epddanmark

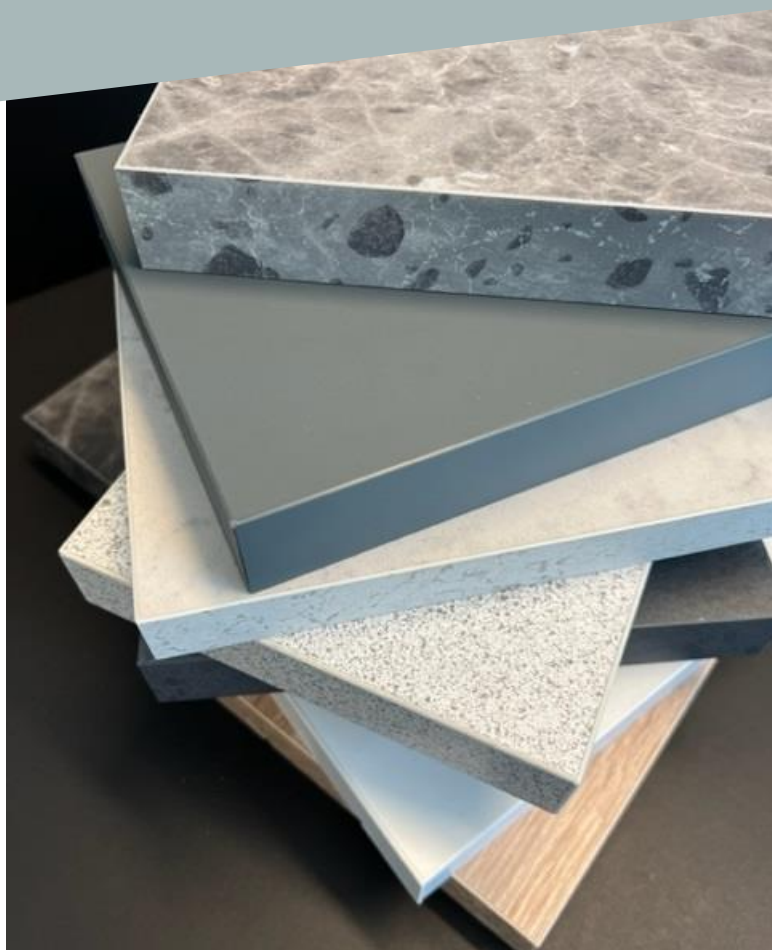
ECO PLATFORM EPD VERIFIED

Owner: TCM Group
No.: MD-23122-EN
Issued: 26-06-2023
Valid to: 26-06-2028

3rd PARTY **VERIFIED**

EPD

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



Owner of declaration
TCM Group
Skautrupvej 16, Tvis
7500 Holstebro,
Danmark

CVR: 37291269

Programme
EPD Danmark
www.epddanmark.dk

☐ Industry EPD
☒ Product EPD

Declared product(s)
Laminate worktop

Number of declared datasets/product variations: 4

Production site
Skautrupvej 24, 7500 Holstebro, Denmark

Certificates of green electricity are used in module A3.

Product(s) use
The worktops are typically used as kitchen worktops.

Functional unit
1 m² of worktop with a reference service life of 30 years.

Year of production site data (A3)
2022

EPD version
Version 1

Issued: 26-06-2023

Valid to: 26-06-2028

Basis of calculation
This EPD is developed in accordance with the European standard EN 15804+A2 and the complementary product category rules (c-PCR) for furniture published by EPD Norway.

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:

[David Althoff Palm, Dalemarken AB]

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 presented in the table below are representative of a typical 61 cm deep laminated kitchen worktop.

Material weight-% of declared product				
	20mm worktop	30mm worktop	40mm worktop	60mm worktop
Chipboard	94	95	97	95
Laminate	<1	<1	<1	1
Kontralaminate	<1	-	-	-
Kontra Paper	-	<1	<1	<1
ABS	<1	<1	-	-
Glue	5	3	2	3

Product packaging:

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

Material	Weight-% of packaging
EPS	92
LDPE foil	8

Representativity

This declaration, including data collection and the modeled foreground system including results, represents the production of the kitchen worktops described as the declared products with the product descriptions presented above on the production site located in Tvis, Denmark.

Product specific data are based on average values collected for the year 2022. Background data are based on GaBi Professional 2023 and Ecoinvent v3.9 and are mostly less than 4 years old. All background processes are based on reference data from 2018 or newer or reviewed to be valid. Generally, the used background datasets are of high quality.

Hazardous substances

The kitchen worktops do not contain substances listed on the ”Candidate List of Substances of Very High Concern for authorisation”.

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

Essential characteristics

This EPD is representative of a typical 61 cm deep laminated kitchen worktop.

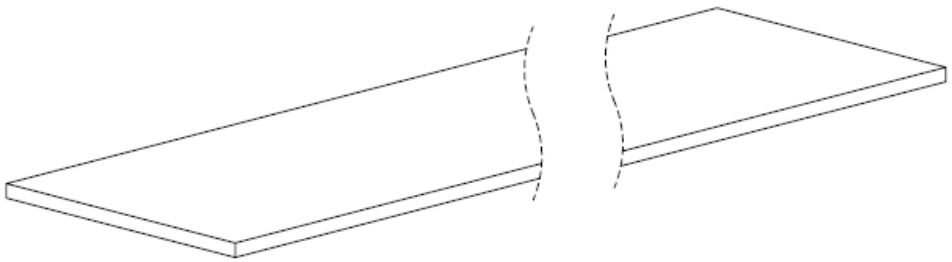
Further technical information can be obtained by contacting the manufacturer or on the manufacturers website:

https://www.tcmgroup.dk/

Reference Service Life (RSL)

The reference service life is 30 years.

Picture of product(s)



LCA background

Functional unit

The LCI and LCIA results in this EPD relates to 1 m^2 of laminated worktop with typical depth of 61 cm.

The functional unit is 1 m^2 of worktop with a reference service life of 30 years. The RSL is a standard service life for kitchen worktops constructed from laminated wood. and based on data from BUILD. This is in alignment with the c-PCR from EPD Norway, which specifies how to develop EPDs for furniture products.

The EPD is a specific EPD and the LCI and LCIA results relates to the specific products.

Name	Value	Unit
Declared unit	1	m^2

Name	Density [kg/m^2]	Conversion factor to 1 kg.
Worktop 20mm	12.5	0.080
Worktop 30mm	19.1	0.052
Worktop 40mm	25.6	0.040
Worktop 60mm	20.1	0.050

The reason why the 60mm worktop is lighter than the 40mm worktop, is because the 60mm worktop consists of a 30mm laminate worktop that is supported timber frame at the edge, and covered with a 60mm high edge band, so that the worktop appears higher 60mm high. Worktop 20-40 mm are massive.

PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804, and NPCR 026 PCR - Part B for Furniture version 2.0 (related to EN 15804 +A2).

Guarantee of Origin – certificates

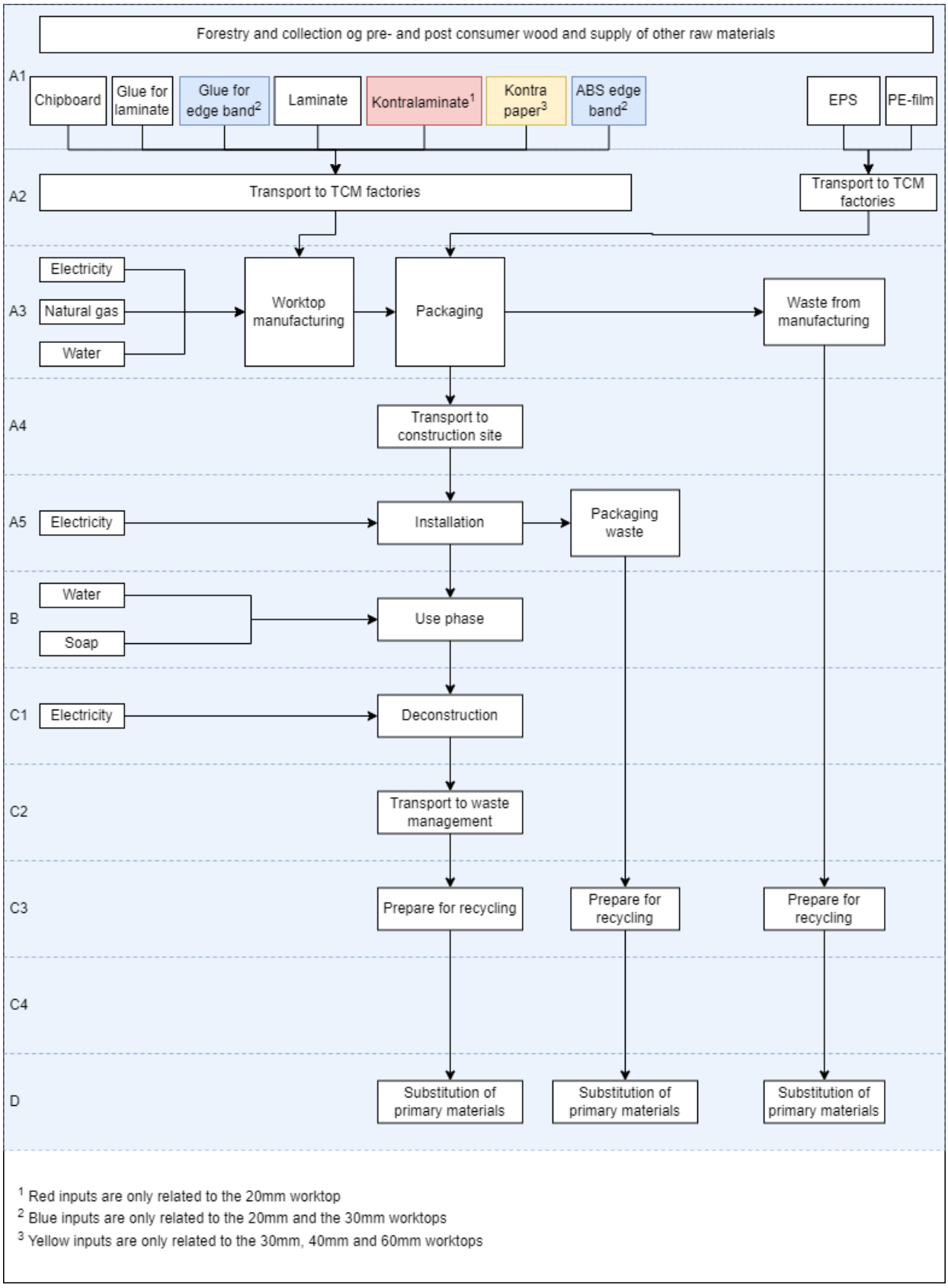
Foreground system:

The product is produced using electricity from solar and wind in production.

Background system:

Upstream and downstream processes are modelled using electricity grid mix.

Flowdiagram



System boundary

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

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 modules A1-A3 are aggregated and comprise the acquisition of all raw materials including forestry and collection of pre- and post-consumer wood, products and energy, transport to the production site, packaging, and waste processing of both waste from manufacturing and treatment of raw material packaging waste up to the "end-of-waste" state or final disposal. The production waste from manufacturing is sent to recycling.

The chipboard inputs consist of 90% post-consumer wood.

No benefits from recycling of waste or energy recovery from A3 is credited in module D.

The production process consists of the following steps: Sawing of chipboard, gluing of laminate, gluing edge bands, drilling, and assembly.

Construction process stage (A4-A5) includes:

The products are transported to the consumer by truck and ferry. An average distance of 191 km by truck and 17 km by ferry to consumers in Scandinavia is used.

There is no waste associated with installation. It is assumed that there is consumption of electricity associated with the installation.

Use stage (B1-B7) includes:

All use stages are included, but there are only environmental impacts associated with module B2 where soap and water is consumed for cleaning of surfaces. It is assumed a kitchen worktop is cleaned 1 time per day using 0,1 L of water per m² top surface and 2 times per year also using 1g of detergent which is modelled for the 30-year reference service life.

End of Life (C1-C4) includes:

It is assumed that there is electricity consumption associated with the deconstruction of the product.

The product is transported 60 km by truck to a waste management facility in Scandinavia.

Wood and metal components are recycled, and plastic components are incinerated. LCA standards for wood dictate that an uptake in A1 must be emitted in C3 irrespective of whether the wood is recycled or not, which has been implemented accordingly.

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

Module D includes material credits and thermal and electrical energy credits from waste handling of product packaging and product waste from the modules A5 and C3.

Because the wood products contain a high share of additives, only the wood content of the wood products is credited in module D, and water and additives are excluded.

LCA results

All results presented below are per functional unit and the B2 modules covers all 30 years.

Worktop 20mm:

ENVIRONMENTAL IMPACTS PER FU (M^2, 30 years) – Worktop 20mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	-6.45E+00	2.08E-01	5.18E-01	7.33E-01	0.00E+00	2.29E-02	6.38E-02	1.83E+01	0.00E+00	-1.78E+01
GWP-fossil	[kg CO_2 eq.]	9.92E+00	2.06E-01	5.18E-01	6.46E-01	0.00E+00	2.29E-02	6.32E-02	1.90E+00	0.00E+00	-1.42E+00
GWP-biogenic	[kg CO_2 eq.]	-1.64E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E+01	0.00E+00	-1.64E+01
GWP-luluc	[kg CO_2 eq.]	8.62E-03	1.90E-03	1.23E-05	8.74E-02	0.00E+00	2.47E-06	5.84E-04	3.89E-05	0.00E+00	-7.01E-03
ODP	[kg CFC 11 eq.]	1.92E-07	2.67E-14	5.30E-13	6.30E-09	0.00E+00	4.18E-13	8.20E-15	5.64E-11	0.00E+00	-9.21E-09
AP	[mol H^+ eq.]	4.51E-02	3.28E-04	1.03E-04	2.18E-03	0.00E+00	4.82E-05	9.30E-05	2.52E-04	0.00E+00	-3.82E-03
EP-freshwater	[kg P eq.]	2.42E-03	7.51E-07	1.12E-07	7.18E-04	0.00E+00	8.48E-08	2.31E-07	2.83E-06	0.00E+00	-1.60E-04
EP-marine	[kg N eq.]	1.22E-02	1.23E-04	2.39E-05	3.83E-03	0.00E+00	1.16E-05	3.37E-05	6.69E-05	0.00E+00	-1.26E-03
EP-terrestrial	[mol N eq.]	1.30E-01	1.45E-03	3.56E-04	7.16E-03	0.00E+00	1.21E-04	3.99E-04	1.11E-03	0.00E+00	-1.29E-02
POCP	[kg NMVOC eq.]	5.81E-02	3.05E-04	6.63E-05	1.48E-03	0.00E+00	3.08E-05	8.14E-05	1.92E-04	0.00E+00	-5.48E-03
ADPm[1]	[kg Sb eq.]	5.66E-05	1.35E-08	4.53E-09	1.04E-06	0.00E+00	3.51E-09	4.15E-09	1.01E-08	0.00E+00	-1.16E-06
ADPf[1]	[MJ]	2.17E+02	2.80E+00	6.45E-01	6.77E+00	0.00E+00	4.75E-01	8.59E-01	9.24E-01	0.00E+00	-2.33E+01
WDP[1]	[m^3 world eq. deprived]	7.38E+00	2.48E-03	4.61E-02	5.52E-01	0.00E+00	4.98E-03	7.62E-04	1.82E-01	0.00E+00	-2.44E-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.									

ADDITIONAL ENVIRONMENTAL IMPACTS PER FU (M^2, 30 years) – Worktop 20mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	6.31E-07	3.50E-09	7.55E-10	2.75E-08	0.00E+00	4.06E-10	8.01E-10	2.95E-09	0.00E+00	-3.94E-08
IRP[2]	[kBq U235 eq.]	3.00E+00	7.84E-04	1.58E-02	9.04E-02	0.00E+00	1.25E-02	2.41E-04	6.09E-03	0.00E+00	-6.21E-01
ETP-fw[1]	[CTUe]	2.35E+02	1.99E+00	2.89E-01	1.03E+02	0.00E+00	2.09E-01	6.10E-01	5.58E-01	0.00E+00	-1.37E+01
HTP-c[1]	[CTUh]	7.81E-08	4.07E-11	1.14E-11	3.45E-09	0.00E+00	6.99E-12	1.25E-11	3.25E-11	0.00E+00	-7.08E-10
HTP-nc[1]	[CTUh]	1.82E-07	2.18E-09	3.03E-10	3.34E-07	0.00E+00	1.72E-10	6.65E-10	2.88E-09	0.00E+00	-1.71E-08
SQP[1]	-	1.48E+02	1.17E+00	2.50E-01	8.15E+00	0.00E+00	1.87E-01	3.59E-01	2.13E-01	0.00E+00	-5.32E+02
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)										
	The numbers are declared in scientific notation, fx 1.95E+02. This number can also be written as: $1.95*10^2$ or 195, while 1.12E-11 is the same as $1.12*10^{-11}$ or 0.0000000000112.										
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.										
	[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.										

RESOURCE USE PER FU (M^2, 30 years) – Worktop 20mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	1.37E+02	2.04E-01	3.61E-01	5.94E+00	0.00E+00	2.84E-01	6.25E-02	2.16E-01	0.00E+00	-1.26E+02
PERM	[MJ]	1.77E+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
PERT	[MJ]	3.14E+02	2.04E-01	3.61E-01	5.94E+00	0.00E+00	2.84E-01	6.25E-02	2.16E-01	0.00E+00	-1.26E+02
PENRE	[MJ]	2.17E+02	2.81E+00	6.45E-01	6.78E+00	0.00E+00	4.75E-01	8.62E-01	9.24E-01	0.00E+00	-2.33E+01
PENRM	[MJ]	6.94E+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
PENRT	[MJ]	2.86E+02	2.81E+00	6.45E-01	6.78E+00	0.00E+00	4.75E-01	8.62E-01	9.24E-01	0.00E+00	-2.33E+01
SM	[kg]	1.05E+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
RSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m^3]	1.73E-01	2.23E-04	1.22E-03	1.38E-02	0.00E+00	2.29E-04	6.85E-05	4.34E-03	0.00E+00	-8.05E-03
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 FU (M^2, 30 years) – Worktop 20mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	8.35E-08	8.70E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-12	6.73E-12	0.00E+00	-1.36E-10
NHWD	[kg]	8.68E-01	4.28E-04	2.21E-03	1.06E+00	0.00E+00	3.49E-04	1.31E-04	1.72E-01	0.00E+00	-2.66E-02
RWD	[kg]	3.43E-04	5.26E-06	9.50E-05	5.42E-04	0.00E+00	7.54E-05	1.61E-06	3.03E-05	0.00E+00	-1.26E-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	0.00E+00	0.00E+00
MFR	[kg]	2.47E+00	0.00E+00	4.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E+01	0.00E+00	0.00E+00
MER	[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
EEE	[MJ]	0.00E+00	0.00E+00	8.92E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E+00	0.00E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	1.59E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.17E+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 FU (M^2, 30 years) – Worktop 20mm		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	4.47
Biogenic carbon content in accompanying packagaing	[kg C]	0
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Worktop 30mm:

ENVIRONMENTAL IMPACTS PER FU (M^2, 30 years) – Worktop 30mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	-1.28E+01	3.18E-01	5.18E-01	7.33E-01	0.00E+00	2.29E-02	9.74E-02	2.76E+01	0.00E+00	2.39E+01
GWP-fossil	[kg CO_2 eq.]	1.29E+01	3.15E-01	5.18E-01	6.46E-01	0.00E+00	2.29E-02	9.65E-02	1.91E+00	0.00E+00	-1.77E+00
GWP-biogenic	[kg CO_2 eq.]	-2.57E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E+01	0.00E+00	2.57E+01
GWP-luluc	[kg CO_2 eq.]	1.21E-02	2.91E-03	1.23E-05	8.74E-02	0.00E+00	2.47E-06	8.92E-04	4.31E-05	0.00E+00	-1.13E-02
ODP	[kg CFC 11 eq.]	2.85E-07	4.09E-14	5.30E-13	6.30E-09	0.00E+00	4.18E-13	1.25E-14	8.76E-11	0.00E+00	-1.73E-08
AP	[mol H^+ eq.]	6.39E-02	5.03E-04	1.03E-04	2.18E-03	0.00E+00	4.83E-05	1.42E-04	2.60E-04	0.00E+00	-5.57E-03
EP-freshwater	[kg P eq.]	3.74E-03	1.15E-06	1.12E-07	7.18E-04	0.00E+00	8.49E-08	3.52E-07	4.36E-06	0.00E+00	-5.00E-04
EP-marine	[kg N eq.]	1.78E-02	1.89E-04	2.39E-05	3.83E-03	0.00E+00	1.16E-05	5.15E-05	6.85E-05	0.00E+00	-1.98E-03
EP-terrestrial	[mol N eq.]	1.89E-01	2.21E-03	3.56E-04	7.16E-03	0.00E+00	1.21E-04	6.10E-04	1.12E-03	0.00E+00	-1.92E-02
POCP	[kg NMVOC eq.]	8.15E-02	4.67E-04	6.63E-05	1.48E-03	0.00E+00	3.08E-05	1.24E-04	1.97E-04	0.00E+00	-8.38E-03
ADPm[1]	[kg Sb eq.]	7.80E-05	2.07E-08	4.53E-09	1.04E-06	0.00E+00	3.51E-09	6.35E-09	1.38E-08	0.00E+00	-2.11E-06
ADPf[1]	[MJ]	2.79E+02	4.29E+00	6.45E-01	6.77E+00	0.00E+00	4.76E-01	1.31E+00	9.68E-01	0.00E+00	-2.87E+01
WDP[1]	[m^3 world eq. deprived]	1.05E+01	3.80E-03	4.61E-02	5.52E-01	0.00E+00	4.98E-03	1.16E-03	1.84E-01	0.00E+00	-3.82E-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.										

ADDITIONAL ENVIRONMENTAL IMPACTS PER FU (M^2, 30 years) – Worktop 30mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	9.12E-07	5.37E-09	7.55E-10	2.75E-08	0.00E+00	4.06E-10	1.22E-09	2.99E-09	0.00E+00	-5.70E-08
IRP[2]	[kBq U235 eq.]	3.42E+00	1.20E-03	1.58E-02	9.04E-02	0.00E+00	1.25E-02	3.68E-04	7.17E-03	0.00E+00	-6.67E-01
ETP-fw[1]	[CTUe]	3.29E+02	3.04E+00	2.89E-01	1.03E+02	0.00E+00	2.10E-01	9.32E-01	5.83E-01	0.00E+00	-2.00E+01
HTP-c[1]	[CTUh]	1.15E-07	6.23E-11	1.14E-11	3.45E-09	0.00E+00	7.00E-12	1.91E-11	3.44E-11	0.00E+00	-1.02E-09
HTP-nc[1]	[CTUh]	2.61E-07	3.33E-09	3.03E-10	3.34E-07	0.00E+00	1.72E-10	1.02E-09	2.92E-09	0.00E+00	-2.36E-08
SQP[1]	-	2.36E+02	1.79E+00	2.50E-01	8.15E+00	0.00E+00	1.87E-01	5.48E-01	2.19E-01	0.00E+00	-8.47E+02
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)										
	The numbers are declared in scientific notation, fx 1.95E+02. This number can also be written as: $1.95*10^2$ or 195, while 1.12E-11 is the same as $1.12*10^{-11}$ or 0.0000000000112.										
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.										
	[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.										

RESOURCE USE PER FU (M^2, 30 years) – Worktop 30mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	1.54E+02	3.12E-01	3.61E-01	5.94E+00	0.00E+00	2.85E-01	9.55E-02	2.24E-01	0.00E+00	-1.96E+02
PERM	[MJ]	2.77E+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
PERT	[MJ]	4.31E+02	3.12E-01	3.61E-01	5.94E+00	0.00E+00	2.85E-01	9.55E-02	2.24E-01	0.00E+00	-1.96E+02
PENRE	[MJ]	2.79E+02	4.30E+00	6.45E-01	6.78E+00	0.00E+00	4.76E-01	1.32E+00	9.68E-01	0.00E+00	-2.87E+01
PENRM	[MJ]	9.28E+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
PENRT	[MJ]	3.72E+02	4.30E+00	6.45E-01	6.78E+00	0.00E+00	4.76E-01	1.32E+00	9.68E-01	0.00E+00	-2.87E+01
SM	[kg]	1.64E+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
RSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m^3]	2.46E-01	3.42E-04	1.22E-03	1.38E-02	0.00E+00	2.29E-04	1.05E-04	4.37E-03	0.00E+00	-1.13E-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 FU (M^2, 30 years) – Worktop 30mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	8.38E-08	1.33E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.08E-12	6.73E-12	0.00E+00	-1.36E-10
NHWD	[kg]	8.93E-01	6.56E-04	2.21E-03	1.06E+00	0.00E+00	3.49E-04	2.01E-04	1.72E-01	0.00E+00	-2.66E-02
RWD	[kg]	3.49E-04	8.05E-06	9.50E-05	5.42E-04	0.00E+00	7.55E-05	2.47E-06	3.03E-05	0.00E+00	-1.26E-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	0.00E+00	0.00E+00
MFR	[kg]	3.42E+00	0.00E+00	4.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E+01	0.00E+00	0.00E+00
MER	[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
EEE	[MJ]	0.00E+00	0.00E+00	8.92E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E+00	0.00E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	1.59E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.17E+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 FU (M^2, 30 years) – Worktop 30mm		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	7.01
Biogenic carbon content in accompanying packagaing	[kg C]	0
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Worktop 40mm:

ENVIRONMENTAL IMPACTS PER FU (M^2, 30 years) – Worktop 40mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	-1.91E+01	4.25E-01	5.18E-01	7.33E-01	0.00E+00	2.28E-02	1.31E-01	3.67E+01	0.00E+00	-3.95E+01
GWP-fossil	[kg CO_2 eq.]	1.57E+01	4.21E-01	5.18E-01	6.46E-01	0.00E+00	2.28E-02	1.29E-01	1.88E+00	0.00E+00	-2.01E+00
GWP-biogenic	[kg CO_2 eq.]	-3.48E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E+01	0.00E+00	-3.75E+01
GWP-luluc	[kg CO_2 eq.]	1.55E-02	3.89E-03	1.23E-05	8.74E-02	0.00E+00	2.46E-06	1.20E-03	4.69E-05	0.00E+00	-1.52E-02
ODP	[kg CFC 11 eq.]	3.71E-07	5.47E-14	5.30E-13	6.30E-09	0.00E+00	4.17E-13	1.68E-14	1.19E-10	0.00E+00	-2.23E-08
AP	[mol H^+ eq.]	8.10E-02	6.72E-04	1.03E-04	2.18E-03	0.00E+00	4.81E-05	1.90E-04	2.66E-04	0.00E+00	-6.63E-03
EP-freshwater	[kg P eq.]	4.74E-03	1.54E-06	1.12E-07	7.18E-04	0.00E+00	8.46E-08	4.72E-07	5.87E-06	0.00E+00	-5.86E-04
EP-marine	[kg N eq.]	2.29E-02	2.52E-04	2.39E-05	3.83E-03	0.00E+00	1.15E-05	6.91E-05	6.93E-05	0.00E+00	-2.39E-03
EP-terrestrial	[mol N eq.]	2.44E-01	2.96E-03	3.56E-04	7.16E-03	0.00E+00	1.20E-04	8.18E-04	1.12E-03	0.00E+00	-2.33E-02
POCP	[kg NMVOC eq.]	1.03E-01	6.24E-04	6.63E-05	1.48E-03	0.00E+00	3.07E-05	1.67E-04	2.00E-04	0.00E+00	-1.06E-02
ADPm[1]	[kg Sb eq.]	9.83E-05	2.77E-08	4.53E-09	1.04E-06	0.00E+00	3.50E-09	8.50E-09	1.76E-08	0.00E+00	-2.70E-06
ADPf[1]	[MJ]	3.36E+02	5.73E+00	6.45E-01	6.77E+00	0.00E+00	4.74E-01	1.76E+00	1.00E+00	0.00E+00	-3.23E+01
WDP[1]	[m^3 world eq. deprived]	1.34E+01	5.08E-03	4.61E-02	5.52E-01	0.00E+00	4.97E-03	1.56E-03	1.83E-01	0.00E+00	-4.35E-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.										

ADDITIONAL ENVIRONMENTAL IMPACTS PER FU (M^2, 30 years) – Worktop 40mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	1.18E-06	7.17E-09	7.55E-10	2.75E-08	0.00E+00	4.05E-10	1.64E-09	2.99E-09	0.00E+00	-7.04E-08
IRP[2]	[kBq U235 eq.]	3.80E+00	1.60E-03	1.58E-02	9.04E-02	0.00E+00	1.25E-02	4.93E-04	8.18E-03	0.00E+00	-6.89E-01
ETP-fw[1]	[CTUe]	4.18E+02	4.07E+00	2.89E-01	1.03E+02	0.00E+00	2.09E-01	1.25E+00	6.01E-01	0.00E+00	-2.39E+01
HTP-c[1]	[CTUh]	1.51E-07	8.33E-11	1.14E-11	3.45E-09	0.00E+00	6.98E-12	2.56E-11	3.58E-11	0.00E+00	-1.25E-09
HTP-nc[1]	[CTUh]	3.36E-07	4.46E-09	3.03E-10	3.34E-07	0.00E+00	1.71E-10	1.36E-09	2.92E-09	0.00E+00	-2.83E-08
SQP[1]	-	3.00E+02	2.39E+00	2.50E-01	8.15E+00	0.00E+00	1.87E-01	7.35E-01	2.23E-01	0.00E+00	-1.13E+03
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 FU (M^2, 30 years) – Worktop 40mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	1.66E+02	4.17E-01	3.61E-01	5.94E+00	0.00E+00	2.84E-01	1.28E-01	2.28E-01	0.00E+00	-2.61E+02
PERM	[MJ]	3.76E+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
PERT	[MJ]	5.41E+02	4.17E-01	3.61E-01	5.94E+00	0.00E+00	2.84E-01	1.28E-01	2.28E-01	0.00E+00	-2.61E+02
PENRE	[MJ]	3.36E+02	5.75E+00	6.45E-01	6.78E+00	0.00E+00	4.74E-01	1.77E+00	1.00E+00	0.00E+00	-3.23E+01
PENRM	[MJ]	1.16E+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
PENRT	[MJ]	4.52E+02	5.75E+00	6.45E-01	6.78E+00	0.00E+00	4.74E-01	1.77E+00	1.00E+00	0.00E+00	-3.23E+01
SM	[kg]	2.22E+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
RSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m^3]	3.13E-01	4.57E-04	1.22E-03	1.38E-02	0.00E+00	2.28E-04	1.40E-04	4.35E-03	0.00E+00	-1.25E-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 FU (M^2, 30 years) – Worktop 40mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	9.62E-08	1.78E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.47E-12	6.65E-12	0.00E+00	-1.37E-10
NHWD	[kg]	8.97E-01	8.77E-04	2.21E-03	1.06E+00	0.00E+00	3.48E-04	2.69E-04	1.70E-01	0.00E+00	-2.64E-02
RWD	[kg]	3.87E-04	1.08E-05	9.50E-05	5.42E-04	0.00E+00	7.52E-05	3.30E-06	3.00E-05	0.00E+00	-1.25E-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	0.00E+00	0.00E+00
MFR	[kg]	4.34E+00	0.00E+00	4.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E+01	0.00E+00	0.00E+00
MER	[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
EEE	[MJ]	0.00E+00	0.00E+00	8.92E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.41E+00	0.00E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	1.59E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.10E+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 FU (M^2, 30 years) – Worktop 40mm		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	9.49
Biogenic carbon content in accompanying packagaing	[kg C]	0
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Worktop 60mm:

ENVIRONMENTAL IMPACTS PER FU (M^2, 30 years) – Worktop 60mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	-1.34E+01	3.35E-01	5.18E-01	7.33E-01	0.00E+00	2.27E-02	1.03E-01	2.92E+01	0.00E+00	2.52E+01
GWP-fossil	[kg CO_2 eq.]	1.36E+01	3.32E-01	5.18E-01	6.46E-01	0.00E+00	2.27E-02	1.02E-01	2.08E+00	0.00E+00	-1.87E+00
GWP-biogenic	[kg CO_2 eq.]	-2.71E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E+01	0.00E+00	2.71E+01
GWP-luluc	[kg CO_2 eq.]	1.32E-02	3.06E-03	1.23E-05	8.74E-02	0.00E+00	2.45E-06	9.39E-04	4.65E-05	0.00E+00	-1.19E-02
ODP	[kg CFC 11 eq.]	3.01E-07	4.31E-14	5.30E-13	6.30E-09	0.00E+00	4.15E-13	1.32E-14	9.17E-11	0.00E+00	-1.82E-08
AP	[mol H^+ eq.]	6.75E-02	5.29E-04	1.03E-04	2.18E-03	0.00E+00	4.79E-05	1.49E-04	2.83E-04	0.00E+00	-5.91E-03
EP-freshwater	[kg P eq.]	3.99E-03	1.21E-06	1.12E-07	7.18E-04	0.00E+00	8.42E-08	3.71E-07	4.56E-06	0.00E+00	-5.38E-04
EP-marine	[kg N eq.]	1.89E-02	1.98E-04	2.39E-05	3.83E-03	0.00E+00	1.15E-05	5.42E-05	7.46E-05	0.00E+00	-2.10E-03
EP-terrestrial	[mol N eq.]	2.00E-01	2.33E-03	3.56E-04	7.16E-03	0.00E+00	1.20E-04	6.42E-04	1.22E-03	0.00E+00	-2.03E-02
POCP	[kg NMVOC eq.]	8.60E-02	4.91E-04	6.63E-05	1.48E-03	0.00E+00	3.06E-05	1.31E-04	2.15E-04	0.00E+00	-8.83E-03
ADPm[1]	[kg Sb eq.]	8.33E-05	2.18E-08	4.53E-09	1.04E-06	0.00E+00	3.48E-09	6.68E-09	1.46E-08	0.00E+00	-2.23E-06
ADPf[1]	[MJ]	2.94E+02	4.51E+00	6.45E-01	6.77E+00	0.00E+00	4.72E-01	1.38E+00	1.05E+00	0.00E+00	-3.03E+01
WDP[1]	[m^3 world eq. deprived]	1.11E+01	4.00E-03	4.61E-02	5.52E-01	0.00E+00	4.95E-03	1.23E-03	2.00E-01	0.00E+00	-4.08E-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.										

ADDITIONAL ENVIRONMENTAL IMPACTS PER (M^2, 30 years) – Worktop 60mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	9.62E-07	5.65E-09	7.55E-10	2.75E-08	0.00E+00	4.03E-10	1.29E-09	3.26E-09	0.00E+00	-6.02E-08
IRP[2]	[kBq U235 eq.]	3.56E+00	1.26E-03	1.58E-02	9.04E-02	0.00E+00	1.25E-02	3.87E-04	7.68E-03	0.00E+00	-6.88E-01
ETP-fw[1]	[CTUe]	3.50E+02	3.20E+00	2.89E-01	1.03E+02	0.00E+00	2.08E-01	9.81E-01	6.33E-01	0.00E+00	-2.11E+01
HTP-c[1]	[CTUh]	1.22E-07	6.55E-11	1.14E-11	3.45E-09	0.00E+00	6.95E-12	2.01E-11	3.73E-11	0.00E+00	-1.08E-09
HTP-nc[1]	[CTUh]	2.77E-07	3.51E-09	3.03E-10	3.34E-07	0.00E+00	1.71E-10	1.07E-09	3.18E-09	0.00E+00	-2.49E-08
SQP[1]	-	2.56E+02	1.88E+00	2.50E-01	8.15E+00	0.00E+00	1.86E-01	5.77E-01	2.38E-01	0.00E+00	-8.88E+02
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)										
	The numbers are declared in scientific notation, fx 1.95E+02. This number can also be written as: $1.95*10^2$ or 195, while 1.12E-11 is the same as $1.12*10^{-11}$ or 0.0000000000112.										
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.										
	[2] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.										

RESOURCE USE PER (M², 30 years) – Worktop 60mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	1.58E+02	3.28E-01	3.61E-01	5.94E+00	0.00E+00	2.83E-01	1.01E-01	2.43E-01	0.00E+00	-2.06E+02
PERM	[MJ]	2.92E+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
PERT	[MJ]	4.50E+02	3.28E-01	3.61E-01	5.94E+00	0.00E+00	2.83E-01	1.01E-01	2.43E-01	0.00E+00	-2.06E+02
PENRE	[MJ]	2.94E+02	4.52E+00	6.45E-01	6.78E+00	0.00E+00	4.72E-01	1.39E+00	1.05E+00	0.00E+00	-3.03E+01
PENRM	[MJ]	9.90E+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
PENRT	[MJ]	3.93E+02	4.52E+00	6.45E-01	6.78E+00	0.00E+00	4.72E-01	1.39E+00	1.05E+00	0.00E+00	-3.03E+01
SM	[kg]	1.72E+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
RSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m³]	2.61E-01	3.59E-04	1.22E-03	1.38E-02	0.00E+00	2.27E-04	1.10E-04	4.77E-03	0.00E+00	-1.20E-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 (M², 30 years) – Worktop 60mm											
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B2**	**B1, B3-B7**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	1.06E-07	1.40E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.29E-12	7.35E-12	0.00E+00	-1.32E-10
NHWD	[kg]	9.94E-01	6.90E-04	2.21E-03	1.06E+00	0.00E+00	3.47E-04	2.11E-04	1.88E-01	0.00E+00	-2.85E-02
RWD	[kg]	3.97E-04	8.47E-06	9.50E-05	5.42E-04	0.00E+00	7.49E-05	2.59E-06	3.31E-05	0.00E+00	-1.35E-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	0.00E+00	0.00E+00
MFR	[kg]	3.66E+00	0.00E+00	4.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E+01	0.00E+00	0.00E+00
MER	[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
EEE	[MJ]	0.00E+00	0.00E+00	8.92E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E+00	0.00E+00	0.00E+00
EET	[MJ]	0.00E+00	0.00E+00	1.59E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.74E+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 (M², 30 years) – Worktop 60mm		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	7.39
Biogenic carbon content in accompanying packagaing	[kg C]	0
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Additional information

LCA interpretation

The results of the current EPD refer to the functional unit of 1 m2 of kitchen worktop. The calculated environmental impacts show that A1, A3 and B modules combined account for the largest contributions to the total impact of 17 out of 19 environmental impact categories. In particular, the production of chipboard (A1), the consumption of thermal energy from natural gas (A3) and waste water treatment (B) are the processes with the highest contribution.

Technical information on scenarios

Transport to the building site (A4)

Scenario information	Value	Unit
Road transport		
Fuel type	Diesel	-
Vehicle type	EURO 6	-
Weighted transport distance	191	km
Capacity utilization (including empty runs)	28 - 32t gross weight / 22t payload capacity/utilization factor 61%	%
Sea transport		
Fuel type	Diesel	-
Weighted transport distance	17	km
Capacity utilization (including empty runs)	3,500t payload /utilization factor 65%	
Gross density of products transported[7]		
Worktop, average (min – max)	559 (336 – 640)	kg / m^3

Installation of the product in the building (A5)

Scenario information	Value	Unit
Ancillary materials	0	kg
Water use	0	m^3
Other resource use	0	kg
Energy type and consumption, electricity	0.32	MJ
Waste materials	0	kg
Output materials	0	kg
Direct emissions to air, soil or water	0	kg

Reference service life

RSL information		Unit
Reference service Life	30	Years

Use (B1-B7)

Scenario information	Value	Unit
B2 - Maintenance		
Maintenance process	Cleaning with water and detergent	-
Maintenance cycle	1	times/day
Ancillary materials for maintenance - detergent	0.001	kg/m²/ 182.5 cycles
Waste materials resulting from maintenance – municipal wastewater treatment	0.1	Kg/m²/cycle
Net freshwater consumption during maintenance	0.100	L/m²/cycle
Energy input during maintenance	0	kWh

End of life (C1-C4)

Scenario information	Worktop 20mm	Worktop 30mm	Worktop 40mm	Worktop 60mm	Unit
Collected separately	0	0	0	0	kg
Collected with mixed waste	1.25E+01	1.91E+01	2.56E+01	2.01E+01	kg
For reuse	0	0	0	0	kg
For recycling	1.17E+01	1.83E+01	2.48E+01	1.93E+01	kg
For energy recovery through incineration	7.58E-01	7.58E-01	7.50E-01	8.33E-01	kg
For final disposal	0	0	0	0	kg

Re-use, recovery and recycling potential (D)

Scenario information/Materiel	Worktop 20mm	Worktop 30mm	Worktop 40mm	Worktop 60mm
From installation (A5)				
Plastic waste from packaging				
MFR (kg)	0.04359	0.04359	0.04359	0.04359
EET (MJ)	1.593	1.593	1.593	1.593
EEE (MJ)	0.8923	0.8923	0.8923	0.8923
Product credits, end of life (C3)				
Wood				
MFR (kg)	9.86	15.4	24.8	16.1
EET (MJ)	0	0	0	0
EEE (MJ)	0	0	0	0
Plastic				
MFR (kg)	0	0	0	0
EET (MJ)	6.17	6.17	6.1	6.74
EEE (MJ)	3.45	3.45	3.41	3.76
Metal				
MFR (kg)	-	0.141	0.14	0.155
EET (MJ)	-	0	0	0
EEE (MJ)	-	0	0	0

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+A2 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+A2 chapter 7.4.2.

References

Publisher	epddanmark www.epddanmark.dk Template version 2022.2
Programme operator	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA-practitioner	Rikke Zuwa Kempf Bernberg and Annika Lund Gade COWI A/S Parallelvej 2 2800 Kgs. Lyngby
LCA software /background data	GaBi Professional 2023 and Ecoinvent v3.9
3rd party verifier	David Althoff Palm Dalemarken AB Beryllvägen 25 442 60 Kode Sweden

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"

cPCR
NPCR 026 PCR - Part B for Furniture version 2.0 (related to EN 15804 +A2)

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"

BUILD service life table November 2022 https://build.dk/Pages/BUILD-levetidstabel.aspx