0	kg

End of life (C1-C4)

Scenario information	Value	Unit
Collected separately	40.21	kg
Collected with mixed waste	0	kg
For reuse	0	kg
For recycling	3.75	kg
For energy recovery	36.26	kg
For final disposal	0.20	kg
Assumptions for scenario development	Most parts of deconstructed and dismantled REXCON ReBLOCK reached its End-of-Life and it is sent for incineration. The remaining parts is sent for recycling.	As appropriate

Re-use, recovery, and recycling potential (D)

Scenario information/Materiel	Value	Unit
Materials recovered	2.86	kg
Electricity produced from waste incineration	85.38	MJ
Thermal energy produced from waste incineration	153.91	MJ

Indoor air

The EPD does not give information on release of dangerous substances to indoor air because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.1.



Any additional performance certifications are available upon request from manufacturer, or at the following link:

<https://www.rexconsystem.com/>

Soil and water

The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.2.

References

Publisher	 www.epddanmark.dk
Programme operator	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA-practitioner	 <i>Greta Szefer, Lasse Hagerup, Edvinas Damukaitis</i> <i>Frandsen & Søndergaard K/S</i> <i>Voergårdvej 8,</i> <i>DK-9200 Aalborg</i> https://frandsen-sondergaard.dk/
LCA software /background data	Sphera LCA for Experts vers. 10.7, professional database, extension database XIV: construction materials, data on demand, version 2023.1
3rd party verifier	<i>Linda Højbye</i> <i>Life Cycle Assessment Consulting</i> <i>e-mail: hoeibye@gmail.com</i>

General programme instructions

General Programme Instructions, version 2.0, spring 2020

www.epddanmark.dk

EN 15804

DS/EN 15804 + A2:2019 - "Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products"

World Steel Association report - Scrap use in the steel industry, 2021

https://worldsteel.org/wp-content/uploads/Fact-sheet-on-scrap_2021.pdf

EN 15942

DS/EN 15942:2011 – " Sustainability of construction works – Environmental product declarations – Communication format business-to-business"

EN 16485

DS/EN 16485:2014 – " Round and sawn timber – Environmental Product Declarations – Product category rules for wood and wood-based products for use in construction"

ISO 14025

DS/EN ISO 14025:2010 – " Environmental labels and declarations – Type III environmental declarations – Principles and procedures"

ISO 14040

DS/EN ISO 14040:2008 – " Environmental management – Life cycle assessment – Principles and framework"

ISO 14044

DS/EN ISO 14044:2008 – “ Environmental management – Life cycle assessment – Requirements and guidelines”

NPCR Part A v2.0

Construction products and services

NPCR Part B v3.0

Steel and aluminium construction products

NPCR 015 Part B v3.0

Wood and wood-based products for use in construction

Sphera LCA for Experts (formerly GaBi) version 10.7 - Professional Database, version 2023.1.

Extension database XIV: construction materials, version 2023.1. Data on demand – sellable content, version 2023. <https://sphera.com/product-sustainability-software/>