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ECO PLATFORM EPD VERIFIED

Owner: DEKO p|s
No.: MD-24177-EN
Issued: 02-04-2025
Valid to: 02-04-2030

3rd PARTY **VERIFIED**

EPD

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | **ISO 14025 & EN 15804**

Owner of declaration
DEKO p|s
Mårkærvej 11, DK-2630 Taastrup
66674517

Programme
EPD Danmark
www.epddanmark.dk

☐ Industry EPD
☒ Product EPD

Declared product(s)
DEKO RG 44.1-16-44.1 mm

Number of declared datasets/product variations: 1

Production site
Mårkærvej 11, DK-2630 Taastrup

The products are not manufactured using green certificates (GO) for the energy consumption in A3.

Use of Guarantees of Origin
☒ No certificates used
☐ Electricity covered by GoO
☐ Biogas covered by GoO

Declared unit
1 m^2 of glazed door system

Year of production site data (A3)
2022

EPD version
[Vers. 1], [March 2025]

Issued: 02-04-2025
Valid to: 02-04-2030

Basis of calculation
This EPD is developed in accordance with the European standard EN 15804+A2 and the cPCR EN 17213:2020

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.

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

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 Høibye

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	X	X	X	X	X	X	X	X	X	X	X	X

Product information

Product description

The main product components are shown in the table below.

Material	Weight-% of declared products
Insulating glass unit (IGU): Incl. PVB lamination, silicone sealing, aluminium spacer and argon gas	79
Aluminium profiles incl. powder coating	18.7
Steel	1.7
Acrylic tape	<1
Plastic	<1

Product packaging:

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

Material	Weight-% of packaging
Plastic (LDPE foil, PE tape, PP straps & polystyrene bag)	14
Wood (EUR pallet, single-use pallet, masonite & cork)	48
Cardboard	35
Steel straps & fittings	3

Representativity

This declaration, including data collection and the modelled foreground system including results, represents the production of 1 m² glazed door system at the production site located in Taastrup, DK. Product specific data are based on average values collected in 2022. Background data are based on 'LCA for Experts' and EcoInvent database 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

DEKO RG glazed door system does not contain substances listed on the "Candidate List of Substances of Very High Concern for authorisation"

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

Product(s) use

The function of the product is to provide access to a room and ensure soundproofing.

Essential characteristics

The RG door system compose of an IGU, aluminium profiles, and small plastic and metal components. The systems offer sound insulation according to; (DS/EN ISO 10140-2).

RG	Sound insulation (dB)
44.1-16-44.1 mm	37-38

Test reports, as well as other technical information can be obtained by contacting DEKO or go to their website:

https://www.deko.com/

Reference Service Life (RSL)

The reference service life is 30 years which is determined according to the guarantee DEKO p|s provides on their systems. According to information from DEKO, there is no need for replacement or repair of product components during the RSL. Maintenance is included in terms of simple cleaning with water and mild detergent three times a year and lubrication of hinges one time per year.

Geographical scope

The geographical scope of this study is Europe.

Picture of product(s)

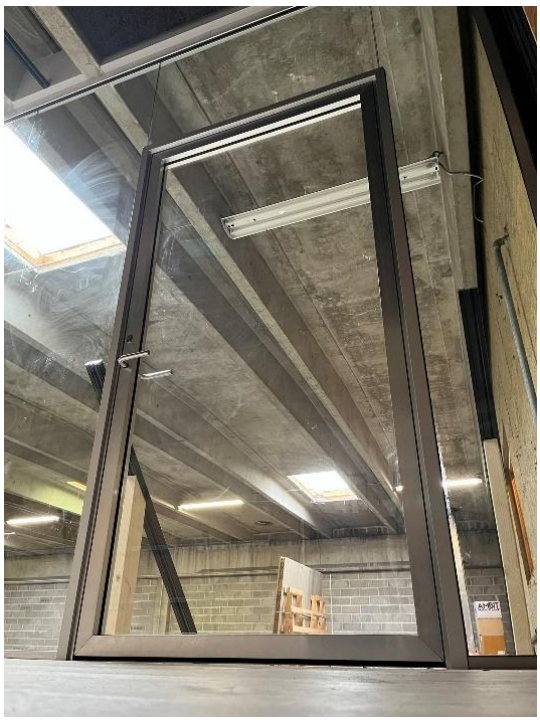


Figure 1: Example of a RG glazed door.

LCA background

Declared unit

The LCI and LCIA results in this EPD relates to 1 m² glazed door system.

RG system	44.1-16-44.1 mm	Unit
Declared unit	1 m² glazed door	-
Density	50.63	kg/m2
Conversion factor to 1 kg.	0.02	m^2/kg

Functional unit

1 m^2 of soundproofing glazed door, including associated fixing components with a reference service life of 30 years.

Allocation

Allocation is made in accordance with EN 15804 + A2. Waste in module A3 is allocated to the RG system based on the total amount of bought glass panes (m^2). Energy consumption for production in A3 is allocated to the RG system based on the total amount of electricity used at DEKO and the produced number of a reference product[1].The reasoning behind the allocation is that DEKO do not have 1 year of production data for RG. As the production process for RG and the reference product is very similar, it is deemed acceptable to allocate the energy consumption in this way. In addition, it should be noted that this allocation method results in a conservative estimate, as the total energy consumption at DEKO is allocated to one type of product.

Impacts from pre-consumer aluminium scrap is allocated to the main product system in which the material is used (RG system). Impacts from post-consumer aluminium scrap is allocated to the former product system. Additionally, transport and recycling process are included to account for the processing of scrap needed to utilise scrap in RG.

The remaining materials are modelled as primary materials.

PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804:2012+A2:2019. In addition to this it also follows the cPCR for windows and doors EN 17213:2020.

Energy modelling principles

Foreground system:

The products are produced without using any green certificates (GO). Therefore, the energy consumption in module A3 is modelled using residual electricity mix (DK). Remaining energy processes are modelled using grid mix.

Information about the energy mix in the foreground system:

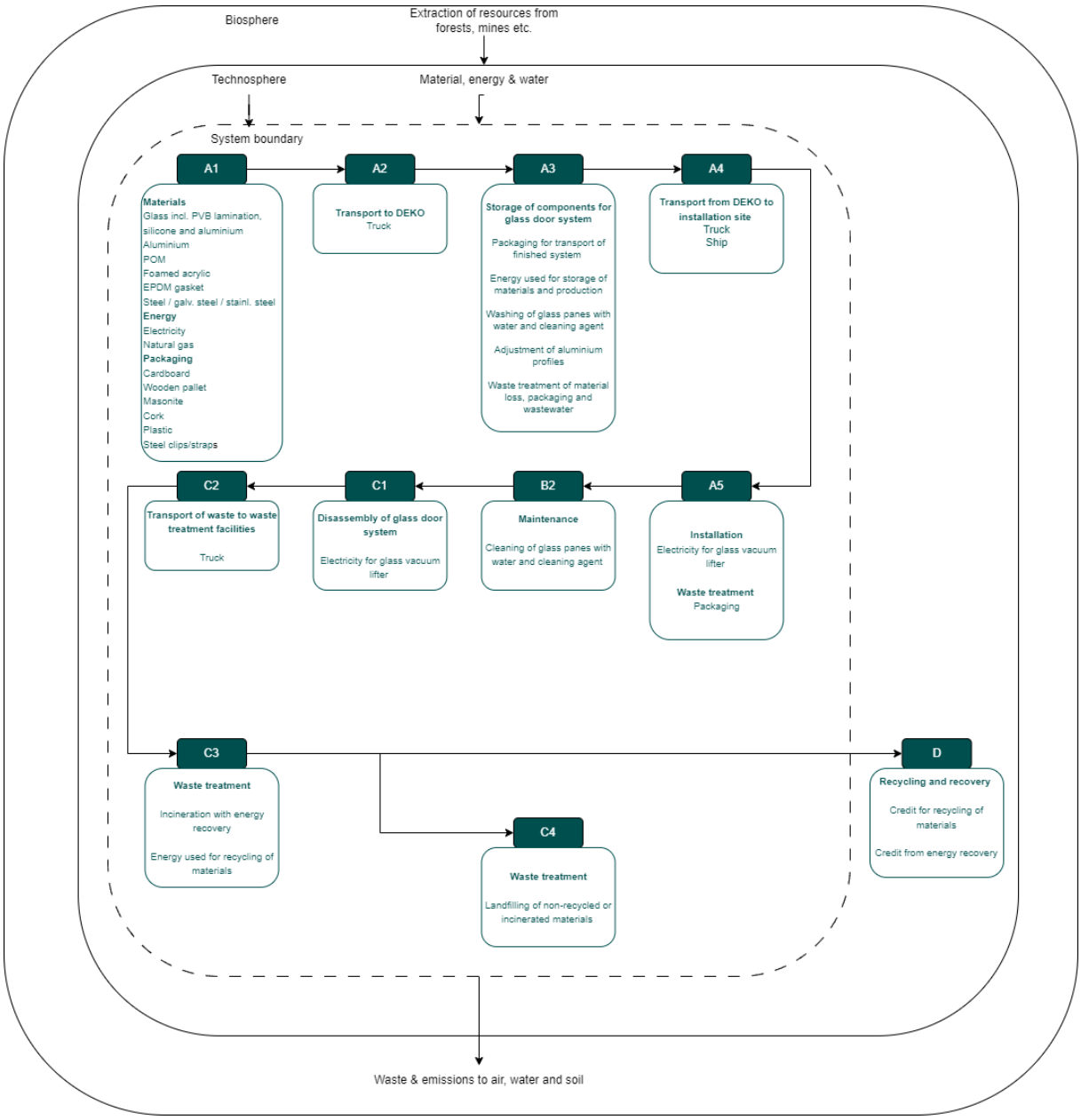
Electricity grid mix, DK, 2020	0.156	kg CO_2-eq/kWh
Electricity grid mix, PL, 2020	0.816	kg CO_2-eq/kWh
Electricity grid mix, Europe, 2020	0.289	kg CO_2-eq/kWh
Residual grid mix, DK, 2022	0.628	kg CO_2-eq/kWh
Thermal energy from natural gas, DK, 2020	0.062	kg CO_2-eq/MJ

Background system:

Upstream and downstream processes are modelled using datasets representing average supply mixes for the specific country or region.

[1] DEKO DG (EPD no.: MD-24069-EN)

Flow diagram



System boundary

This EPD is based on a cradle-to-grave and module D LCA, in which 100 weight-% has been accounted for.

The general rules apply for the exclusion of inputs and outputs in the LCA, which is in compliance with the rules in EN 15804:2012+A2:2019, 6.3.6, in case of insufficient input data gaps for unit process, the cut-off criteria shall be 1% of renewable and non-renewable primary energy usage and 1% of the total mass input of that unit process. The total of neglected input flows per module, e.g. per module A1-A3, A4-A5, B1-B5, B6-B7, C1-C4 and module D shall be a maximum of 5% of energy usage and mass.

Excluded processes in the system include energy use of electric screwdriver during installation and disassembly in module A5 and C1, respectively. In addition to this, the energy use for adjustment of aluminium profiles in module A3 is excluded as this is deemed negligible.

Product stage (A1-A3) includes:

A1 – Extraction and processing of raw materials

A2 – Transport to the production site

A3 – Manufacturing processes

The product stage comprises the acquisition of all raw materials, products and energy, transport to the production site, losses from production, packaging and waste processing up to the ”end-of-waste” state or final disposal. The LCA results are declared in aggregated form for the product stage, which means, that the sub-modules A1, A2 and A3 are declared as one module A1-A3.

The RG system compose of an IGU, aluminium, acrylic tape, plastic, and steel.

The glass panes (i.e. IGU) are customised in specific measurement before arriving at DEKO, hence no adjustment is needed. The IGU compose of glass, PVB lamination, silicone, argon gas and a spacer consisting of aluminium. The IGU is washed with 0.2 l water and 0.001 kg cleaning agent per m^2 at DEKO’s production facility.

The aluminium profiles are extruded into profiles prior to the aluminium profiles arrive at DEKO. The scrap content in the aluminium is 6% post-consumer and 85% pre-consumer. The pre-consumer scrap is attributed the same environmental impacts as primary aluminium. The profiles are delivered in standard length and are adjusted at DEKO, thus the transport and treatment of aluminium cut-offs are handled in module A3 but are not credited in module D.

The RG door system is produced, stored, and packed in Taastrup DK. The energy use for production and storage is included in module A3.

Construction process stage (A4-A5) includes:

The installation of the RG system is done using electric screw drivers and a glass vacuum lifter. The energy use of the glass vacuum lifter is included. The steel straps are assumed recycled in A5 and credited in module D.

The plastic packaging is assumed incinerated with energy recovery and credited in module D. The wooden pallet is assumed reused 25 times. Therefore, 1/25 of the pallet is assumed incinerated and the energy recovery is credited in module D. Cardboard and other wooden packaging components are assumed incinerated together with the pallet.

Use stage (B1-B7) includes:

The environmental impacts occurring in the use stage can be attributed to the cleaning of the glass panes and lubrication of hinges. No replacements are expected during the RSL. It is assumed that the glass panes (incl. profiles) are cleaned three times per year with the use of 0.2 l water and 0.001 kg cleaning agent per m^2 throughout the 30 years (RSL). Subsequently, the used cleaning water and cleaning agent is treated as wastewater. The door is assumed lubricated one time per year with the use of 3 mL per m^2 throughout the 30 years (RSL).

End of Life (C1-C4) includes:

It is assumed that 100% of the door system is collected at the demolition site and sent for waste treatment. The waste treatment for the specific material fractions follows the guidelines in cPCR EN17213:2019 and literature.

The waste is transported to waste treatment facilities. For recycling the distance is set to 230-550 km depending on the material whereas the waste going to incineration is transported 50 km and waste to landfill is transported 70 km.

The following waste treatment rates are applied: 5% loss is assumed for sorting of metals. 95% of the plastic is incinerated. The IGU is assumed to be landfilled[2].

Materials	Recycling (%)	Incineration (%)	Loss (%)
IGU	0	0	100
Aluminium	95	0	5
Steel	95	0	5
Acrylic tape	0	95	5
Plastic	0	95	5

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

In module D the potential benefits from recovery and recycling of materials from the product and packaging is modelled.

For aluminium, the secondary (post-consumer) material is subtracted to avoid double counting. This entails that only the primary materials are credited in module D.

[2] (Saint-Gobain - EPD: CLIMALIT PLUS® 44.1-16-44.1, 2024)

LCA results

ENVIRONMENTAL IMPACTS PER 1 m² RG 44.1-16-44.1 mm												
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	1.61E+02	1.64E+00	1.13E+00	0.00E+00	3.44E-01	0.00E+00	2.26E-01	4.45E-01	7.78E-01	6.06E-01	-7.17E+01
GWP-fossil	[kg CO_2 eq.]	1.60E+02	1.62E+00	6.35E-01	0.00E+00	3.23E-01	0.00E+00	2.24E-01	4.34E-01	7.78E-01	6.06E-01	-7.15E+01
GWP-biogenic	[kg CO_2 eq.]	-3.45E-02	0.00E+00	3.45E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E-04	0.00E+00	-1.95E-01
GWP-luluc	[kg CO_2 eq.]	1.72E-01	2.63E-02	2.70E-03	0.00E+00	2.11E-02	0.00E+00	3.41E-05	7.21E-03	1.92E-05	3.52E-03	-1.42E-02
ODP	[kg CFC 11 eq.]	1.31E-06	2.33E-13	5.10E-12	0.00E+00	2.40E-08	0.00E+00	5.08E-12	6.32E-14	7.40E-13	1.67E-12	-5.07E-11
AP	[mol H^+ eq.]	7.91E-01	9.00E-03	1.38E-03	0.00E+00	2.13E-03	0.00E+00	4.32E-04	2.41E-03	1.33E-04	4.24E-03	-3.78E-01
EP-freshwater	[kg P eq.]	4.14E-03	6.68E-06	1.61E-06	0.00E+00	1.13E-04	0.00E+00	9.34E-07	1.83E-06	1.48E-07	2.48E-05	-2.32E-05
EP-marine	[kg N eq.]	1.66E-01	4.32E-03	5.45E-04	0.00E+00	6.99E-04	0.00E+00	1.08E-04	1.17E-03	3.47E-05	1.08E-03	-7.44E-02
EP-terrestrial	[mol N eq.]	1.91E+00	4.80E-02	6.12E-03	0.00E+00	4.49E-03	0.00E+00	1.13E-03	1.30E-02	5.07E-04	1.19E-02	-8.15E-01
POCP	[kg NMVOC eq.]	4.62E-01	8.94E-03	1.19E-03	0.00E+00	1.30E-03	0.00E+00	2.85E-04	2.36E-03	9.60E-05	3.32E-03	-2.20E-01
ADPm[1]	[kg Sb eq.]	1.26E-04	1.37E-07	5.59E-08	0.00E+00	3.19E-06	0.00E+00	4.19E-08	3.74E-08	6.30E-09	3.94E-08	-4.40E-06
ADPf[1]	[MJ]	2.56E+03	2.10E+01	6.90E+00	0.00E+00	6.72E+00	0.00E+00	4.69E+00	5.65E+00	7.64E-01	8.20E+00	-8.34E+02
WDP[1]	[m^3 world eq. deprived]	3.50E+01	2.43E-02	1.41E-01	0.00E+00	4.13E-01	0.00E+00	6.10E-02	6.64E-03	7.25E-02	7.01E-02	-3.00E+01
Caption	GWP-total = Globale 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 = Acidifcation; 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	[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.											

* According to EN15804, the uptake of biogenic carbon from datasets describing transport, energy, detergent and water in module A2, A3, A4, B2 and C2 is balanced out as it represents less than 5 weight% of the biogenic carbon in the declared product.

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1 m² RG 44.1-16-44.1 mm												
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	5.46E-07	6.48E-08	9.20E-09	0.00E+00	2.11E-08	0.00E+00	3.61E-09	1.25E-08	1.25E-09	5.26E-08	-7.10E-06
IRP[2]	[kBq U235 eq.]	2.48E+00	5.50E-03	1.23E-01	0.00E+00	2.20E-02	0.00E+00	1.23E-01	1.49E-03	1.74E-02	1.06E-02	-3.87E+00
ETP-fw[1]	[CTUe]	8.49E+01	1.56E+01	3.00E+00	0.00E+00	6.43E+00	0.00E+00	1.36E+00	4.19E+00	2.59E-01	5.83E+00	-2.43E+02
HTP-c[1]	[CTUh]	4.72E-07	3.14E-10	1.15E-10	0.00E+00	4.23E-10	0.00E+00	7.63E-11	8.48E-11	1.51E-11	1.24E-10	-9.57E-08
HTP-nc[1]	[CTUh]	1.73E-07	1.40E-08	3.11E-09	0.00E+00	1.57E-08	0.00E+00	1.17E-09	3.80E-09	2.62E-10	4.40E-09	-6.39E-07
SQP[1]	-	2.26E+02	1.01E+01	3.03E+00	0.00E+00	3.96E+00	0.00E+00	1.99E+00	2.78E+00	3.09E-01	2.16E+00	-3.29E+01
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 m² RG 44.1-16-44.1 mm												
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	7.80E+02	1.77E+00	8.98E+00	0.00E+00	1.79E+00	0.00E+00	3.39E+00	4.87E-01	4.90E-01	1.41E+00	-4.87E+02
PERM	[MJ]	5.41E+00	0.00E+00	-5.41E+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
PERT	[MJ]	7.86E+02	1.77E+00	3.56E+00	0.00E+00	1.79E+00	0.00E+00	3.39E+00	4.87E-01	4.90E-01	1.41E+00	-4.87E+02
PENRE	[MJ]	2.57E+03	2.10E+01	1.06E+01	0.00E+00	6.72E+00	0.00E+00	4.69E+00	5.65E+00	8.50E+00	8.20E+00	-8.34E+02
PENRM	[MJ]	1.58E+01	0.00E+00	-3.68E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-7.74E+00	0.00E+00	0.00E+00
PENRT	[MJ]	2.59E+03	2.10E+01	6.90E+00	0.00E+00	6.72E+00	0.00E+00	4.69E+00	5.65E+00	7.64E-01	8.20E+00	-8.34E+02
SM	[kg]	1.50E+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	0.00E+00	0.00E+00
RSF	[MJ]	3.31E-18	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	0.00E+00
NRSF	[MJ]	3.89E-17	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	0.00E+00
FW	[m³]	1.83E+00	1.98E-03	4.59E-03	0.00E+00	9.64E-03	0.00E+00	2.59E-03	5.42E-04	1.86E-03	2.14E-03	-1.11E+00
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											
	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.											

WASTE CATEGORIES AND OUTPUT FLOWS PER 1 m² RG 44.1-16-44.1 mm												
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	2.38E-02	8.01E-10	6.84E-09	0.00E+00	1.78E-10	0.00E+00	6.77E-09	2.16E-10	9.81E-10	2.04E-09	-8.36E-08
NHWD	[kg]	3.05E+01	3.40E-03	4.23E-01	0.00E+00	1.59E-02	0.00E+00	3.88E-03	9.23E-04	1.06E+01	3.85E+01	-3.31E+01
RWD	[kg]	2.12E-01	3.79E-05	7.47E-04	0.00E+00	1.52E-05	0.00E+00	7.48E-04	1.03E-05	1.06E-04	8.92E-05	-3.95E-02
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	0.00E+00	0.00E+00	0.00E+00
MFR	[kg]	1.91E+01	0.00E+00	1.13E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.81E+00	0.00E+00	0.00E+00
MER	[kg]	7.75E-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	0.00E+00	0.00E+00
EEE	[MJ]	2.55E+00	0.00E+00	1.15E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E+00	0.00E+00	0.00E+00
EET	[MJ]	4.61E+00	0.00E+00	2.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E+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 m² RG 44.1-16-44.1 mm		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0
Biogenic carbon content in accompanying packagaing	[kg C]	0.59
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Additional information

LCA interpretation

The results of this EPD are calculated based on 1 m^2 RG system with the thickness; 44.1-16-44.1 mm. The calculated results reflect that the production of aluminium profiles and glass panes entails the greatest environmental impacts for the system. This can be expected as the aluminium profiles and IGU account for 18% and 79% of the weight, respectively. In addition to this, the production of these components are very energy and material intensive.

Technical information on scenarios

Transport to the building site (A4)

Scenario information	Truck	Ship	Unit
Fuel type	Diesel	Heavy fuel oil	-
Vehicle type	Truck, Euro 5, 26 - 28t gross weight / 18.4t payload capacity	Container ship, 5.000 to 200.000 dwt payload capacity, deep sea	-
Transport distance	217	33	km
Capacity utilisation (including empty runs)	<42.5	<42.5	%
Gross density of products transported	50.63		kg/m^2

Installation of the product in the building (A5)

Scenario information	Value	Unit
Waste materials (packaging)	0.42	kg
Output materials	50.63	kg

Reference service life

RSL information		Unit
Reference service Life	30	Years
Maintenance (cleaning)	Cleaning 3 times a year during the RSL	-
Maintenance (lubrication)	Lubricated 1 time a year during the RSL	-

Use (B1-B7) – B2 Maintenance

Scenario information	Value	Unit
Maintenance process (cleaning)	The door system is assumed cleaned 3 times a year with mild cleaning agent.	
Maintenance cycle	3	/year
Waste materials resulting from maintenance (water and mild cleaning agent)	0.201	kg
Net freshwater consumption during maintenance	0.2	m3
Maintenance process (lubrication)	The door system is assumed lubricated 1 time a year with lubricating oil	
Maintenance cycle	1	/year
Lubricant (per maintenance cycle)	0.94	g/m^2

End of life (C1-C4)

Scenario information	44.1-16-44.1 mm	Unit
Collected separately	50.63	kg
Collected with mixed waste	0	kg
For reuse	0	kg
For recycling with credit in module D	9.81	kg
For recycling without credit in module D	0.57	kg
For energy recovery	0.29	kg
For landfilling	40.53	kg
Assumptions for scenario development	The IGU is assumed landfilled. Aluminium and steel are assumed recycled with an efficiency of 95%. 95% of the plastic is assumed incinerated.	

Re-use, recovery and recycling potential (D)

Module	Scenario information	44.1-16-44.1 mm	Unit
A5 (packaging)	Materials sent for recycling	0.01	kg
	Energy recovery from waste incineration (electricity)	1.2	MJ
	Energy recovery from waste incineration (thermal)	2.1	MJ
C3 (declared product)	Materials sent for recycling	9.81	kg
	Energy recovery from waste incineration (electricity)	1.16	MJ
	Energy recovery from waste incineration (thermal)	2.07	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.

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

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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"

EN 15942
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EN 17213
cPCR: DS/EN 17213:2020 – "Windows and doors – Environmental product declarations – Product category rules for windows and pedestrian doorsets"

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Saint-Gobain
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DS/EN ISO 10140-2
Acoustics – Laboratory measurement of sound insulation of building elements – Part 2: Measurement of airborne sound insulation (ISO 10140-2:2021)

ISO 14025
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ISO 14040
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ISO 14044
DS/EN ISO 14044:2008 – ” Environmental management – Life cycle assessment – Requirements and guidelines”