

Owner: Ege Carpets A/S  
No.: MD-24195-EN  
Issued: 18-12-2024  
Valid to: 18-12-2029

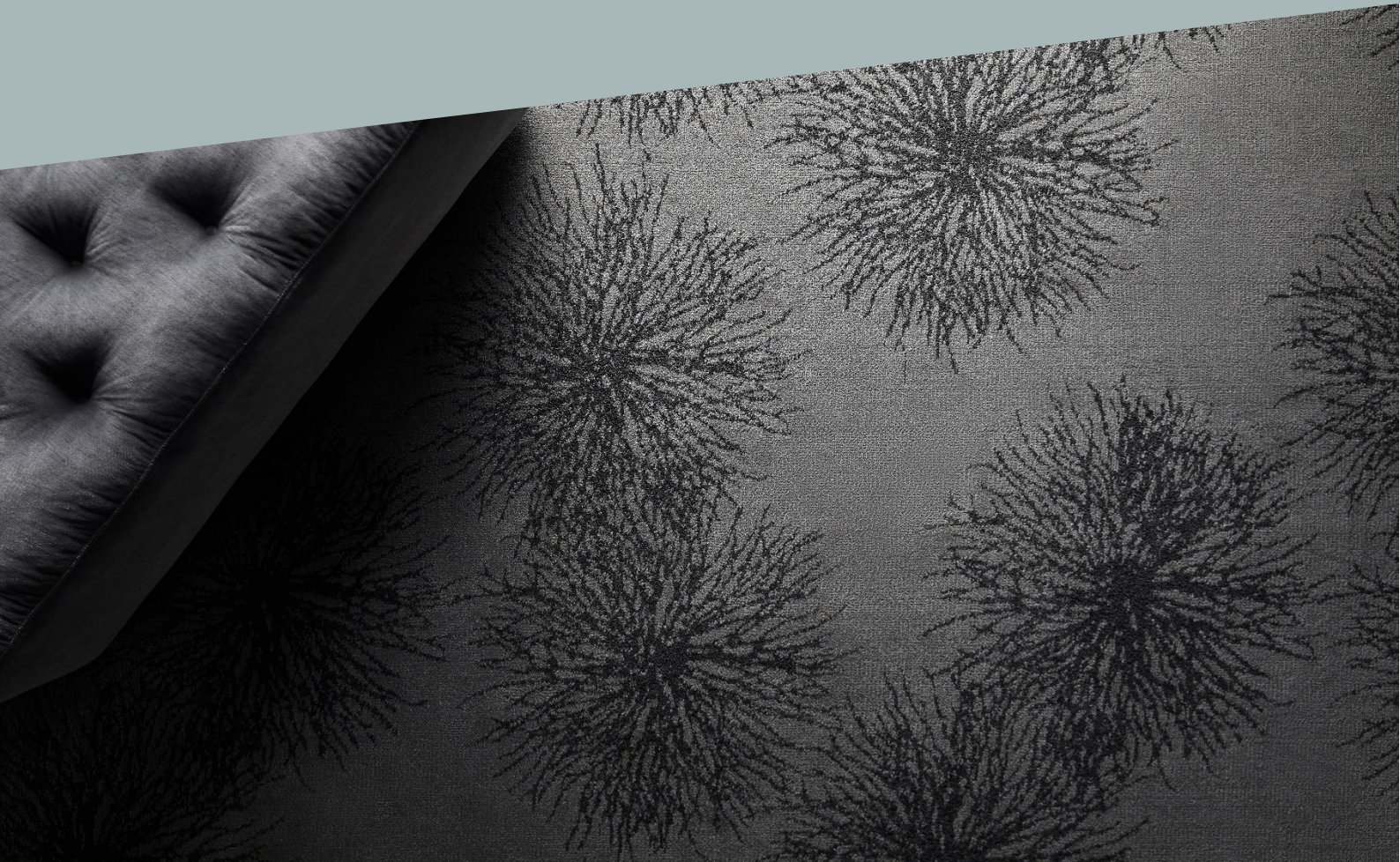
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3<sup>rd</sup> PARTY VERIFIED

**EPD**

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VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | ISO 14025 & EN 15804



**Owner of declaration**  
 Ege Carpets A/S  
 Industrivej Syd 17, 7400 Herning,  
 Denmark  
 CVR: 38 45 42 18



**Issued:**  
 18-12-2024

**Valid to:**  
 18-12-2029

**Programme**  
 EPD Danmark  
[www.epddanmark.dk](http://www.epddanmark.dk)



- Industry EPD
- Product EPD

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

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

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

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

**Declared products**  
 1 m<sup>2</sup> Tufted carpet

Number of declared datasets/product variations: 4


- o Graphic 1100 LWT, Graphic 1300 LWT, Graphic 1500 LWT, Graphic 1800 LWT

**EPD type**

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

**Production site**  
 Ege Carpets A/S, Industrivej Syd 17, 7400 Herning, Denmark.  
 Foamtex, Mads Clausens Vej 1, 7441 Bording, Denmark

**Products use**  
 Tufted carpets for use as floor coverings in buildings.

CEN standard EN 15804 serves as the core PCR
Independent verification of the declaration and data, according to EN ISO 14025
<input type="checkbox"/> internal <input checked="" type="checkbox"/> external
Third party verifier:  _____ Mirko Miseljic

**Declared unit**  
 1 m<sup>2</sup> of tufted carpet

**Year of data**  
 2023/2024

**EPD version**  
 Version 1.0

  
 \_\_\_\_\_  
 Martha Katrine Sørensen  
 EPD Danmark

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

Product			Construction process		Use							End of life			Beyond the system boundary	
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use potential	De-construction demolition	Transport	Waste processing	Disposal	Re-use, recovery and recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

# Product information

## Product description

The main product components are shown in the table below.

Material	Graphic 1100 LWT	Graphic 1300 LWT	Graphic 1500 LWT	Graphic 1800 LWT	Weight-percentage
Sheep wool	53%	56%	58%	61%	%
Polyester	0%	0%	0%	0%	%
Polypropylene	19%	17%	15%	13%	%
Polyamide 6.6	13%	14%	15%	15%	%
Dolomite filler	9%	8%	7%	6%	%
Latex	5%	4%	4%	3%	%
Auxiliaries	<1%	<1%	<1%	<1%	%
Calcium Carbonate	<1%	<1%	<1%	<1%	%

## Representativity

This declaration, including data collection and the modeled foreground system including results, represents the production of 1 m<sup>2</sup> tufted carpet, in four product variations, on the production site located in Herning, Denmark. Product specific data are based on average values collected in the period 5/2023 - 4/2024. Background data are based on a combination of LCA for experts 2024.2 databases, and Ecoinvent 3.8, and are less than 10 years old. Generally, the used background datasets are of high quality, and the majority of the datasets are only a couple of years old.

This is a specific EPD and is only representative for carpets matching the declared product names.

## Hazardous substances

The products declared within this EPD do not contain substances listed in the "Candidate List of Substances of Very High Concern for authorisation"

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

## Essential characteristics

The products declared within this EPD are covered by harmonized technical specification EN1307. Declaration of performance according to EU regulation 305/2011 is available for all declared product variations according to EN14041.

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

<https://www.egecarpets.com/carpets>

The product certificates are available by choosing the carpet in question and selecting the matching quality and backing, after which the certificates are presented and available to download.

## Reference Service Life (RSL)

The service lifetime of a floor covering for a certain application on a floor is too widespread to give one common number.

For this EPD the reference service life is set to 1 year, according to the PCR EN16810:2017. This means that all impacts for the use phase are based on the cleaning and maintenance model for one year.

Depending on several factors such as the area of use based on EN ISO 10874, the construction of the carpet and where it is installed, the service lifetime can be determined for a specific use scenario. The technical lifetime is, however, at least 10 years, based on the warranty of the carpets.

Based on the determined service lifetime of a specific use scenario, the total environmental impact can be calculated by scaling the impacts from B1 accordingly.

# LCA background

## Declared unit

The LCI and LCIA results in this EPD relates to 1 m<sup>2</sup> tufted carpet, for the four product variants listed below.

Graphic 1100 LWT	Value	Unit
Declared unit	1	m <sup>2</sup>
Mass	1,67	kg/m <sup>2</sup>
Conversion factor to 1 kg.	0,60	-
Graphic 1300 LWT	Value	Unit
Declared unit	1	m <sup>2</sup>
Mass	1,86	kg/m <sup>2</sup>
Conversion factor to 1 kg.	0,54	-
Graphic 1500 LWT	Value	Unit
Declared unit	1	m <sup>2</sup>
Mass	2,06	kg/m <sup>2</sup>
Conversion factor to 1 kg.	0,49	-
Graphic 1800 LWT	Value	Unit
Declared unit	1	m <sup>2</sup>
Mass	2,36	kg/m <sup>2</sup>
Conversion factor to 1 kg.	0,42	-

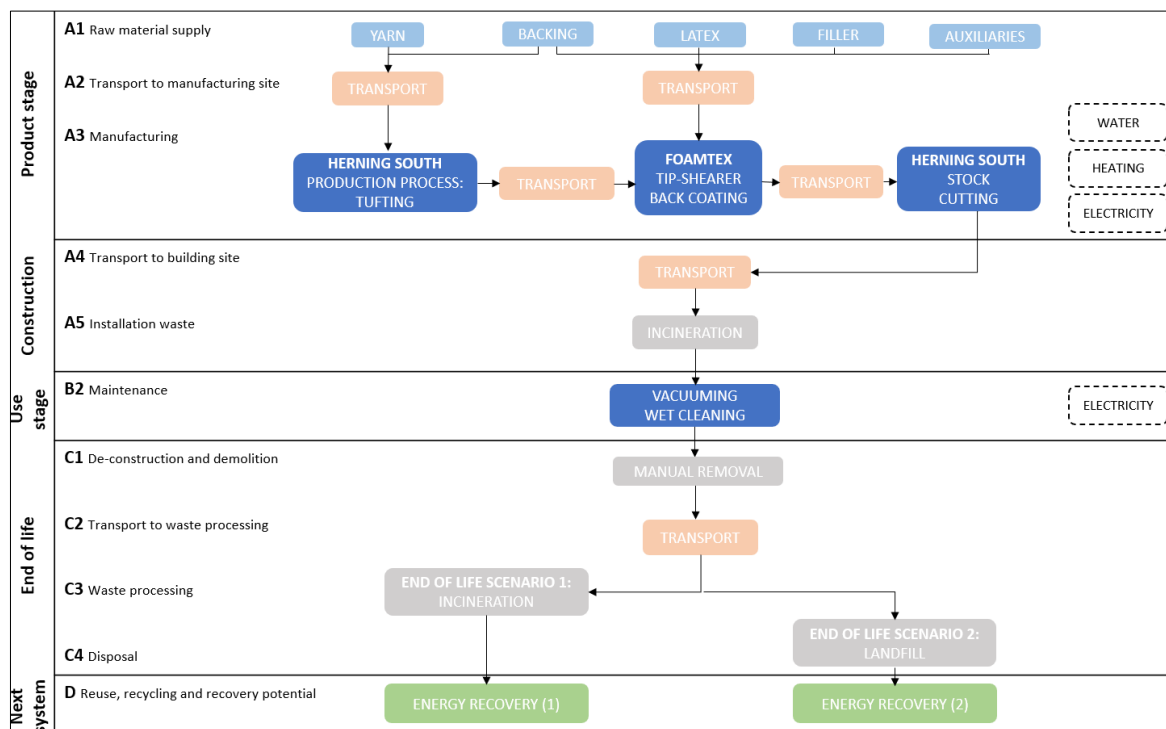
## Functional unit

Not defined

## PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804, and the product specific

## Flowdiagram



PCR: DS/EN 16810:2017 "Resilient, textile and laminate floor coverings – Environmental product declarations – Product category rules"

## Energy modelling principles

Foreground system:

The product is partly produced using electricity covered by Guarantees of Origin (wind energy) during the production (A3). Remaining electricity processes are modelled using the Danish residual grid mix.

Information about the energy mix in the foreground system:

Dataset
Thermal energy from natural gas, DK
Electricity from photovoltaic, DK
Residual grid mix, DK
Thermal energy from light fuel oil (LFO), DK
Thermal energy from biomass (solid), DK
Electricity from wind power, DK

Background system:

Upstream and downstream processes are modelled using the European grid mix

## System boundary

This EPD is based on a cradle-to-grave LCA.

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.

Consumption of energy and water during production is allocated evenly per m<sup>2</sup>, due to uniformity in manufacturing of each m<sup>2</sup> unaffected by the weight of the carpet.

### Product stage (A1-A3) includes:

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

The carpets are comprised of pile material consisting of a combination of wool and nylon, a primary backing of polypropylene, a secondary backing consisting of polypropylene and pigments, as well as auxiliary materials for the application of precoating and dyes to the carpet.

The manufacturing of the carpets is divided into two stages, first the carpet goes through a tufting process at Ege Carpets in Herning, after which it is transported to a 3<sup>rd</sup> party (Foamtex) where a backing is attached. Then the finished carpet is returned to Ege Carpets in Herning and stored until shipping.

Materials for the products are supplied from a variety of European countries, and all materials are transported via truck to the production site in Herning, and to the production site of the 3<sup>rd</sup> party.

All electricity used to operate the sites at Ege Carpets is supplied as certified green electricity from wind power. Certificates confirming this are submitted to EPD Denmark on a yearly basis. Thermal energy is supplied from district heating. For all other processes the residual grid mix for

electricity and thermal energy from natural gas for heat were modelled.

### Construction process stage (A4-A5) includes:

The construction process stage includes the transport of the carpets from the manufacturer to the building site, covered by module A4. The transport is modelled as 1000 km, which is intended to represent an average distance of transportation, representative of the use of the product in Europe.

The installation process covered in module A5 covers the installation of the carpets in buildings. This is done manually, thus no machinery or energy is required, instead the module includes the percentage of carpets that become construction waste. A flat rate of 5% construction waste is modelled during installation. The results for waste in A5 are calculated as entirely sent to incineration, as the most conservative approach. The Adhesives are not included in this EPD.

### Use stage (B1-B7) includes:

The use stage only has activity in module B2 (maintenance) which includes cleaning of the carpets. The impacts arising in module B2 are due to vacuuming and wet cleaning of the carpet, and are modelled as cleaning needs for one year. This means the values of column B2 in the results tables have to be multiplied with the RSL of the carpet in the following LCA. This is done due to the RSL of the carpets varying significantly depending on the use scenarios. There are no relevant contributions in the modules B3-B7.

### End of Life (C1-C4) includes:

End-of-life is modelled using two different scenarios for waste processing: scenario 1 where the carpet is sent to municipal waste incineration, and scenario 2 where the carpet is sent to landfill.

There are no impacts occurring in module C1, as the carpets are removed manually, requiring no additional machinery.

Module C2 covers the transport of construction waste after demolition. This is calculated as 40 km, based on estimated standard distances to waste treatment sites.

Module C3 includes carpets sent to municipal waste incineration, based on average incineration

scenarios for European conditions. The municipal waste incineration exports electrical and thermal energy.

Module C4 covers carpets sent to landfill, including treatment of waste and collection of gas, which is utilized on site resulting in exported electrical energy.

Both scenarios have identical results for modules C1 and C2, but differences in modules C3 and C4. Scenario 1 has impacts from the waste incineration in module C3 (marked as C3/1 in the results tables) and no impacts in C4, while Scenario 2 has no impacts in C3 but instead in C4 (marked as C4/2 in the results tables).

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

Module D includes the potentials in energy recovery arising from incineration of the carpets at the end of life, as well as incineration of installation waste occurring in module A5. In the results tables this is presented in two columns: firstly 'D/1' covering the potentials arising during the life of the carpet, along with covering the potentials for energy recovery from End-of-Life scenario 1 (incineration), and secondly 'D/2' covering only the potentials arising during the life of the carpet, since no energy is exported from End-of-Life scenario 2 (landfill) as a result of landfilling.

# LCA results

Waste scenarios: C3/1 + D/1 = disposal as incineration. C4/2 + D/2 = disposal as landfill.

## Graphic 1100 LWT

ENVIRONMENTAL IMPACTS PER m2 Graphic 1100 LWT													
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
GWP-total	kg CO <sub>2</sub> eq.	1,27E+01	1,69E-01	8,51E-01	0	1,08E-01	0	0	6,77E-03	2,48E+00	2,17E+00	-9,73E-01	-1,51E-01
GWP-fossil	kg CO <sub>2</sub> eq.	1,16E+01	1,66E-01	7,42E-01	0	1,06E-01	0	0	6,65E-03	6,79E-01	2,18E-01	-9,67E-01	-1,50E-01
GWP-biogenic	kg CO <sub>2</sub> eq.	1,72E+00	3,98E-04	1,40E-01	0	3,79E-03	0	0	1,59E-05	1,81E+00	1,96E+00	-6,24E-03	-1,00E-03
GWP-luluc	kg CO <sub>2</sub> eq.	3,16E-02	2,80E-03	1,59E-03	0	5,84E-03	0	0	1,12E-04	0,00E+00	1,83E-04	-1,73E-04	-2,64E-05
ODP	kg CFC 11 eq.	1,89E-09	2,45E-14	2,07E-10	0	2,07E-12	0	0	9,82E-16	3,77E-09	2,24E-13	-6,96E-12	-1,30E-12
AP	mol H <sup>+</sup> eq.	6,15E-02	2,50E-04	3,16E-03	0	2,27E-04	0	0	1,00E-05	2,16E-03	5,93E-04	-1,71E-03	-2,67E-04
EP-freshwater	kg PO <sub>4</sub> eq.	2,60E-04	7,12E-07	1,30E-05	0	7,78E-07	0	0	2,85E-08	2,14E-08	2,26E-05	-4,73E-06	-7,20E-07
EP-marine	kg N eq.	1,19E-02	9,41E-05	6,29E-04	0	5,67E-05	0	0	3,77E-06	9,54E-04	1,18E-03	-5,09E-04	-7,81E-05
EP-terrestrial	mol N eq.	2,64E-01	1,11E-03	1,36E-02	0	6,04E-04	0	0	4,44E-05	1,09E-02	2,17E-03	-5,23E-03	-8,04E-04
POCP	kg NMVOC eq.	2,32E-02	2,49E-04	1,25E-03	0	1,70E-04	0	0	9,95E-06	2,45E-03	1,29E-03	-1,33E-03	-2,04E-04
ADPm <sup>1</sup>	kg Sb eq.	2,09E-06	1,45E-08	8,03E-08	0	3,35E-08	0	0	5,81E-10	-8,24E-07	4,75E-09	-8,85E-08	-1,51E-08
ADPf <sup>1</sup>	MJ	1,68E+02	2,20E+00	8,50E+00	0	2,28E+00	0	0	8,78E-02	1,19E+00	1,71E+00	-1,36E+01	-2,20E+00
WDP <sup>1</sup>	m <sup>3</sup>	2,04E+00	2,58E-03	1,24E-01	0	3,14E-02	0	0	1,03E-04	2,99E-01	8,96E-03	-1,53E-01	-2,54E-02
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												
Disclaimer	<sup>1</sup> 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 m2 Graphic 1100 LWT													
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
PM	[Disease incidence]	5,05E-07	2,41E-09	2,57E-08	0	3,81E-09	0	0	9,66E-11	6,15E-09	5,72E-09	-1,39E-08	-2,18E-09
IRP <sup>2</sup>	[kBq U235 eq.]	6,01E-01	5,80E-04	3,04E-02	0	5,14E-02	0	0	2,32E-05	9,32E-04	3,12E-03	-1,69E-01	-3,15E-02
ETP-fw <sup>1</sup>	[CTUe]	7,06E+01	1,63E+00	3,58E+00	0	7,00E-01	0	0	6,52E-02	1,70E-01	4,01E+00	-3,87E+00	-6,29E-01
HTP-c <sup>1</sup>	[CTUh]	5,80E-09	3,29E-11	2,94E-10	0	5,17E-11	0	0	1,32E-12	6,28E-11	3,79E-11	-1,93E-10	-3,19E-11
HTP-nc <sup>1</sup>	[CTUh]	4,73E-07	1,48E-09	2,40E-08	0	7,53E-10	0	0	5,91E-11	6,25E-09	3,37E-09	-5,86E-09	-8,94E-10
SQP <sup>1</sup>	-	9,91E+02	1,08E+00	4,96E+01	0	1,11E+00	0	0	4,32E-02	0,00E+00	1,66E-01	-1,79E+01	-2,64E+00
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												
Disclaimers	<sup>1</sup> 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.												
	<sup>2</sup> 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 Graphic 1100 LWT													
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
PERE	[MJ]	1,57E+02	1,89E-01	7,86E+00	0	1,47E+00	0	0	7,56E-03	8,73E+00	1,75E-01	-9,95E+00	-1,61E+00
PERM	[MJ]	8,73E+00	0,00E+00	4,37E-01	0	0,00E+00	0	0	0,00E+00	8,73E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,66E+02	1,89E-01	8,29E+00	0	1,47E+00	0	0	7,56E-03	1,27E-03	1,75E-01	-9,95E+00	-1,61E+00
PENRE	[MJ]	1,35E+02	2,20E+00	6,84E+00	0	2,28E+00	0	0	8,78E-02	3,45E+01	1,71E+00	-1,36E+01	-2,20E+00
PENRM	[MJ]	3,33E+01	0,00E+00	1,67E+00	0	0,00E+00	0	0	0,00E+00	3,33E+01	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,68E+02	2,20E+00	8,50E+00	0	2,28E+00	0	0	8,78E-02	1,19E+00	1,71E+00	-1,36E+01	-2,20E+00
SM	[kg]	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0	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	0,00E+00	0	0	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	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m³]	2,48E-01	2,11E-04	1,29E-02	0	1,20E-03	0	0	8,43E-06	6,95E-03	2,65E-04	-5,42E-03	-9,25E-04
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water												

WASTE CATEGORIES AND OUTPUT FLOWS PER m2 Graphic 1100 LWT													
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
HWD	[kg]	1,45E-05	8,41E-11	7,25E-07	0	7,12E-06	0	0	3,36E-12	0,00E+00	2,99E-10	-9,32E-09	-1,74E-09
NHWD	[kg]	3,55E-01	3,58E-04	3,04E-02	0	1,99E-03	0	0	1,43E-05	0,00E+00	1,21E+00	-3,30E-02	-4,87E-03
RWD	[kg]	4,38E-03	4,00E-06	2,23E-04	0	3,09E-04	0	0	1,60E-07	5,86E-05	2,09E-05	-1,03E-03	-1,92E-04

CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,85E-02	0,00E+00	9,23E-04	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,18E-01	0,00E+00	3,48E-01	0	0,00E+00	0	0	0,00E+00	2,97E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	1,44E-01	0,00E+00	7,24E-01	0	0,00E+00	0	0	0,00E+00	8,81E+00	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EE = Exported energy												

BIOGENIC CARBON CONTENT PER m2 Graphic 1100 LWT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0,4
Biogenic carbon content in accompanying packaging	[kg C]	0
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO <sub>2</sub>	



## Graphic 1300 LWT

ENVIRONMENTAL IMPACTS PER m2 Graphic 1300 LWT													
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
GWP-total	kg CO <sub>2</sub> eq.	1,35E+01	1,89E-01	8,91E-01	0	1,08E-01	0	0	7,55E-03	2,77E+00	2,42E+00	-1,07E+00	-1,51E-01
GWP-fossil	kg CO <sub>2</sub> eq.	1,23E+01	1,85E-01	7,77E-01	0	1,06E-01	0	0	7,40E-03	7,56E-01	2,42E-01	-1,06E+00	-1,50E-01
GWP-biogenic	kg CO <sub>2</sub> eq.	1,83E+00	4,43E-04	1,46E-01	0	3,79E-03	0	0	1,77E-05	2,01E+00	2,18E+00	-6,84E-03	-1,00E-03
GWP-luluc	kg CO <sub>2</sub> eq.	3,39E-02	3,12E-03	1,71E-03	0	5,84E-03	0	0	1,25E-04	0,00E+00	2,04E-04	-1,90E-04	-2,64E-05
ODP	kg CFC 11 eq.	1,89E-09	2,73E-14	2,08E-10	0	2,07E-12	0	0	1,09E-15	4,20E-09	2,50E-13	-7,61E-12	-1,30E-12
AP	mol H <sup>+</sup> eq.	6,58E-02	2,79E-04	3,37E-03	0	2,27E-04	0	0	1,11E-05	2,41E-03	6,60E-04	-1,88E-03	-2,67E-04
EP-freshwater	kg PO <sub>4</sub> eq.	2,78E-04	7,93E-07	1,39E-05	0	7,78E-07	0	0	3,17E-08	2,39E-08	2,52E-05	-5,18E-06	-7,20E-07
EP-marine	kg N eq.	1,27E-02	1,05E-04	6,67E-04	0	5,67E-05	0	0	4,19E-06	1,06E-03	1,31E-03	-5,58E-04	-7,81E-05
EP-terrestrial	mol N eq.	2,83E-01	1,24E-03	1,46E-02	0	6,04E-04	0	0	4,95E-05	1,21E-02	2,42E-03	-5,73E-03	-8,04E-04
POCP	kg NMVOC eq.	2,45E-02	2,77E-04	1,31E-03	0	1,70E-04	0	0	1,11E-05	2,73E-03	1,44E-03	-1,46E-03	-2,04E-04
ADPm <sup>1</sup>	kg Sb eq.	2,18E-06	1,62E-08	8,47E-08	0	3,35E-08	0	0	6,47E-10	-9,18E-07	5,29E-09	-9,68E-08	-1,51E-08
ADPf <sup>1</sup>	MJ	1,76E+02	2,45E+00	8,90E+00	0	2,28E+00	0	0	9,78E-02	1,33E+00	1,90E+00	-1,49E+01	-2,20E+00
WDP <sup>1</sup>	m <sup>3</sup>	2,16E+00	2,88E-03	1,30E-01	0	3,14E-02	0	0	1,15E-04	3,33E-01	9,99E-03	-1,68E-01	-2,54E-02
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												
Disclaimer	<sup>1</sup> 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 m2 Graphic 1300 LWT													
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
PM	[Disease incidence]	5,38E-07	2,69E-09	2,73E-08	0	3,81E-09	0	0	1,08E-10	6,85E-09	6,37E-09	-1,53E-08	-2,18E-09
IRP <sup>2</sup>	[kBq U235 eq.]	6,31E-01	6,46E-04	3,18E-02	0	5,14E-02	0	0	2,58E-05	1,04E-03	3,48E-03	-1,85E-01	-3,15E-02
ETP-fw <sup>1</sup>	[CTUe]	7,41E+01	1,82E+00	3,76E+00	0	7,00E-01	0	0	7,26E-02	1,89E-01	4,46E+00	-4,25E+00	-6,29E-01
HTP-c <sup>1</sup>	[CTUh]	6,15E-09	3,67E-11	3,12E-10	0	5,17E-11	0	0	1,47E-12	7,00E-11	4,22E-11	-2,11E-10	-3,19E-11
HTP-nc <sup>1</sup>	[CTUh]	5,08E-07	1,65E-09	2,58E-08	0	7,53E-10	0	0	6,58E-11	6,97E-09	3,75E-09	-6,42E-09	-8,94E-10
SQP <sup>1</sup>	-	1,06E+03	1,20E+00	5,31E+01	0	1,11E+00	0	0	4,81E-02	0,00E+00	1,85E-01	-1,97E+01	-2,64E+00
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												
Disclaimers	<sup>1</sup> 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.												
	<sup>2</sup> 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 Graphic 1300 LWT													
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
PERE	[MJ]	1,66E+02	2,11E-01	8,29E+00	0	1,47E+00	0	0	8,43E-03	9,58E+00	1,94E-01	-1,09E+01	-1,61E+00
PERM	[MJ]	9,58E+00	0,00E+00	4,79E-01	0	0,00E+00	0	0	0,00E+00	9,58E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,75E+02	2,11E-01	8,77E+00	0	1,47E+00	0	0	8,43E-03	1,42E-03	1,94E-01	-1,09E+01	-1,61E+00
PENRE	[MJ]	1,41E+02	2,45E+00	7,16E+00	0	2,28E+00	0	0	9,78E-02	3,62E+01	1,90E+00	-1,49E+01	-2,20E+00
PENRM	[MJ]	3,49E+01	0,00E+00	1,74E+00	0	0,00E+00	0	0	0,00E+00	3,49E+01	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,76E+02	2,45E+00	8,90E+00	0	2,28E+00	0	0	9,78E-02	1,33E+00	1,90E+00	-1,49E+01	-2,20E+00
SM	[kg]	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0	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	0,00E+00	0	0	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	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	2,67E-01	2,35E-04	1,39E-02	0	1,20E-03	0	0	9,39E-06	7,75E-03	2,96E-04	-5,93E-03	-9,25E-04
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water												

WASTE CATEGORIES AND OUTPUT FLOWS PER m2 Graphic 1300 LWT													
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
HWD	[kg]	1,56E-05	9,36E-11	7,82E-07	0	7,12E-06	0	0	3,75E-12	0,00E+00	3,34E-10	-1,02E-08	-1,74E-09
NHWD	[kg]	3,73E-01	3,99E-04	3,13E-02	0	1,99E-03	0	0	1,60E-05	0,00E+00	1,35E+00	-3,63E-02	-4,87E-03
RWD	[kg]	4,62E-03	4,45E-06	2,35E-04	0	3,09E-04	0	0	1,78E-07	6,53E-05	2,33E-05	-1,12E-03	-1,92E-04

CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,85E-02	0,00E+00	9,23E-04	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,14E-01	0,00E+00	3,47E-01	0	0,00E+00	0	0	0,00E+00	3,30E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	1,39E-01	0,00E+00	7,23E-01	0	0,00E+00	0	0	0,00E+00	9,82E+00	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EE = Exported energy												

BIOGENIC CARBON CONTENT PER m2 Graphic 1500 LWT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0,47
Biogenic carbon content in accompanying packaging	[kg C]	0
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO <sub>2</sub>	

## Graphic 1500 LWT

ENVIRONMENTAL IMPACTS PER m2 Graphic 1500 LWT													
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
GWP-total	kg CO <sub>2</sub> eq.	1,52E+01	2,09E-01	9,72E-01	0	1,08E-01	0	0	8,36E-03	3,07E+00	2,68E+00	-1,17E+00	-1,51E-01
GWP-fossil	kg CO <sub>2</sub> eq.	1,37E+01	2,05E-01	8,47E-01	0	1,06E-01	0	0	8,20E-03	8,37E-01	2,69E-01	-1,16E+00	-1,50E-01
GWP-biogenic	kg CO <sub>2</sub> eq.	2,05E+00	4,91E-04	1,56E-01	0	3,79E-03	0	0	1,96E-05	2,23E+00	2,42E+00	-7,46E-03	-1,00E-03
GWP-luluc	kg CO <sub>2</sub> eq.	3,84E-02	3,46E-03	1,93E-03	0	5,84E-03	0	0	1,38E-04	0,00E+00	2,26E-04	-2,07E-04	-2,64E-05
ODP	kg CFC 11 eq.	1,90E-09	3,03E-14	2,08E-10	0	2,07E-12	0	0	1,21E-15	4,65E-09	2,77E-13	-8,29E-12	-1,30E-12
AP	mol H <sup>+</sup> eq.	7,45E-02	3,09E-04	3,81E-03	0	2,27E-04	0	0	1,23E-05	2,67E-03	7,31E-04	-2,05E-03	-2,67E-04
EP-freshwater	kg PO <sub>4</sub> eq.	3,14E-04	8,78E-07	1,57E-05	0	7,78E-07	0	0	3,51E-08	2,65E-08	2,79E-05	-5,66E-06	-7,20E-07
EP-marine	kg N eq.	1,42E-02	1,16E-04	7,45E-04	0	5,67E-05	0	0	4,65E-06	1,18E-03	1,45E-03	-6,09E-04	-7,81E-05
EP-terrestrial	mol N eq.	3,21E-01	1,37E-03	1,64E-02	0	6,04E-04	0	0	5,48E-05	1,34E-02	2,68E-03	-6,26E-03	-8,04E-04
POCP	kg NMVOC eq.	2,72E-02	3,07E-04	1,45E-03	0	1,70E-04	0	0	1,23E-05	3,03E-03	1,59E-03	-1,59E-03	-2,04E-04
ADPm <sup>1</sup>	kg Sb eq.	2,38E-06	1,79E-08	9,48E-08	0	3,35E-08	0	0	7,17E-10	-1,02E-06	5,86E-09	-1,06E-07	-1,51E-08
ADPf <sup>1</sup>	MJ	1,93E+02	2,71E+00	9,75E+00	0	2,28E+00	0	0	1,08E-01	1,47E+00	2,11E+00	-1,62E+01	-2,20E+00
WDP <sup>1</sup>	m <sup>3</sup>	2,41E+00	3,18E-03	1,42E-01	0	3,14E-02	0	0	1,27E-04	3,69E-01	1,11E-02	-1,83E-01	-2,54E-02
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												
Disclaimer	<sup>1</sup> 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 m2 Graphic 1500 LWT													
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
PM	[Disease incidence]	6,04E-07	2,98E-09	3,06E-08	0	3,81E-09	0	0	1,19E-10	7,59E-09	7,06E-09	-1,67E-08	-2,18E-09
IRP <sup>2</sup>	[kBq U235 eq.]	6,94E-01	7,16E-04	3,50E-02	0	5,14E-02	0	0	2,86E-05	1,15E-03	3,85E-03	-2,01E-01	-3,15E-02
ETP-fw <sup>1</sup>	[CTUe]	8,16E+01	2,01E+00	4,13E+00	0	7,00E-01	0	0	8,04E-02	2,10E-01	4,95E+00	-4,63E+00	-6,29E-01
HTP-c <sup>1</sup>	[CTUh]	6,89E-09	4,06E-11	3,48E-10	0	5,17E-11	0	0	1,62E-12	7,75E-11	4,67E-11	-2,30E-10	-3,19E-11
HTP-nc <sup>1</sup>	[CTUh]	5,77E-07	1,82E-09	2,92E-08	0	7,53E-10	0	0	7,29E-11	7,72E-09	4,16E-09	-7,02E-09	-8,94E-10
SQP <sup>1</sup>	-	1,20E+03	1,33E+00	6,00E+01	0	1,11E+00	0	0	5,33E-02	0,00E+00	2,05E-01	-2,15E+01	-2,64E+00
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												
Disclaimers	<sup>1</sup> 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.												
	<sup>2</sup> 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 Graphic 1500 LWT													
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
PERE	[MJ]	1,85E+02	2,33E-01	9,29E+00	0	1,47E+00	0	0	9,33E-03	1,05E+01	2,15E-01	-1,19E+01	-1,61E+00
PERM	[MJ]	1,05E+01	0,00E+00	5,24E-01	0	0,00E+00	0	0	0,00E+00	1,05E+01	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,96E+02	2,33E-01	9,81E+00	0	1,47E+00	0	0	9,33E-03	1,57E-03	2,15E-01	-1,19E+01	-1,61E+00
PENRE	[MJ]	1,57E+02	2,71E+00	7,93E+00	0	2,28E+00	0	0	1,08E-01	3,79E+01	2,11E+00	-1,62E+01	-2,20E+00
PENRM	[MJ]	3,65E+01	0,00E+00	1,82E+00	0	0,00E+00	0	0	0,00E+00	3,65E+01	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,93E+02	2,71E+00	9,75E+00	0	2,28E+00	0	0	1,08E-01	1,47E+00	2,11E+00	-1,62E+01	-2,20E+00
SM	[kg]	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0	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	0,00E+00	0	0	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	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m³]	3,03E-01	2,60E-04	1,57E-02	0	1,20E-03	0	0	1,04E-05	8,58E-03	3,28E-04	-6,47E-03	-9,25E-04
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water												

WASTE CATEGORIES AND OUTPUT FLOWS PER m2 Graphic 1500 LWT													
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
HWD	[kg]	1,78E-05	1,04E-10	8,92E-07	0	7,12E-06	0	0	4,15E-12	0,00E+00	3,70E-10	-1,11E-08	-1,74E-09
NHWD	[kg]	4,13E-01	4,42E-04	3,33E-02	0	1,99E-03	0	0	1,77E-05	0,00E+00	1,49E+00	-3,96E-02	-4,87E-03
RWD	[kg]	5,10E-03	4,93E-06	2,59E-04	0	3,09E-04	0	0	1,97E-07	7,24E-05	2,58E-05	-1,22E-03	-1,92E-04

CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,85E-02	0,00E+00	9,23E-04	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,14E-01	0,00E+00	3,47E-01	0	0,00E+00	0	0	0,00E+00	3,66E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	1,39E-01	0,00E+00	7,23E-01	0	0,00E+00	0	0	0,00E+00	1,09E+01	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EE = Exported energy												

BIOGENIC CARBON CONTENT PER m2 Graphic 1500 LWT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0,54
Biogenic carbon content in accompanying packaging	[kg C]	0
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO <sub>2</sub>	

## Graphic 1800 LWT

ENVIRONMENTAL IMPACTS PER m2 Graphic 1800 LWT													
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
GWP-total	kg CO <sub>2</sub> eq.	1,76E+01	2,39E-01	1,09E+00	0	1,08E-01	0	0	9,58E-03	3,51E+00	3,08E+00	-1,31E+00	-1,51E-01
GWP-fossil	kg CO <sub>2</sub> eq.	1,58E+01	2,35E-01	9,52E-01	0	1,06E-01	0	0	9,40E-03	9,60E-01	3,08E-01	-1,31E+00	-1,50E-01
GWP-biogenic	kg CO <sub>2</sub> eq.	2,36E+00	5,63E-04	1,72E-01	0	3,79E-03	0	0	2,25E-05	2,55E+00	2,77E+00	-8,41E-03	-1,00E-03
GWP-luluc	kg CO <sub>2</sub> eq.	4,51E-02	3,96E-03	2,27E-03	0	5,84E-03	0	0	1,58E-04	0,00E+00	2,59E-04	-2,34E-04	-2,64E-05
ODP	kg CFC 11 eq.	1,91E-09	3,47E-14	2,09E-10	0	2,07E-12	0	0	1,39E-15	5,33E-09	3,17E-13	-9,31E-12	-1,30E-12
AP	mol H <sup>+</sup> eq.	8,74E-02	3,54E-04	4,45E-03	0	2,27E-04	0	0	1,41E-05	3,06E-03	8,38E-04	-2,31E-03	-2,67E-04
EP-freshwater	kg PO <sub>4</sub> eq.	3,68E-04	1,01E-06	1,84E-05	0	7,78E-07	0	0	4,03E-08	3,03E-08	3,19E-05	-6,38E-06	-7,20E-07
EP-marine	kg N eq.	1,66E-02	1,33E-04	8,62E-04	0	5,67E-05	0	0	5,32E-06	1,35E-03	1,67E-03	-6,87E-04	-7,81E-05
EP-terrestrial	mol N eq.	3,77E-01	1,57E-03	1,93E-02	0	6,04E-04	0	0	6,28E-05	1,54E-02	3,07E-03	-7,06E-03	-8,04E-04
POCP	kg NMVOC eq.	3,13E-02	3,52E-04	1,66E-03	0	1,70E-04	0	0	1,41E-05	3,47E-03	1,83E-03	-1,80E-03	-2,04E-04
ADPm <sup>1</sup>	kg Sb eq.	2,69E-06	2,05E-08	1,10E-07	0	3,35E-08	0	0	8,21E-10	-1,17E-06	6,72E-09	-1,19E-07	-1,51E-08
ADPf <sup>1</sup>	MJ	2,19E+02	3,10E+00	1,10E+01	0	2,28E+00	0	0	1,24E-01	1,68E+00	2,42E+00	-1,83E+01	-2,20E+00
WDP <sup>1</sup>	m <sup>3</sup>	2,78E+00	3,65E-03	1,61E-01	0	3,14E-02	0	0	1,46E-04	4,22E-01	1,27E-02	-2,06E-01	-2,54E-02
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												
Disclaimer	<sup>1</sup> 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 m2 Graphic 1800 LWT													
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
PM	[Disease incidence]	7,02E-07	3,41E-09	3,55E-08	0	3,81E-09	0	0	1,37E-10	8,70E-09	8,09E-09	-1,88E-08	-2,18E-09
IRP <sup>2</sup>	[kBq U235 eq.]	7,89E-01	8,20E-04	3,98E-02	0	5,14E-02	0	0	3,28E-05	1,32E-03	4,41E-03	-2,26E-01	-3,15E-02
ETP-fw <sup>1</sup>	[CTUe]	9,27E+01	2,30E+00	4,69E+00	0	7,00E-01	0	0	9,22E-02	2,40E-01	5,67E+00	-5,22E+00	-6,29E-01
HTP-c <sup>1</sup>	[CTUh]	7,99E-09	4,65E-11	4,03E-10	0	5,17E-11	0	0	1,86E-12	8,89E-11	5,36E-11	-2,59E-10	-3,19E-11
HTP-nc <sup>1</sup>	[CTUh]	6,79E-07	2,09E-09	3,43E-08	0	7,53E-10	0	0	8,35E-11	8,85E-09	4,76E-09	-7,91E-09	-8,94E-10
SQP <sup>1</sup>	-	1,41E+03	1,53E+00	7,03E+01	0	1,11E+00	0	0	6,11E-02	0,00E+00	2,35E-01	-2,43E+01	-2,64E+00
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												
Disclaimers	<sup>1</sup> 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.												
	<sup>2</sup> 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 Graphic 1800 LWT													
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
PERE	[MJ]	2,15E+02	2,67E-01	1,08E+01	0	1,47E+00	0	0	1,07E-02	1,18E+01	2,47E-01	-1,34E+01	-1,61E+00
PERM	[MJ]	1,18E+01	0,00E+00	5,91E-01	0	0,00E+00	0	0	0,00E+00	1,18E+01	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	2,27E+02	2,67E-01	1,14E+01	0	1,47E+00	0	0	1,07E-02	1,80E-03	2,47E-01	-1,34E+01	-1,61E+00
PENRE	[MJ]	1,80E+02	3,10E+00	9,08E+00	0	2,28E+00	0	0	1,24E-01	4,05E+01	2,42E+00	-1,83E+01	-2,20E+00
PENRM	[MJ]	3,89E+01	0,00E+00	1,94E+00	0	0,00E+00	0	0	0,00E+00	3,89E+01	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	2,19E+02	3,10E+00	1,10E+01	0	2,28E+00	0	0	1,24E-01	1,68E+00	2,42E+00	-1,83E+01	-2,20E+00
SM	[kg]	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0	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	0,00E+00	0	0	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	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	3,57E-01	2,98E-04	1,84E-02	0	1,20E-03	0	0	1,19E-05	9,83E-03	3,75E-04	-7,28E-03	-9,25E-04
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water												

WASTE CATEGORIES AND OUTPUT FLOWS PER m2 Graphic 1800 LWT													
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
HWD	[kg]	2,11E-05	1,19E-10	1,06E-06	0	7,12E-06	0	0	4,75E-12	0,00E+00	4,23E-10	-1,25E-08	-1,74E-09
NHWD	[kg]	4,74E-01	5,07E-04	3,63E-02	0	1,99E-03	0	0	2,03E-05	0,00E+00	1,71E+00	-4,47E-02	-4,87E-03
RWD	[kg]	5,84E-03	5,65E-06	2,96E-04	0	3,09E-04	0	0	2,26E-07	8,29E-05	2,96E-05	-1,37E-03	-1,92E-04

CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,85E-02	0,00E+00	9,23E-04	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,14E-01	0,00E+00	3,47E-01	0	0,00E+00	0	0	0,00E+00	4,19E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	1,39E-01	0,00E+00	7,23E-01	0	0,00E+00	0	0	0,00E+00	1,25E+01	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EE = Exported energy												

BIOGENIC CARBON CONTENT PER m2 Graphic 1800 LWT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0,65
Biogenic carbon content in accompanying packaging	[kg C]	0
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO <sub>2</sub>	

# Additional information

## Technical information on scenarios

### Transport to the building site (A4)

Scenario information	Value	Unit
Fuel type	Diesel	-
Vehicle type	GLO: Truck, Euro 6, 20 - 26t gross weight / 17.3t payload capacity	-
Transport distance	1000	km
Capacity utilisation (including empty runs)	55%	%
Gross density of products transported	500	kg/m <sup>3</sup>
Capacity utilisation volume factor	1	-

### Installation of the product in the building (A5)

Scenario information	Value	Unit
Ancillary materials	0	kg
Water use	0	m <sup>3</sup>
Other resource use	0	kg
Energy type and consumption	0	kWh
Waste materials (5%)	0,083 – 0,139	kg
Output materials (installed carpet)	1,67 – 2,36	kg
Direct emissions to air, soil or water	0	kg

### Reference service life

RSL information	Unit
Reference service Life	1 year (with an expected lifetime of 10-30 Years)
Declared product properties	Information for all topics can be found on the following website, by entering the product information: <a href="https://www.egecarpets.com/carpets">https://www.egecarpets.com/carpets</a>
Design application parameters	
Assumed quality of work	
Outdoor environment	
Indoor environment	
Usage conditions	
Maintenance	

**Use (B1-B7)**

Scenario information	Value	Unit
<b>B2 - Maintenance</b>		
Maintenance process	Vacuuming and wet cleaning	-
Maintenance cycle (Vacuum cleaning)	252	/year
Maintenance cycle (Wet cleaning)	1,5	/year
Ancillary materials for maintenance, cleaning agent	6,53E-03	kg/cycle
Waste materials resulting from maintenance (wastewater)	2,39E-04	m <sup>3</sup>
Net fresh water consumption during maintenance	2,93E-04	m <sup>3</sup>
Energy input during maintenance	5,61E-01	kWh

**End of life (C1-C4)**

Scenario information	Value	Unit
Collected separately	0	kg
Collected with mixed waste	1,67 – 2,36	kg
For reuse	0	kg
For recycling	0	kg
For energy recovery – Scenario 1	1,67 – 2,36	kg
For final disposal – Scenario 2	1,67 – 2,36	kg
Assumptions for scenario development	Assumed to be either 100% incineration or 100% landfill, depending on national waste management scenarios.	-

**Re-use, recovery and recycling potential from installation waste, A5 (D)**

Scenario information/Materiel	Value	Unit
Exported electrical energy	0,347 – 0,349	MJ
Exported thermal energy	0,72 – 0,73	MJ

**End-of-Life scenario 1 – Incineration: Re-use, recovery and recycling potential (D/1)**

Scenario information/Materiel	Value	Unit
Exported electrical energy	3,9 – 5,1	MJ
Exported thermal energy	11,4 – 15,1	MJ

**End-of-Life scenario 2 – Landfill: Re-use, recovery and recycling potential during use (D/2)**

Scenario information/Materiel	Value	Unit
Exported electrical energy	0	MJ
Exported thermal energy	0	MJ



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### Indoor air

*There is information on Safety & Environment for the emissions of the products covered in this EPD to the indoor climate. The certificates are of the following types, depending on the chosen carpet/carpet tile: Green Label Plus, METS, Indoor Air Comfort, and ABG.*

*The certificates are available at the following link, by choosing a carpet and selecting the matching quality and backing, after which the certificates are presented:*

[www.egecarpets.com/carpets](http://www.egecarpets.com/carpets)

### Soil and water

*The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on measurement of release of regulated dangerous substances from construction products using harmonised test methods according to the provisions of the respective technical committees for European product standards are not available.*

# References

<b>Publisher</b>	 <a href="http://www.epddanmark.dk">www.epddanmark.dk</a>
<b>Programme operator</b>	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup <a href="http://www.teknologisk.dk">www.teknologisk.dk</a>
<b>LCA-practitioner</b>	Ulf Smith Minke Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup <a href="http://www.teknologisk.dk">www.teknologisk.dk</a>
<b>LCA software / background data</b>	Thinkstep GaBi 10.7 2023, database v. 2024.2 <a href="https://sphera.com/">https://sphera.com/</a>  Ecoinvent 3.8 <a href="http://www.ecoinvent.org">www.ecoinvent.org</a> <i>EN 15804 reference package 3.1</i>
<b>3<sup>rd</sup> party verifier</b>	Mirko Miseljic LCA Specialists <a href="mailto:lcaspecialists@outlook.com">lcaspecialists@outlook.com</a>

**General programme instructions**

Version 2.0 [www.epddanmark.dk](http://www.epddanmark.dk)

**EN 15804**

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

**EN 16810**

DS/EN 16810:2017 – " Resilient, textile and laminate floor coverings – Environmental product declarations – Product category rules"

**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"

**Ege Carpets Sustainability Report 2019/2020**

<https://www.egecarpets.com/csr-catalogues>