

Owner: a:gain ApS
No.: MD-25072-EN
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Valid to: 25-04-2030

3rd PARTY VERIFIED

EPD

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | ISO 14025 & EN 15804



Owner of declaration

a:gain ApS
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Issued:
25-04-2025

Valid to:
25-04-2030

Programme

EPD Danmark
 www.epddanmark.dk



- Industry EPD
- Product EPD

Declared product(s)

Viddø window elements
 Number of declared datasets/product variations: 8

Production site

Krone Vinduer A/S
 Aalborgvej 576
 9760 Vrå
 Denmark

Use of Guarantees of Origin

- No certificates used
- Electricity covered by GoO
- Biogas covered by GoO

Declared/ functional unit

1 m²

Year of production site data (A3)

2023

EPD version

1

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.

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+A2 serves as the core PCR

Independent verification of the tool on which declaration and data is based, according to EN ISO 14025:2010

internal external

Third party verifier:

Mie Ostenfeldt

Mie Ostenfeldt
Ostenfeldt Consulting

Martha Katrine Sørensen

Martha Katrine Sørensen
EPD Danmark

Life cycle stages and modules (ND = 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	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X

Product information

Product description

Viddø window element is a facade window system made from different fractions of primary and discarded glass IGU's (insulated glass units). The discarded/primary IGU compositions 30/70, 40/60, 50/50, 60/40, 70/30, 80/20, 90/10, 100/0 are covered in this EPD (e.g., 30/70 corresponds to 30% discarded and 70% primary IGU considering their area in the window element).

The main materials of the declared product are listed in the table below. The weight composition is expressed in ranges to cover all discarded/primary IGU compositions from 30/70 to 100/0. These constitute 100% by weight of the declared product.

Material	Weight-% of declared product
Glas (IGU)	70-74
Træ (frame)	22-18
Aluminium	4-3
Steel (fittings, screws etc.)	2-1
Plastic (sealing strips)	1
Other (coat, adhesive etc.)	2
Total	100

Product packaging:

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

Material	Weight of packaging material (kg/DU)	Weight-% of packaging
Wooden pallet	0.06	24
OSB plate	0.17	69
LDPE film	0.02	7
Total	0.25	100

Representativity

The product is sold in the European market. Data covers production at Krone Vinduer A/S production site in Vrå, Denmark, of the described product in various sizes. The product structure is based on a standard window size of 1.48 m * 2.18 m and is scaled to the declared unit 1 m².

Product specific data are based on annual average values collected in 2023. Background data are based on datasets from LCA Managed Content v. 2024.1 (formerly GaBi) and the Ecoinvent database v. 3.10. The data used is less than 2 years old, which is in accordance with EN15804:2012+A2:2019. Generally, the background datasets used are of high quality.

Hazardous substances

Viddø 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 product is used as fixed (non-openable) or openable windows in buildings. The declared product is available in various dimensions, IGU compositions (discarded and primary) and with various options in terms of colors. Viddø is installed like any other window element. It's delivered on site ready to be installed by the contractor.

The IGUs from Viddø window element can be reused for other purposes (e.g., the partitioning wall system Tystø from a:gain ApS) after the window reaches its end-of-life stage. All IGUs used in the Viddø window element are registered along with all relevant information in a:gain ApS database. A future contractor can reach this information through the product's tag.

Essential characteristics (CE)

Performance properties and technical specifications for the windows can be obtained by contacting a:gain ApS or on a:gain ApS website: <https://www.again.dk/download-center>

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

<https://www.again.dk/products/windows/viddo>

Not defined, as the use phase is not included in the study.

Reference Service Life (RSL)

Picture of product(s)



LCA background

Declared unit

LCI and LCIA results in this EPD relate to 1 m² of Viddø window, given in the table below, indicating average density and a conversion factor to kg.

Name	Value	Unit
Declared unit	1	m ²

Functional unit

Not defined

Material properties

The mass per declared unit (areal density) and conversion factors for scaling results from declared unit to 1 kg are provided in the table below for Viddø elements of different secondary/primary IGU composition.

Discarded/primary IGU ratio for Viddø	Mass factor (kg/DU)	Conversion factor to 1 kg
30/70	37.41	0.027
40/60	38.03	0.026
50/50	38.64	0.026
60/40	39.26	0.025
70/30	39.86	0.025
80/20	40.47	0.025
90/10	41.09	0.024
100/0	41.53	0.024

This EPD is developed according to the core rules for the product category of construction products in EN 15804 + A2, and the product category rules for windows and pedestrian doorsets in EN 17213:2020.

Energy modelling principles

Foreground system:

The product is produced using residual mix in production. Remaining energy processes include thermal energy from natural gas in Denmark.

Information about the energy mix in the foreground system:

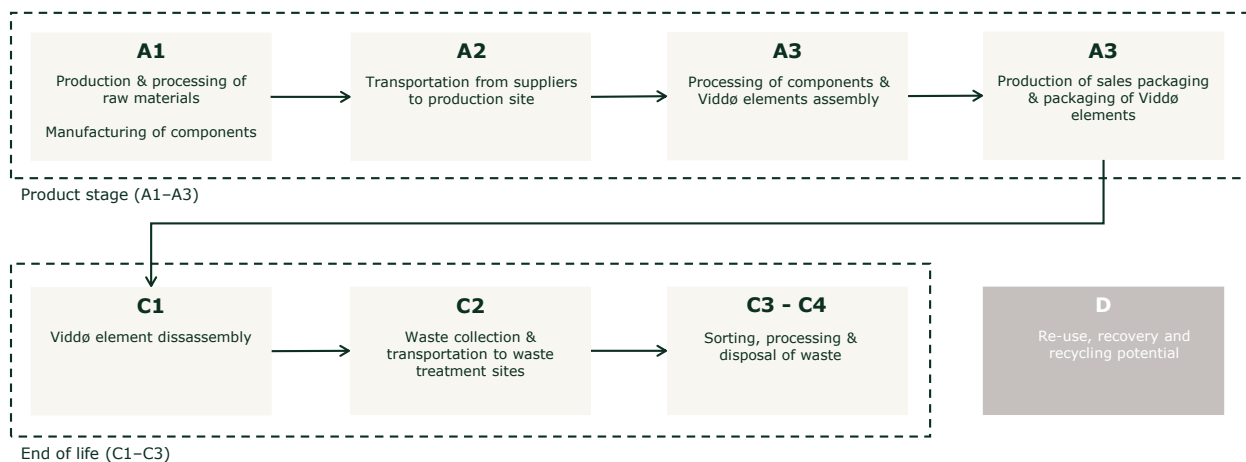
Energy mix	EF	Unit
Residual grid mix	0.58	kg CO ₂ e/kWh
Natural gas	0.07	kg CO ₂ e/MJ

Background system:

Upstream and downstream processes are modeled with the electricity sources on which the used dataset is based. This will most often be the national average electricity mix. When possible, the residual electricity grid mix of the relevant geography was used considering the relevant geography.

PCR

Flowdiagram



System boundaries

This EPD is based on a cradle-to-gate LCA, in which 100 weight-% has been accounted for and all relevant processes are included.

The general rules for the exclusion of inputs and outputs follows the requirements in EN 15804, 6.3.5, where the total of neglected input flows per module shall be a maximum of 5 % of energy usage and mass and 1 % of energy usage and mass for unit processes.

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, packaging and waste processing up to the "end-of-waste" state or final disposal. Production of Viddø elements take place in Krone A/S production site in Vrå, Denmark. The production process includes shortening of profiles, drilling of holes, gluing, painting, assembling the windows as well as packaging and stacking on pallets. Any wood offcuts are incinerated internally. Any environmental impacts from the discarded IGU production (upstream) was not allocated to the product system since a:gain receives the discarded IGUs without any cost.

End of Life (C1-C4) includes:

When the buildings are demolished, the Viddø elements will be dismantled. This process is assumed to be carried out with ordinary tools, such as an electric drill. The subsequent waste treatment for the window follows the waste

scenarios for timber windows and doorsets in EN 17213:2020, Annex B.3. Waste sorting into waste fractions after Viddø elements' dismantling has been included, as well as average transport distances for waste treatment.

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

A recycling efficiency of 95% has been assumed while avoided materials were only considered for primary materials (aluminium handle, glass from primary IGU, steel/stainless steel hardware). The aluminium frame is 100% secondary so no credit was accounted. Also, no credit was accounted for the recycling of glass from the discarded IGU.

Energy recovery has been included for the incineration of materials that displace the average European electricity mix and heat.

LCA results

Viddø window element 30/70

ENVIRONMENTAL IMPACTS PER 1m ² Viddø 30/70									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	2.31E+01	4.47E+00	5.46E+01	1.34E-03	1.88E+00	1.83E+01	1.06E+00	-1.32E+01
GWP-fossil	[kg CO ₂ eq.]	5.23E+01	4.38E+00	4.01E+01	1.33E-03	1.87E+00	5.17E+00	3.05E-01	-1.31E+01
GWP-biogenic	[kg CO ₂ eq.]	-2.94E+01	1.04E-02	1.45E+01	1.19E-05	-2.61E-02	1.31E+01	7.55E-01	-2.98E-02
GWP-luluc	[kg CO ₂ eq.]	1.22E-01	7.34E-02	1.41E-02	2.02E-07	3.10E-02	6.37E-03	1.70E-03	-2.01E-03
ODP	[kg CFC 11 eq.]	5.85E-07	6.45E-13	1.65E-08	3.01E-14	2.72E-13	4.56E-09	7.98E-13	-4.74E-11
AP	[mol H+ eq.]	4.53E-01	7.24E-03	3.38E-02	2.57E-06	1.07E-02	1.04E-02	2.13E-03	-3.40E-02
EP-freshwater	[kg P eq.]	1.72E-03	1.87E-05	1.18E-04	5.51E-09	7.88E-06	1.08E-04	2.22E-06	-1.03E-05
EP-marine	[kg N eq.]	8.99E-02	2.76E-03	1.37E-02	6.41E-07	5.22E-03	4.27E-03	5.79E-04	-1.02E-02
EP-terrestrial	[mol N eq.]	1.02E+00	3.23E-02	1.52E-01	6.71E-06	5.81E-02	5.11E-02	6.23E-03	-1.15E-01
POCP	[kg NMVOC eq.]	2.55E-01	7.20E-03	3.76E-02	1.69E-06	1.01E-02	1.10E-02	1.98E-03	-2.35E-02
ADPm ¹	[kg Sb eq.]	8.97E-05	3.81E-07	3.54E-06	2.49E-10	1.61E-07	9.93E-06	1.90E-08	-6.44E-07
ADPf ¹	[MJ]	9.55E+02	5.78E+01	5.15E+02	2.79E-02	2.43E+01	9.87E+00	4.05E+00	-2.05E+02
WDP ¹	[m ³ world eq. deprived]	1.90E+03	6.77E-02	1.88E+00	3.67E-04	2.86E-02	1.71E+00	3.49E-02	-8.43E-01
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	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.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1m ² Viddø 30/70									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PM	[Disease incidence]	6.50E-06	7.46E-08	3.07E-07	2.15E-11	5.89E-08	6.01E-08	2.62E-08	-2.68E-07
IRP ²	[kBq U235 eq.]	5.10E+00	1.52E-02	1.89E+00	7.34E-04	6.42E-03	1.46E-02	5.18E-03	-1.22E+00
ETP-fw ¹	[CTUe]	1.71E+03	4.29E+01	4.45E+01	8.08E-03	1.81E+01	7.08E+00	2.30E+00	-6.68E+01
HTP-c ¹	[CTUh]	5.19E-08	8.66E-10	7.29E-09	4.54E-13	3.65E-10	2.63E-09	5.72E-11	-3.57E-09
HTP-nc ¹	[CTUh]	1.46E-06	3.88E-08	1.60E-07	6.95E-12	1.64E-08	2.65E-08	3.06E-09	-6.44E-08
SQP ¹	-	7.30E+03	2.83E+01	7.17E+01	1.17E-02	1.20E+01	6.32E+00	1.04E+00	-1.95E+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.								
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.								
	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 1m ² Viddø 30/70									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PERE	[MJ]	4.53E+02	4.96E+00	9.19E+01	2.01E-02	2.09E+00	1.55E+00	6.76E-01	-3.37E+01
PERM	[MJ]	8.22E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	5.35E+02	4.96E+00	9.19E+01	2.01E-02	2.09E+00	1.55E+00	6.76E-01	-3.37E+01
PENRE	[MJ]	9.20E+02	5.78E+01	5.15E+02	2.79E-02	2.43E+01	2.29E+01	4.05E+00	-2.05E+02
PENRM	[MJ]	4.28E+01	0.00E+00	-5.47E-01	0.00E+00	0.00E+00	-1.30E+01	0.00E+00	0.00E+00
PENRT	[MJ]	9.62E+02	5.78E+01	5.15E+02	2.79E-02	2.43E+01	9.87E+00	4.05E+00	-2.05E+02
SM	[kg]	2.26E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	[MJ]	1.34E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	3.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m3]	3.97E-01	5.53E-03	8.21E-02	1.54E-05	2.33E-03	4.05E-02	1.06E-03	-3.26E-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								
	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 1m ² Viddø 30/70									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
HWD	[kg]	1.57E-01	2.21E-09	9.61E-03	4.03E-11	9.31E-10	2.36E-02	9.78E-10	-6.65E-08
NHWD	[kg]	3.26E+01	9.42E-03	3.93E-01	2.30E-05	3.97E-03	2.21E-01	1.86E+01	-1.00E+00
RWD	[kg]	2.99E-02	1.05E-04	1.68E-02	4.45E-06	4.43E-05	-5.33E-05	4.33E-05	-7.43E-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]	6.33E+00	0.00E+00	2.04E+00	0.00E+00	0.00E+00	9.78E+00	0.00E+00	0.00E+00
MER	[kg]	2.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	[MJ]	3.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E+01	0.00E+00	0.00E+00
EET	[MJ]	6.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.13E+01	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 1m ² Viddø 30/70		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	3.73E+00
Biogenic carbon content in accompanying packaging	[kg C]	1.10E-01
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO ₂	

Viddø window element 40/60

ENVIRONMENTAL IMPACTS PER 1m ² Viddø 40/60									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	1.76E+01	4.27E+00	5.46E+01	1.34E-03	1.92E+00	1.83E+01	1.07E+00	-1.26E+01

GWP-fossil	[kg CO2 eq.]	4.68E+01	4.19E+00	4.01E+01	1.33E-03	1.91E+00	5.18E+00	3.11E-01	-1.26E+01
GWP-biogenic	[kg CO2 eq.]	-2.94E+01	9.99E-03	1.45E+01	1.19E-05	-2.66E-02	1.31E+01	7.55E-01	-2.89E-02
GWP-luluc	[kg CO2 eq.]	1.18E-01	7.02E-02	1.41E-02	2.02E-07	3.17E-02	6.50E-03	1.73E-03	-1.88E-03
ODP	[kg CFC 11 eq.]	5.84E-07	6.17E-13	1.65E-08	3.01E-14	2.78E-13	4.56E-09	8.16E-13	-4.61E-11
AP	[mol H+ eq.]	3.97E-01	6.94E-03	3.38E-02	2.57E-06	1.09E-02	1.04E-02	2.18E-03	-3.05E-02
EP-freshwater	[kg P eq.]	1.70E-03	1.78E-05	1.18E-04	5.51E-09	8.05E-06	1.08E-04	2.23E-06	-1.00E-05
EP-marine	[kg N eq.]	7.98E-02	2.64E-03	1.37E-02	6.41E-07	5.33E-03	4.28E-03	5.91E-04	-9.18E-03
EP-terrestrial	[mol N eq.]	9.00E-01	3.10E-02	1.52E-01	6.71E-06	5.93E-02	5.13E-02	6.36E-03	-1.03E-01
POCP	[kg NMVOC eq.]	2.26E-01	6.90E-03	3.76E-02	1.69E-06	1.03E-02	1.10E-02	2.02E-03	-2.14E-02
ADPm ¹	[kg Sb eq.]	8.71E-05	3.64E-07	3.54E-06	2.49E-10	1.64E-07	9.93E-06	1.94E-08	-6.24E-07
ADPf ¹	[MJ]	8.58E+02	5.52E+01	5.15E+02	2.79E-02	2.48E+01	9.91E+00	4.14E+00	-1.97E+02
WDP ¹	[m3 world eq. deprived]	1.90E+03	6.47E-02	1.88E+00	3.67E-04	2.92E-02	1.72E+00	3.57E-02	-8.06E-01
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	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.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1m ² Viddø 40/60									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PM	[Disease incidence]	5.98E-06	7.18E-08	3.07E-07	2.15E-11	6.01E-08	6.02E-08	2.68E-08	-2.44E-07
IRP ²	[kBq U235 eq.]	4.59E+00	1.46E-02	1.89E+00	7.34E-04	6.56E-03	1.41E-02	5.29E-03	-1.19E+00
ETP-fw ¹	[CTUe]	1.48E+03	4.10E+01	4.45E+01	8.08E-03	1.84E+01	7.16E+00	2.35E+00	-5.93E+01
HTP-c ¹	[CTUh]	4.72E-08	8.28E-10	7.29E-09	4.54E-13	3.72E-10	2.63E-09	5.84E-11	-3.51E-09
HTP-nc ¹	[CTUh]	1.37E-06	3.71E-08	1.60E-07	6.95E-12	1.67E-08	2.65E-08	3.11E-09	-6.06E-08
SQP ¹	-	7.28E+03	2.71E+01	7.17E+01	1.17E-02	1.22E+01	6.36E+00	1.06E+00	-1.90E+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.								
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.								
	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 1m ² Viddø 40/60									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PERE	[MJ]	4.43E+02	4.74E+00	9.19E+01	2.01E-02	2.14E+00	1.54E+00	6.91E-01	-3.28E+01
PERM	[MJ]	8.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	5.25E+02	4.74E+00	9.19E+01	2.01E-02	2.14E+00	1.54E+00	6.91E-01	-3.28E+01
PENRE	[MJ]	8.25E+02	5.52E+01	5.15E+02	2.79E-02	2.48E+01	2.29E+01	4.14E+00	-1.97E+02
PENRM	[MJ]	4.14E+01	0.00E+00	-5.47E-01	0.00E+00	0.00E+00	-1.30E+01	0.00E+00	0.00E+00
PENRT	[MJ]	8.66E+02	5.52E+01	5.15E+02	2.79E-02	2.48E+01	9.91E+00	4.14E+00	-1.97E+02
SM	[kg]	2.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

RSF	[MJ]	1.34E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	3.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m3]	3.71E-01	5.28E-03	8.21E-02	1.54E-05	2.38E-03	4.05E-02	1.08E-03	-3.14E-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								
	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 1m ² Vidlø 40/60									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
HWD	[kg]	1.57E-01	2.11E-09	9.61E-03	4.03E-11	9.50E-10	2.36E-02	1.00E-09	-6.47E-08
NHWD	[kg]	2.87E+01	9.01E-03	3.93E-01	2.30E-05	4.05E-03	2.21E-01	1.91E+01	-8.75E-01
RWD	[kg]	2.66E-02	1.00E-04	1.68E-02	4.45E-06	4.52E-05	-5.66E-05	4.42E-05	-7.24E-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]	5.43E+00	0.00E+00	2.04E+00	0.00E+00	0.00E+00	9.97E+00	0.00E+00	0.00E+00
MER	[kg]	2.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	[MJ]	2.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E+01	0.00E+00	0.00E+00
EET	[MJ]								
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 1m ² Vidlø 40/60		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	3.73E+00
Biogenic carbon content in accompanying packaging	[kg C]	1.10E-01
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO ₂	

Vidlø window element 50/50

ENVIRONMENTAL IMPACTS PER 1m ² Vidlø 50/50									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
GWP-total	[kg CO2 eq.]	1.20E+01	4.07E+00	5.46E+01	1.34E-03	1.95E+00	1.83E+01	1.07E+00	-1.21E+01
GWP-fossil	[kg CO2 eq.]	4.13E+01	4.00E+00	4.01E+01	1.33E-03	1.95E+00	5.19E+00	3.18E-01	-1.21E+01
GWP-biogenic	[kg CO2 eq.]	-2.94E+01	9.53E-03	1.45E+01	1.19E-05	-2.72E-02	1.31E+01	7.55E-01	-2.80E-02
GWP-luluc	[kg CO2 eq.]	1.13E-01	6.70E-02	1.41E-02	2.02E-07	3.23E-02	6.63E-03	1.77E-03	-1.76E-03
ODP	[kg CFC 11 eq.]	5.82E-07	5.88E-13	1.65E-08	3.01E-14	2.83E-13	4.56E-09	8.33E-13	-4.49E-11
AP	[mol H+ eq.]	3.40E-01	6.63E-03	3.38E-02	2.57E-06	1.12E-02	1.04E-02	2.22E-03	-2.71E-02
EP-freshwater	[kg P eq.]	1.69E-03	1.70E-05	1.18E-04	5.51E-09	8.20E-06	1.08E-04	2.25E-06	-9.70E-06
EP-marine	[kg N eq.]	6.96E-02	2.53E-03	1.37E-02	6.41E-07	5.43E-03	4.29E-03	6.03E-04	-8.15E-03
EP-terrestrial	[mol N eq.]	7.79E-01	2.96E-02	1.52E-01	6.71E-06	6.04E-02	5.14E-02	6.49E-03	-9.12E-02

POCP	[kg NMVOC eq.]	1.97E-01	6.60E-03	3.76E-02	1.69E-06	1.05E-02	1.11E-02	2.06E-03	-1.93E-02
ADPm ¹	[kg Sb eq.]	8.44E-05	3.47E-07	3.54E-06	2.49E-10	1.67E-07	9.94E-06	1.98E-08	-6.04E-07
ADPf ¹	[MJ]	7.62E+02	5.27E+01	5.15E+02	2.79E-02	2.53E+01	9.95E+00	4.23E+00	-1.89E+02
WDP ¹	[m3 world eq. deprived]	1.90E+03	6.17E-02	1.88E+00	3.67E-04	2.98E-02	1.72E+00	3.64E-02	-7.68E-01
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	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.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1m ² Viddø 50/50									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PM	[Disease incidence]	5.46E-06	6.88E-08	3.07E-07	2.15E-11	6.13E-08	6.03E-08	2.74E-08	-2.21E-07
IRP ²	[kBq U235 eq.]	4.09E+00	1.39E-02	1.89E+00	7.34E-04	6.69E-03	1.37E-02	5.39E-03	-1.16E+00
ETP-fw ¹	[CTUe]	1.26E+03	3.91E+01	4.45E+01	8.08E-03	1.88E+01	7.23E+00	2.40E+00	-5.18E+01
HTP-c ¹	[CTUh]	4.25E-08	7.89E-10	7.29E-09	4.54E-13	3.79E-10	2.63E-09	5.95E-11	-3.46E-09
HTP-nc ¹	[CTUh]	1.28E-06	3.54E-08	1.60E-07	6.95E-12	1.70E-08	2.66E-08	3.15E-09	-5.69E-08
SQP ¹	-	7.27E+03	2.58E+01	7.17E+01	1.17E-02	1.24E+01	6.40E+00	1.09E+00	-1.85E+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.								
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.								
	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 1m ² Viddø 50/50									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PERE	[MJ]	4.34E+02	4.52E+00	9.19E+01	2.01E-02	2.18E+00	1.52E+00	7.06E-01	-3.20E+01
PERM	[MJ]	8.18E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	5.15E+02	4.52E+00	9.19E+01	2.01E-02	2.18E+00	1.52E+00	7.06E-01	-3.20E+01
PENRE	[MJ]	7.29E+02	5.27E+01	5.15E+02	2.79E-02	2.53E+01	2.29E+01	4.23E+00	-1.89E+02
PENRM	[MJ]	3.99E+01	0.00E+00	-5.47E-01	0.00E+00	0.00E+00	-1.30E+01	0.00E+00	0.00E+00
PENRT	[MJ]	7.69E+02	5.27E+01	5.15E+02	2.79E-02	2.53E+01	9.95E+00	4.23E+00	-1.89E+02
SM	[kg]	1.96E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	[MJ]	1.34E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	3.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m3]	3.45E-01	5.04E-03	8.21E-02	1.54E-05	2.43E-03	4.05E-02	1.10E-03	-3.03E-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								
	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 1m ² Viddø 50/50									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
HWD	[kg]	1.57E-01	2.02E-09	9.61E-03	4.03E-11	9.69E-10	2.36E-02	1.02E-09	-6.30E-08
NHWD	[kg]	2.48E+01	8.59E-03	3.93E-01	2.30E-05	4.13E-03	2.21E-01	1.95E+01	-7.48E-01
RWD	[kg]	2.34E-02	9.58E-05	1.68E-02	4.45E-06	4.61E-05	-5.97E-05	4.51E-05	-7.06E-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]	4.52E+00	0.00E+00	2.04E+00	0.00E+00	0.00E+00	1.01E+01	0.00E+00	0.00E+00
MER	[kg]	2.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	[MJ]	2.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E+01	0.00E+00	0.00E+00
EET	[MJ]	4.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.13E+01	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 1m ² Viddø 50/50		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	3.73E+00
Biogenic carbon content in accompanying packaging	[kg C]	1.10E-01
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO ₂	

Viddø window element 60/40

ENVIRONMENTAL IMPACTS PER 1m ² Viddø 60/40									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
GWP-total	[kg CO2 eq.]	6.48E+00	3.88E+00	5.46E+01	1.34E-03	1.99E+00	1.83E+01	1.08E+00	-1.16E+01
GWP-fossil	[kg CO2 eq.]	3.58E+01	3.80E+00	4.01E+01	1.33E-03	1.99E+00	5.20E+00	3.24E-01	-1.15E+01
GWP-biogenic	[kg CO2 eq.]	-2.94E+01	9.07E-03	1.45E+01	1.19E-05	-2.77E-02	1.31E+01	7.55E-01	-2.71E-02
GWP-luluc	[kg CO2 eq.]	1.09E-01	6.37E-02	1.41E-02	2.02E-07	3.29E-02	6.76E-03	1.81E-03	-1.63E-03
ODP	[kg CFC 11 eq.]	5.81E-07	5.60E-13	1.65E-08	3.01E-14	2.89E-13	4.56E-09	8.50E-13	-4.36E-11
AP	[mol H+ eq.]	2.83E-01	6.33E-03	3.38E-02	2.57E-06	1.14E-02	1.04E-02	2.27E-03	-2.36E-02
EP-freshwater	[kg P eq.]	1.68E-03	1.62E-05	1.18E-04	5.51E-09	8.37E-06	1.08E-04	2.26E-06	-9.39E-06
EP-marine	[kg N eq.]	5.94E-02	2.41E-03	1.37E-02	6.41E-07	5.54E-03	4.30E-03	6.15E-04	-7.11E-03
EP-terrestrial	[mol N eq.]	6.57E-01	2.82E-02	1.52E-01	6.71E-06	6.16E-02	5.15E-02	6.62E-03	-7.94E-02
POCP	[kg NMVOC eq.]	1.68E-01	6.30E-03	3.76E-02	1.69E-06	1.07E-02	1.11E-02	2.09E-03	-1.72E-02
ADPm ¹	[kg Sb eq.]	8.18E-05	3.31E-07	3.54E-06	2.49E-10	1.71E-07	9.94E-06	2.03E-08	-5.84E-07
ADPf ¹	[MJ]	6.65E+02	5.01E+01	5.15E+02	2.79E-02	2.58E+01	9.99E+00	4.31E+00	-1.81E+02
WDP ¹	[m3 world eq. deprived]	1.90E+03	5.87E-02	1.88E+00	3.67E-04	3.03E-02	1.72E+00	3.71E-02	-7.31E-01
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	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.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1m ² Viddø 60/40									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PM	[Disease incidence]	4.94E-06	6.59E-08	3.07E-07	2.15E-11	6.25E-08	6.05E-08	2.79E-08	-1.97E-07
IRP ²	[kBq U235 eq.]	3.58E+00	1.32E-02	1.89E+00	7.34E-04	6.82E-03	1.32E-02	5.49E-03	-1.13E+00
ETP-fw ¹	[CTUe]	1.03E+03	3.72E+01	4.45E+01	8.08E-03	1.92E+01	7.31E+00	2.45E+00	-4.43E+01
HTP-c ¹	[CTUh]	3.78E-08	7.51E-10	7.29E-09	4.54E-13	3.87E-10	2.63E-09	6.07E-11	-3.40E-09
HTP-nc ¹	[CTUh]	1.19E-06	3.37E-08	1.60E-07	6.95E-12	1.74E-08	2.66E-08	3.20E-09	-5.32E-08
SQP ¹	-	7.26E+03	2.46E+01	7.17E+01	1.17E-02	1.27E+01	6.44E+00	1.11E+00	-1.79E+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.								
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.								
	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 1m ² Viddø 60/40									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PERE	[MJ]	4.24E+02	4.30E+00	9.19E+01	2.01E-02	2.22E+00	1.51E+00	7.21E-01	-3.11E+01
PERM	[MJ]	8.16E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	5.06E+02	4.30E+00	9.19E+01	2.01E-02	2.22E+00	1.51E+00	7.21E-01	-3.11E+01
PENRE	[MJ]	6.34E+02	5.01E+01	5.15E+02	2.79E-02	2.58E+01	2.30E+01	4.31E+00	-1.81E+02
PENRM	[MJ]	3.85E+01	0.00E+00	-5.47E-01	0.00E+00	0.00E+00	-1.30E+01	0.00E+00	0.00E+00
PENRT	[MJ]	6.72E+02	5.01E+01	5.15E+02	2.79E-02	2.58E+01	9.99E+00	4.31E+00	-1.81E+02
SM	[kg]	1.81E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	[MJ]	1.34E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	3.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m3]	3.18E-01	4.79E-03	8.21E-02	1.54E-05	2.48E-03	4.06E-02	1.12E-03	-2.91E-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								
	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 1m ² Viddø 60/40									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
HWD	[kg]	1.57E-01	1.92E-09	9.61E-03	4.03E-11	9.88E-10	2.36E-02	1.04E-09	-6.12E-08
NHWD	[kg]	2.09E+01	8.17E-03	3.93E-01	2.30E-05	4.21E-03	2.21E-01	1.99E+01	-6.21E-01
RWD	[kg]	2.01E-02	9.12E-05	1.68E-02	4.45E-06	4.70E-05	-6.29E-05	4.60E-05	-6.87E-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]	3.62E+00	0.00E+00	2.04E+00	0.00E+00	0.00E+00	1.03E+01	0.00E+00	0.00E+00
MER	[kg]	2.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	[MJ]	1.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E+01	0.00E+00	0.00E+00
EET	[MJ]	3.89E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.13E+01	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 1m ² Viddø 60/40		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	3.73E+00
Biogenic carbon content in accompanying packaging	[kg C]	1.10E-01
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO ₂	

Viddø window element 70/30

ENVIRONMENTAL IMPACTS PER 1m ² Viddø 70/30									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
GWP-total	[kg CO2 eq.]	9.44E-01	3.68E+00	5.46E+01	1.34E-03	2.03E+00	1.83E+01	1.09E+00	-1.10E+01
GWP-fossil	[kg CO2 eq.]	3.02E+01	3.61E+00	4.01E+01	1.33E-03	2.02E+00	5.21E+00	3.30E-01	-1.10E+01
GWP-biogenic	[kg CO2 eq.]	-2.94E+01	8.60E-03	1.45E+01	1.19E-05	-2.82E-02	1.31E+01	7.55E-01	-2.63E-02
GWP-luluc	[kg CO2 eq.]	1.05E-01	6.05E-02	1.41E-02	2.02E-07	3.35E-02	6.88E-03	1.85E-03	-1.51E-03
ODP	[kg CFC 11 eq.]	5.79E-07	5.31E-13	1.65E-08	3.01E-14	2.94E-13	4.56E-09	8.67E-13	-4.24E-11
AP	[mol H+ eq.]	2.26E-01	6.03E-03	3.38E-02	2.57E-06	1.16E-02	1.04E-02	2.31E-03	-2.01E-02
EP-freshwater	[kg P eq.]	1.67E-03	1.54E-05	1.18E-04	5.51E-09	8.52E-06	1.08E-04	2.28E-06	-9.07E-06
EP-marine	[kg N eq.]	4.92E-02	2.29E-03	1.37E-02	6.41E-07	5.64E-03	4.31E-03	6.26E-04	-6.08E-03
EP-terrestrial	[mol N eq.]	5.36E-01	2.69E-02	1.52E-01	6.71E-06	6.28E-02	5.17E-02	6.75E-03	-6.77E-02
POCP	[kg NMVOC eq.]	1.39E-01	6.00E-03	3.76E-02	1.69E-06	1.09E-02	1.11E-02	2.13E-03	-1.52E-02
ADPm ¹	[kg Sb eq.]	7.92E-05	3.14E-07	3.54E-06	2.49E-10	1.74E-07	9.94E-06	2.07E-08	-5.64E-07
ADPf ¹	[MJ]	5.68E+02	4.76E+01	5.15E+02	2.79E-02	2.63E+01	1.00E+01	4.39E+00	-1.73E+02
WDP ¹	[m3 world eq. deprived]	1.90E+03	5.57E-02	1.88E+00	3.67E-04	3.09E-02	1.72E+00	3.79E-02	-6.94E-01
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	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.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1m ² Viddø 70/30									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PM	[Disease incidence]	4.42E-06	6.30E-08	3.07E-07	2.15E-11	6.37E-08	6.06E-08	2.85E-08	-1.73E-07
IRP ²	[kBq U235 eq.]	3.08E+00	1.26E-02	1.89E+00	7.34E-04	6.95E-03	1.27E-02	5.59E-03	-1.10E+00
ETP-fw ¹	[CTUe]	8.07E+02	3.53E+01	4.45E+01	8.08E-03	1.95E+01	7.38E+00	2.50E+00	-3.68E+01
HTP-c ¹	[CTUh]	3.30E-08	7.13E-10	7.29E-09	4.54E-13	3.94E-10	2.62E-09	6.18E-11	-3.34E-09
HTP-nc ¹	[CTUh]	1.10E-06	3.20E-08	1.60E-07	6.95E-12	1.77E-08	2.67E-08	3.24E-09	-4.94E-08
SQP ¹	-	7.24E+03	2.33E+01	7.17E+01	1.17E-02	1.29E+01	6.48E+00	1.13E+00	-1.74E+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.								

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.
	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 1m ² Viddø 70/30									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PERE	[MJ]	4.14E+02	4.08E+00	9.19E+01	2.01E-02	2.26E+00	1.50E+00	7.36E-01	-3.02E+01
PERM	[MJ]	8.14E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	4.96E+02	4.08E+00	9.19E+01	2.01E-02	2.26E+00	1.50E+00	7.36E-01	-3.02E+01
PENRE	[MJ]	5.38E+02	4.76E+01	5.15E+02	2.79E-02	2.63E+01	2.30E+01	4.39E+00	-1.73E+02
PENRM	[MJ]	3.71E+01	0.00E+00	-5.47E-01	0.00E+00	0.00E+00	-1.30E+01	0.00E+00	0.00E+00
PENRT	[MJ]	5.75E+02	4.76E+01	5.15E+02	2.79E-02	2.63E+01	1.00E+01	4.39E+00	-1.73E+02
SM	[kg]	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	[MJ]	1.34E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	3.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m ³]	2.92E-01	4.55E-03	8.21E-02	1.54E-05	2.52E-03	4.06E-02	1.15E-03	-2.80E-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								
	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 1m ² Viddø 70/30									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
HWD	[kg]	1.57E-01	1.82E-09	9.61E-03	4.03E-11	1.01E-09	2.36E-02	1.06E-09	-5.94E-08
NHWD	[kg]	1.69E+01	7.76E-03	3.93E-01	2.30E-05	4.29E-03	2.20E-01	2.04E+01	-4.93E-01
RWD	[kg]	1.69E-02	8.65E-05	1.68E-02	4.45E-06	4.79E-05	-6.60E-05	4.68E-05	-6.69E-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]	2.71E+00	0.00E+00	2.04E+00	0.00E+00	0.00E+00	1.05E+01	0.00E+00	0.00E+00
MER	[kg]	2.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	[MJ]	1.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E+01	0.00E+00	0.00E+00
EET	[MJ]	2.93E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.13E+01	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 1m ² Viddø 70/30		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	3.73E+00
Biogenic carbon content in accompanying packaging	[kg C]	1.10E-01
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO ₂	

Viddø window element 80/20

ENVIRONMENTAL IMPACTS PER 1m ² Viddø 80/20									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
GWP-total	[kg CO2 eq.]	-4.59E+00	3.48E+00	5.46E+01	1.34E-03	2.07E+00	1.83E+01	1.09E+00	-1.05E+01
GWP-fossil	[kg CO2 eq.]	2.47E+01	3.42E+00	4.01E+01	1.33E-03	2.06E+00	5.22E+00	3.37E-01	-1.05E+01
GWP-biogenic	[kg CO2 eq.]	-2.94E+01	8.14E-03	1.45E+01	1.19E-05	-2.87E-02	1.31E+01	7.55E-01	-2.54E-02
GWP-luluc	[kg CO2 eq.]	1.00E-01	5.72E-02	1.41E-02	2.02E-07	3.42E-02	7.01E-03	1.89E-03	-1.38E-03
ODP	[kg CFC 11 eq.]	5.78E-07	5.03E-13	1.65E-08	3.01E-14	2.99E-13	4.56E-09	8.85E-13	-4.11E-11
AP	[mol H+ eq.]	1.69E-01	5.72E-03	3.38E-02	2.57E-06	1.18E-02	1.05E-02	2.36E-03	-1.66E-02
EP-freshwater	[kg P eq.]	1.66E-03	1.45E-05	1.18E-04	5.51E-09	8.68E-06	1.08E-04	2.29E-06	-8.76E-06
EP-marine	[kg N eq.]	3.90E-02	2.18E-03	1.37E-02	6.41E-07	5.75E-03	4.33E-03	6.38E-04	-5.04E-03
EP-terrestrial	[mol N eq.]	4.14E-01	2.55E-02	1.52E-01	6.71E-06	6.39E-02	5.18E-02	6.88E-03	-5.59E-02
POCP	[kg NMVOC eq.]	1.10E-01	5.69E-03	3.76E-02	1.69E-06	1.11E-02	1.11E-02	2.16E-03	-1.31E-02
ADPm ¹	[kg Sb eq.]	7.66E-05	2.97E-07	3.54E-06	2.49E-10	1.77E-07	9.94E-06	2.11E-08	-5.44E-07
ADPf ¹	[MJ]	4.71E+02	4.50E+01	5.15E+02	2.79E-02	2.68E+01	1.01E+01	4.48E+00	-1.65E+02
WDP ¹	[m3 world eq. deprived]	1.90E+03	5.27E-02	1.88E+00	3.67E-04	3.15E-02	1.72E+00	3.86E-02	-6.57E-01
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	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.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1m ² Viddø 80/20									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PM	[Disease incidence]	3.89E-06	6.01E-08	3.07E-07	2.15E-11	6.49E-08	6.08E-08	2.91E-08	-1.49E-07
IRP ²	[kBq U235 eq.]	2.57E+00	1.19E-02	1.89E+00	7.34E-04	7.08E-03	1.23E-02	5.70E-03	-1.07E+00
ETP-fw ¹	[CTUe]	5.81E+02	3.34E+01	4.45E+01	8.08E-03	1.99E+01	7.45E+00	2.54E+00	-2.93E+01
HTP-c ¹	[CTUh]	2.83E-08	6.75E-10	7.29E-09	4.54E-13	4.01E-10	2.62E-09	6.29E-11	-3.28E-09
HTP-nc ¹	[CTUh]	1.00E-06	3.03E-08	1.60E-07	6.95E-12	1.80E-08	2.67E-08	3.29E-09	-4.57E-08
SQP ¹	-	7.23E+03	2.21E+01	7.17E+01	1.17E-02	1.32E+01	6.52E+00	1.16E+00	-1.68E+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.								
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.								
	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 1m ² Viddø 80/20									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PERE	[MJ]	4.05E+02	3.86E+00	9.19E+01	2.01E-02	2.31E+00	1.49E+00	7.50E-01	-2.93E+01
PERM	[MJ]	8.11E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	4.86E+02	3.86E+00	9.19E+01	2.01E-02	2.31E+00	1.49E+00	7.50E-01	-2.93E+01
PENRE	[MJ]	4.43E+02	4.50E+01	5.15E+02	2.79E-02	2.68E+01	2.31E+01	4.48E+00	-1.65E+02

PENRM	[MJ]	3.56E+01	0.00E+00	-5.47E-01	0.00E+00	0.00E+00	-1.30E+01	0.00E+00	0.00E+00
PENRT	[MJ]	4.78E+02	4.50E+01	5.15E+02	2.79E-02	2.68E+01	1.01E+01	4.48E+00	-1.65E+02
SM	[kg]	1.50E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	[MJ]	1.34E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	3.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m3]	2.66E-01	4.30E-03	8.21E-02	1.54E-05	2.57E-03	4.06E-02	1.17E-03	-2.68E-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								
	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 1m ² Viddø 80/20									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
HWD	[kg]	1.57E-01	1.72E-09	9.61E-03	4.03E-11	1.03E-09	2.36E-02	1.08E-09	-5.77E-08
NHWD	[kg]	1.30E+01	7.34E-03	3.93E-01	2.30E-05	4.37E-03	2.20E-01	2.08E+01	-3.66E-01
RWD	[kg]	1.36E-02	8.19E-05	1.68E-02	4.45E-06	4.88E-05	-6.92E-05	4.77E-05	-6.51E-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]	1.81E+00	0.00E+00	2.04E+00	0.00E+00	0.00E+00	1.07E+01	0.00E+00	0.00E+00
MER	[kg]	2.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	[MJ]	9.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E+01	0.00E+00	0.00E+00
EET	[MJ]	1.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.13E+01	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 1m ² Viddø 80/20		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	3.73E+00
Biogenic carbon content in accompanying packaging	[kg C]	1.10E-01
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO ₂	

Viddø window element 90/10

ENVIRONMENTAL IMPACTS PER 1m ² Viddø 90/10									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
GWP-total	[kg CO2 eq.]	-1.01E+01	3.29E+00	5.46E+01	1.34E-03	2.11E+00	1.83E+01	1.10E+00	-9.94E+00
GWP-fossil	[kg CO2 eq.]	1.92E+01	3.22E+00	4.01E+01	1.33E-03	2.10E+00	5.22E+00	3.43E-01	-9.91E+00
GWP-biogenic	[kg CO2 eq.]	-2.94E+01	7.68E-03	1.45E+01	1.19E-05	-2.93E-02	1.31E+01	7.55E-01	-2.45E-02
GWP-luluc	[kg CO2 eq.]	9.59E-02	5.39E-02	1.41E-02	2.02E-07	3.48E-02	7.14E-03	1.93E-03	-1.26E-03
ODP	[kg CFC 11 eq.]	5.76E-07	4.74E-13	1.65E-08	3.01E-14	3.05E-13	4.56E-09	9.02E-13	-3.99E-11
AP	[mol H+ eq.]	1.12E-01	5.42E-03	3.38E-02	2.57E-06	1.20E-02	1.05E-02	2.40E-03	-1.32E-02
EP-freshwater	[kg P eq.]	1.65E-03	1.37E-05	1.18E-04	5.51E-09	8.84E-06	1.08E-04	2.31E-06	-8.44E-06

EP-marine	[kg N eq.]	2.88E-02	2.06E-03	1.37E-02	6.41E-07	5.85E-03	4.34E-03	6.50E-04	-4.01E-03
EP-terrestrial	[mol N eq.]	2.93E-01	2.41E-02	1.52E-01	6.71E-06	6.51E-02	5.20E-02	7.01E-03	-4.41E-02
POCP	[kg NMVOC eq.]	8.14E-02	5.39E-03	3.76E-02	1.69E-06	1.13E-02	1.12E-02	2.20E-03	-1.10E-02
ADPm ¹	[kg Sb eq.]	7.40E-05	2.80E-07	3.54E-06	2.49E-10	1.80E-07	9.94E-06	2.15E-08	-5.24E-07
ADPf ¹	[MJ]	3.74E+02	4.25E+01	5.15E+02	2.79E-02	2.73E+01	1.01E+01	4.56E+00	-1.57E+02
WDP ¹	[m3 world eq. deprived]	1.90E+03	4.97E-02	1.88E+00	3.67E-04	3.21E-02	1.72E+00	3.93E-02	-6.20E-01
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	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.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1m ² Viddø 90/10									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PM	[Disease incidence]	3.37E-06	5.72E-08	3.07E-07	2.15E-11	6.61E-08	6.09E-08	2.96E-08	-1.26E-07
IRP ²	[kBq U235 eq.]	2.06E+00	1.12E-02	1.89E+00	7.34E-04	7.21E-03	1.18E-02	5.80E-03	-1.04E+00
ETP-fw ¹	[CTUe]	3.55E+02	3.15E+01	4.45E+01	8.08E-03	2.02E+01	7.53E+00	2.59E+00	-2.18E+01
HTP-c ¹	[CTUh]	2.36E-08	6.37E-10	7.29E-09	4.54E-13	4.09E-10	2.62E-09	6.41E-11	-3.22E-09
HTP-nc ¹	[CTUh]	9.12E-07	2.85E-08	1.60E-07	6.95E-12	1.84E-08	2.68E-08	3.33E-09	-4.20E-08
SQP ¹	-	7.22E+03	2.08E+01	7.17E+01	1.17E-02	1.34E+01	6.56E+00	1.18E+00	-1.63E+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.								
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.								
	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 1m ² Viddø 90/10									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PERE	[MJ]	3.95E+02	3.64E+00	9.19E+01	2.01E-02	2.35E+00	1.48E+00	7.65E-01	-2.85E+01
PERM	[MJ]	8.09E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	4.76E+02	3.64E+00	9.19E+01	2.01E-02	2.35E+00	1.48E+00	7.65E-01	-2.85E+01
PENRE	[MJ]	3.47E+02	4.25E+01	5.15E+02	2.79E-02	2.73E+01	2.31E+01	4.56E+00	-1.57E+02
PENRM	[MJ]	3.42E+01	0.00E+00	-5.47E-01	0.00E+00	0.00E+00	-1.30E+01	0.00E+00	0.00E+00
PENRT	[MJ]	3.82E+02	4.25E+01	5.15E+02	2.79E-02	2.73E+01	1.01E+01	4.56E+00	-1.57E+02
SM	[kg]	1.35E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	[MJ]	1.34E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	3.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m3]	2.39E-01	4.06E-03	8.21E-02	1.54E-05	2.62E-03	4.06E-02	1.19E-03	-2.56E-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								
	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 1m ² Viddø 90/10									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
HWD	[kg]	1.57E-01	1.63E-09	9.61E-03	4.03E-11	1.04E-09	2.36E-02	1.10E-09	-5.59E-08
NHWD	[kg]	9.11E+00	6.92E-03	3.93E-01	2.30E-05	4.45E-03	2.20E-01	2.12E+01	-2.39E-01
RWD	[kg]	1.04E-02	7.73E-05	1.68E-02	4.45E-06	4.97E-05	-7.24E-05	4.86E-05	-6.32E-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]	9.04E-01	0.00E+00	2.04E+00	0.00E+00	0.00E+00	1.09E+01	0.00E+00	0.00E+00
MER	[kg]	2.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	[MJ]	4.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E+01	0.00E+00	0.00E+00
EET	[MJ]	1.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.13E+01	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 1m ² Viddø 90/10		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	3.73E+00
Biogenic carbon content in accompanying packaging	[kg C]	1.10E-01
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO ₂	

Viddø window element 100/0

ENVIRONMENTAL IMPACTS PER 1m ² Viddø 100/0									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
GWP-total	[kg CO2 eq.]	-1.49E+01	2.98E+00	5.46E+01	1.34E-03	2.16E+00	1.71E+01	1.05E+00	-8.81E+00
GWP-fossil	[kg CO2 eq.]	1.33E+01	2.92E+00	4.01E+01	1.33E-03	2.15E+00	4.98E+00	3.53E-01	-8.79E+00
GWP-biogenic	[kg CO2 eq.]	-2.83E+01	6.96E-03	1.45E+01	1.19E-05	-3.00E-02	1.21E+01	6.97E-01	-2.18E-02
GWP-luluc	[kg CO2 eq.]	8.74E-02	4.89E-02	1.41E-02	2.02E-07	3.57E-02	7.32E-03	2.00E-03	-1.09E-03
ODP	[kg CFC 11 eq.]	5.39E-07	4.30E-13	1.64E-08	3.01E-14	3.13E-13	4.26E-09	9.30E-13	-3.57E-11
AP	[mol H+ eq.]	5.38E-02	4.92E-03	3.36E-02	2.57E-06	1.23E-02	9.85E-03	2.48E-03	-9.24E-03
EP-freshwater	[kg P eq.]	1.60E-03	1.24E-05	1.15E-04	5.51E-09	9.07E-06	1.02E-04	2.23E-06	-7.56E-06
EP-marine	[kg N eq.]	1.82E-02	1.87E-03	1.36E-02	6.41E-07	6.01E-03	4.09E-03	6.66E-04	-2.82E-03
EP-terrestrial	[mol N eq.]	1.67E-01	2.19E-02	1.52E-01	6.71E-06	6.68E-02	4.89E-02	7.20E-03	-3.06E-02
POCP	[kg NMVOC eq.]	5.13E-02	4.89E-03	3.74E-02	1.69E-06	1.16E-02	1.05E-02	2.23E-03	-8.47E-03
ADPm ¹	[kg Sb eq.]	6.97E-05	2.54E-07	3.49E-06	2.49E-10	1.85E-07	9.32E-06	2.22E-08	-4.70E-07
ADPf ¹	[MJ]	2.68E+02	3.85E+01	5.15E+02	2.79E-02	2.80E+01	9.66E+00	4.69E+00	-1.39E+02
WDP ¹	[m3 world eq. deprived]	1.77E+03	4.51E-02	1.87E+00	3.67E-04	3.29E-02	1.61E+00	4.05E-02	-5.47E-01
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	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.								

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1m ² Viddø 100/0									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PM	[Disease incidence]	2.67E-06	5.20E-08	3.05E-07	2.15E-11	6.78E-08	5.77E-08	3.06E-08	-9.82E-08
IRP ²	[kBq U235 eq.]	1.50E+00	1.02E-02	1.89E+00	7.34E-04	7.39E-03	8.83E-03	5.93E-03	-9.41E-01
ETP-fw ¹	[CTUe]	1.26E+02	2.86E+01	4.45E+01	8.08E-03	2.08E+01	7.43E+00	2.67E+00	-1.34E+01
HTP-c ¹	[CTUh]	1.85E-08	5.77E-10	7.20E-09	4.54E-13	4.19E-10	2.44E-09	6.57E-11	-3.07E-09
HTP-nc ¹	[CTUh]	7.75E-07	2.59E-08	1.59E-07	6.95E-12	1.88E-08	2.52E-08	3.33E-09	-3.55E-08
SQP ¹	-	6.97E+03	1.89E+01	7.04E+01	1.17E-02	1.38E+01	6.35E+00	1.22E+00	-1.46E+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.								
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.								
	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 1m ² Viddø 100/0									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
PERE	[MJ]	3.74E+02	3.30E+00	9.17E+01	2.01E-02	2.41E+00	1.32E+00	7.90E-01	-2.56E+01
PERM	[MJ]	7.46E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	4.49E+02	3.30E+00	9.17E+01	2.01E-02	2.41E+00	1.32E+00	7.90E-01	-2.56E+01
PENRE	[MJ]	2.44E+02	3.85E+01	5.15E+02	2.79E-02	2.80E+01	2.27E+01	4.69E+00	-1.39E+02
PENRM	[MJ]	3.16E+01	0.00E+00	-5.47E-01	0.00E+00	0.00E+00	-1.30E+01	0.00E+00	0.00E+00
PENRT	[MJ]	2.75E+02	3.85E+01	5.15E+02	2.79E-02	2.80E+01	9.66E+00	4.69E+00	-1.39E+02
SM	[kg]	1.12E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	[MJ]	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	2.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m ³]	2.04E-01	3.68E-03	8.20E-02	1.54E-05	2.68E-03	3.80E-02	1.23E-03	-2.30E-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								
	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 1m ² Viddø 100/0									
Parameter	Unit	A1	A2	A3	C1	C2	C3	C4	D
HWD	[kg]	1.51E-01	1.47E-09	9.23E-03	4.03E-11	1.07E-09	2.21E-02	1.14E-09	-5.01E-08
NHWD	[kg]	5.01E+00	6.28E-03	3.93E-01	2.30E-05	4.57E-03	2.12E-01	2.20E+01	-1.08E-01
RWD	[kg]	7.03E-03	7.00E-05	1.68E-02	4.45E-06	5.10E-05	-8.29E-05	4.99E-05	-5.71E-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]	1.97E-03	0.00E+00	2.04E+00	0.00E+00	0.00E+00	1.11E+01	0.00E+00	0.00E+00
MER	[kg]	2.64E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

EEE	[MJ]	3.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E+01	0.00E+00	0.00E+00
EET	[MJ]	7.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.46E+01	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 1m ² Viddø 100/0		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	3.45E+00
Biogenic carbon content in accompanying packaging	[kg C]	1.10E-01
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO ₂	

Additional information

LCA interpretation

Utility consumption (e.g., electricity and natural gas) is a major contributor to the environmental impact GWP total, fossil and biogenic across all variants of Viddø window elements. The environmental impacts from extraction and processing of raw materials vary depending on the discarded IGU composition, ranging from high to low for low and high discarded IGU composition, respectively. Yet, the extraction and processing of raw materials remains a main contributor to many environmental impact categories regardless of the IGU composition. For high content of discarded IGU the environmental impact GWP total in module A1 is negative because of the low impacts from IGU production (no impacts for discarded IGU) and negative impact in climate change – biogenic due to the wood in the window’s frame.

No impacts from the production of discarded IGUs were accounted to the Viddø window element because the discarded IGUs have no economic value. In case that discarded IGUs obtain economic value then part of the impacts from producing those IGUs will be allocated to the Viddø window element which in turn will increase the environmental impacts in module A1.

Technical information on scenarios

End of life (C1-C4)

Processes	Value								Unit
	30/70	40/60	50/50	60/40	70/30	80/20	90/10	100/0	
Collected separately	37.41	38.03	38.64	39.26	39.86	40.47	41.09	41.53	kg/m ²
Collected with mixed waste	0	0	0	0	0	0	0	0	kg/m ²
For reuse	0	0	0	0	0	0	0	0	kg/m ²
For recycling	9.81	9.99	10.18	10.36	10.54	10.73	10.91	11.16	kg/m ²
For energy recovery	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.23	kg/m ²
For final disposal	18.78	19.22	19.65	20.08	20.50	20.93	21.36	22.14	kg/m ²

Re-use, recovery and recycling potential (D)

Scenario information/ Material	Value								Unit
	30/70	40/60	50/50	60/40	70/30	80/20	90/10	100/0	
Displaced metal (aluminum, steel)	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	kg/m ²
Displaced glass	4,82	4,14	3,45	2,76	2,07	1,38	0,69	0,00	kg/m ²
Avoided electricity production	22.13	22.13	22.13	22.13	22.13	22.13	22.13	20.58	MJ/m ²
Avoided heat production	91.27	91.27	91.27	91.27	91.27	91.27	91.27	84.61	MJ/m ²




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

Version 2.0

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EN 15804

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

EN 17213:2020

DS/EN 17213:2020 – "Windows and doors – Environmental Product Declarations – Product category rules for windows and pedestrian doorsets"

EN 15942

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

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"