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ECO PLATFORM EPD VERIFIED

Owner: Ege Carpets A/S
No.: MD-21080-EN
Issued: 23-03-2022
Valid to: 23-03-2027

3rd PARTY **VERIFIED**

EPD

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

Owner of declaration
Ege Carpets A/S
Industrivej Nord 25, 7400 Herning,
Denmark
CVR: 38 45 42 18

Programme
EPD Danmark
www.epddanmark.dk

☐ Industry EPD
☒ Product EPD

Declared products
1 m^2 Tufted carpet with PA6 Econyl pile material and WT textile (PP) backing.

Number of declared datasets/product variations: 5
- Highline Carré / Reform Flux WT
- Highline Loop / Reform Calico WT
- Reform Artworks / Reform Discovery WT
- Reform Heritage / Construction / Transition / Legend / A New Wave / Memory / Radiant WT
- Highline 1100 WT

Production site
Ege Carpets A/S, Industrivej Nord 25, 7400 Herning, Denmark.

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

Functional unit
1 m^2 of tufted carpet

Year of data
2019/2020

EPD version
Version 1.0

Issued: 23-03-2022
Valid to: 23-03-2027

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

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

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

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

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

CEN standard EN 15804 serves as the core PCR

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

☐ internal ☒ external

Third party verifier:

Linda Høibye

Martha Katrine Sørensen
EPD Danmark

Life cycle stages and modules (MND = module not declared)																
Product			Construction process		Use							End of life				Beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use 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

This EPD Covers 13 products divided into 5 groups, based on the amount of pile material pr m^2 carpet. Material compositions of the grouped products vary less than 1% in mass, The compositions are determined using weighted averages based on produced quantities.
The main product components are shown in the table below.

Material	Highline Carré & Reform Flux WT	Highline Loop & Reform Calico WT	Reform Artworks & Reform Discovery WT	Reform Heritage / Construction/ Transition/ Legend/ A New Wave/ Memory/ Radiant WT	Highline 1100 WT	Weight-percentage
Polyamide 6	22	30	28	16	43	%
Polyester	6	5	5	6	0	%
Polypropylene	4	4	4	4	9	%
Limestone filler	0	0	0	0	12	%
Aluminium-hydroxide filler	25	21	23	26	12	%
Dolomite filler	22	21	21	25	15	%
Latex	20	18	18	21	9	%
Auxiliaries	1	1	2	2	1	%

Representativity

This declaration, including data collection and the modeled foreground system including results, represents the production of 1 m^2 tufted carpet, in three product variations, on the production site located in Herning, Denmark. Product specific data are based on average values collected in the period 5/2019 - 4/2020. Background data are based on a combination of GaBi 2021 databases, and Ecoinvent 3.6, 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 one year. This means that all impacts for the use phase are based on the cleaning and maintenance model for one year.

Depending on the area of use based on EN ISO 10874, the technical lifetime advised by the manufacturer and the estimated time on the floor by the customer, the service lifetime can be determined.

Based on the determined service lifetime the total environmental impact can be calculated.

For Ege carpets the minimum technical lifetime is 10 years.

LCA background

Declared unit

The LCI and LCIA results in this EPD relates to 1 m^2 tufted carpet, for the three product variants listed below.

Highline Carré / Reform Flux WT	**Value**	**Unit**
Declared unit	1	m^2
Mass	2,01	kg/m^2
Conversion factor to 1 kg.	0,4969	-
Highline Loop / Reform Calico WT	**Value**	**Unit**
Declared unit	1	m^2
Mass	2,27	kg/m^2
Conversion factor to 1 kg.	0,4397	-
Reform Artworks / Reform Discovery WT	**Value**	**Unit**
Declared unit	1	m^2
Mass	2,47	kg/m^2
Conversion factor to 1 kg.	0,3973	-
Reform Heritage / Construction/ Transition/ Legend/ A New Wave/ Memory/ Radiant WT	**Value**	**Unit**
Declared unit	1	m^2
Mass	2,71	kg/m^2
Conversion factor to 1 kg.	0,3684	-
Highline 1100 WT	**Value**	**Unit**
Declared unit	1	m^2
Mass	2,57	kg/m^2
Conversion factor to 1 kg.	0,3891	-

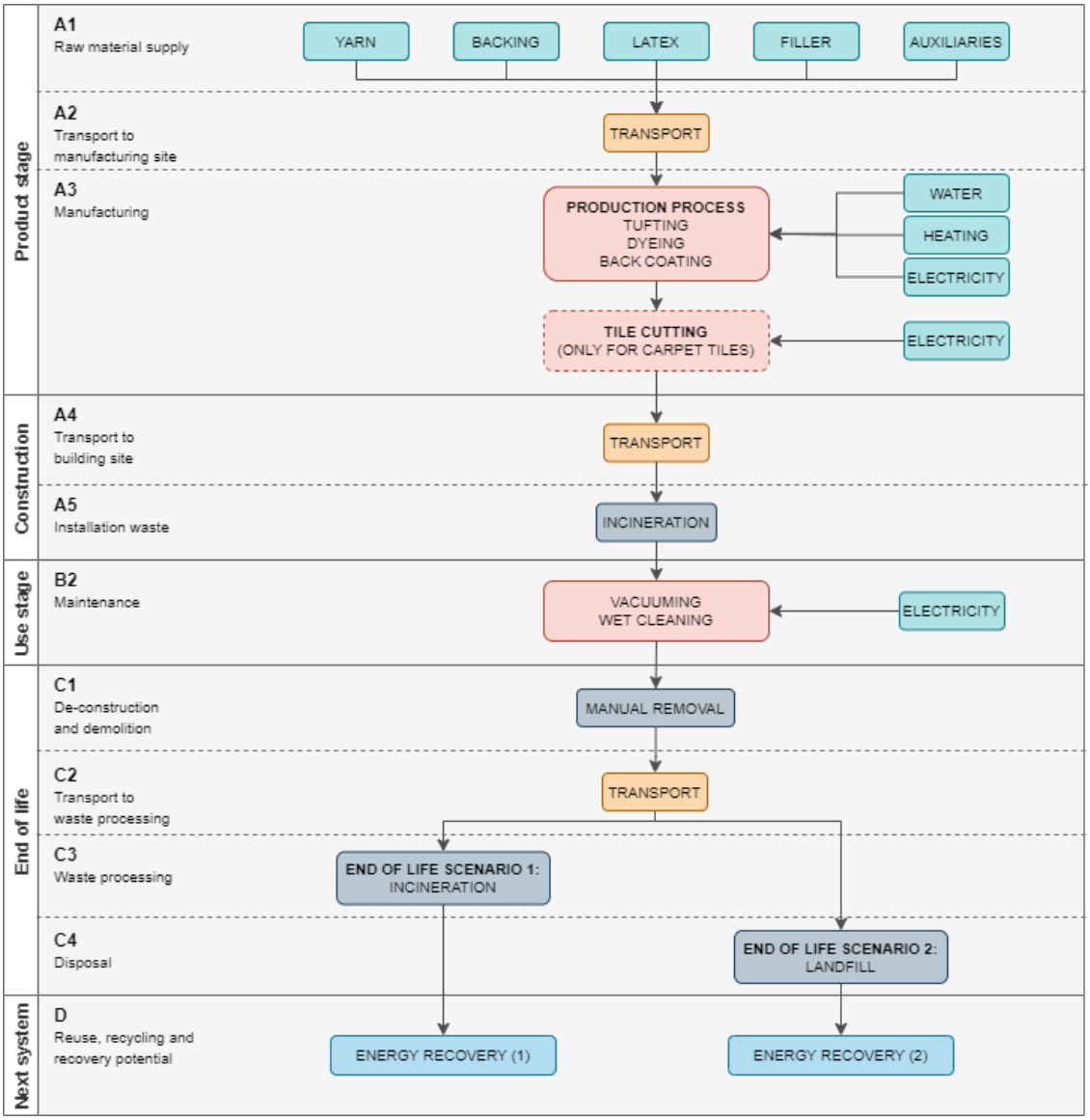
Functional unit

1 m^2 Tufted carpets for use as floor coverings in buildings.

PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804, and the product specific PCR: DS/EN 16810:2017 "Resilient, textile and laminate floor coverings – Environmental product declarations – Product category rules".

Flowdiagram



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 is allocated per m^2, due to uniformity in manufacturing of each m^2 unaffected by weight of the carpet. Waste flows are allocated per kg, due to a heavier carpet generating more waste per m^2 as caused by the manufacturing process.

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 recycled nylon, a primary backing of polyester or polypropylene, a secondary backing consisting of polypropylene, a variety of filler materials, and auxiliary materials for the application of precoating and dyes to the carpet. Recycled materials constitute between 26 – 39% of the content of the carpet.

Materials for the products are supplied from a variety of European countries, and all materials are transported via truck to the production site.

All electricity used to manufacture the products as well as operate the sites at Ege Carpets is supplied as certified green electricity from wind power. And a substantial contribution of the heating is supplied by certified biogas. Certificates confirming this are submitted to EPD Denmark on a yearly basis.

The product stage covers the manufacture of carpets as required to deliver 1 m2 of installed carpet, which includes the production of additional carpet as required to cover the waste accumulating in module A3, as well as construction waste accumulating in module A5, which results in the production of >1 m^2 carpet in order to deliver 1 m^2 of installed carpet.

All waste treatment of construction waste from module A5 is modelled as municipal waste incineration, regardless of geographical waste treatment scenario, this is done to minimize the scenario-specific results. This only affects the results to a very small degree, as the amounts of waste is insignificant, and it is considered the most conservative approach due to the higher impacts from incineration. Energy generated from waste treatment in A5 is counted in module D, while energy generated during incineration in A3 is deducted from the energy used in manufacturing.

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, and no machinery or energy is required, instead the module includes the percentage of carpets that become construction waste, here a flat rate of 5% construction waste is modelled, that is sent to either municipal waste incineration or landfill, depending on the waste management strategy of the geographical are where the product is installed. The results for waste in A5 are calculated as entirely sent to incineration, as the most conservative approach, in order to avoid cluttering the results tables. 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 a 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[1].

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 either incineration or landfilling 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 form End-of-Life scenario 1 (incineration), and secondly 'D/2' covering the same potentials arising during the life of the carpet, along with exported energy from End-of-Life scenario 2 (landfill) as a result of landfilling.

[1] Sustainable paths for managing solid and liquid waste from distilleries and breweries - ScienceDirect

LCA results

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

Highline Carré / Reform Flux WT.

ENVIRONMENTAL IMPACTS PER m2 Highline Carré / Reform Flux WT													
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
GWP-total	kg CO_2 eq.	4,98E+00	1,78E-01	1,51E-01	0	2,42E-01	0	0	6,78E-03	3,00E+00	3,10E+00	-1,03E+00	-1,07E-01
GWP-fossil	kg CO_2 eq.	4,71E+00	1,75E-01	4,14E-02	0	2,39E-01	0	0	6,65E-03	8,22E-01	2,70E-01	-1,02E+00	-1,06E-01
GWP-biogenic	kg CO_2 eq.	2,58E-01	1,98E-03	1,09E-01	0	-2,73E-03	0	0	7,53E-05	2,18E+00	2,83E+00	-4,22E-03	-4,31E-04
GWP-luluc	kg CO_2 eq.	1,36E-02	1,44E-03	2,75E-06	0	6,14E-03	0	0	5,50E-05	0,00E+00	1,21E-04	-1,44E-03	-2,10E-04
ODP	kg CFC 11 eq.	4,78E-08	3,49E-17	2,28E-10	0	1,05E-09	0	0	1,33E-18	4,55E-09	3,48E-16	-8,53E-15	-2,29E-15
AP	mol H^+ eq.	1,32E-02	6,23E-04	1,32E-04	0	5,14E-04	0	0	2,37E-05	2,61E-03	7,36E-04	-1,89E-03	-1,91E-04
EP-freshwater	kg PO_4 eq.	2,92E-04	5,25E-07	2,30E-09	0	9,65E-07	0	0	2,00E-08	2,59E-08	2,73E-05	-4,87E-06	-5,92E-07
EP-marine	kg N eq.	3,40E-03	2,88E-04	5,82E-05	0	1,23E-04	0	0	1,10E-05	1,15E-03	1,43E-03	-5,91E-04	-6,21E-05
EP-terrestrial	mol N eq.	3,59E-02	3,22E-03	6,64E-04	0	1,30E-03	0	0	1,22E-04	1,32E-02	2,66E-03	-6,01E-03	-6,17E-04
POCP	kg NMVOC eq.	9,55E-03	5,63E-04	1,49E-04	0	3,52E-04	0	0	2,14E-05	2,97E-03	1,57E-03	-1,53E-03	-1,54E-04
ADPm[1]	kg Sb eq.	2,93E-06	1,57E-08	2,99E-11	0	8,21E-08	0	0	5,97E-10	5,04E-13	9,92E-09	-1,69E-07	-3,68E-08
ADPf[1]	MJ	9,66E+01	2,35E+00	7,45E-02	0	4,33E+00	0	0	8,97E-02	1,40E+00	2,10E+00	-1,18E+01	-1,26E+00
WDP[1]	m^3	1,12E+00	1,64E-03	1,80E-02	0	4,42E-02	0	0	6,25E-05	3,61E-01	1,04E-02	-9,57E-02	-1,00E-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 = 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												
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 m2 Highline Carré / Reform Flux WT													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
PM	[Disease incidence]	1,31E-07	3,58E-09	3,78E-10	0	6,25E-09	0	0	1,36E-10	7,43E-09	7,10E-09	-1,58E-08	-1,68E-09
IRP[2]	[kBq U235 eq.]	7,29E-01	6,27E-04	5,75E-05	0	9,79E-02	0	0	2,39E-05	1,13E-03	3,50E-03	-3,25E-02	-8,48E-03
ETP-fw[1]	[CTUe]	8,56E+01	1,75E+00	5,11E-02	0	1,82E+00	0	0	6,65E-02	9,56E-01	4,92E+00	-3,15E+00	-3,96E-01
HTP-c[1]	[CTUh]	4,35E-09	3,53E-11	3,86E-12	0	6,76E-11	0	0	1,35E-12	7,59E-11	9,78E-11	-2,11E-10	-3,56E-11
HTP-nc[1]	[CTUh]	1,28E-07	2,11E-09	3,93E-10	0	2,44E-09	0	0	8,03E-11	7,77E-09	1,08E-08	-8,71E-09	-9,61E-10
SQP[1]	-	2,63E+01	8,09E-01	1,54E-03	0	1,56E+00	0	0	3,08E-02	0,00E+00	1,43E-01	-1,95E+01	-2,07E+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	[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 Highline Carré / Reform Flux WT													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
PERE	[MJ]	3,42E+01	1,35E-01	3,35E-04	0	0	0,00E+00	0	5,16E-03	1,54E-03	1,53E-01	-9,29E+00	-1,85E+00
PERM	[MJ]	0,00E+00	0,00E+00	0,00E+00	0	0	0,00E+00	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,42E+01	1,35E-01	3,35E-04	0	0	0,00E+00	0	5,16E-03	1,54E-03	1,53E-01	-9,29E+00	-1,85E+00
PENRE	[MJ]	5,60E+01	2,36E+00	7,45E-02	0	0	0,00E+00	0	9,00E-02	1,40E+00	2,10E+00	-1,18E+01	-1,26E+00
PENRM	[MJ]	4,06E+01	0,00E+00	0,00E+00	0	0	0,00E+00	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	9,66E+01	2,36E+00	7,45E-02	0	0	0,00E+00	0	9,00E-02	1,40E+00	2,10E+00	-1,18E+01	-1,26E+00
SM	[kg]	6,37E-01	0,00E+00	0,00E+00	0	0	0,00E+00	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	3,56E+00	0,00E+00	0,00E+00	0	0	0,00E+00	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	0,00E+00	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m^3]	3,19E-02	1,55E-04	4,20E-04	0	0	0,00E+00	0	5,91E-06	8,40E-03	3,02E-04	-4,55E-03	-7,95E-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 Highline Carré / Reform Flux WT													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
HWD	[kg]	5,58E-04	1,24E-10	2,37E-13	0	7,11E-06	0	0	0,00E+00	3,78E-10	-8,13E-10	-1,71E-08	-2,23E-09
NHWD	[kg]	1,79E-01	3,71E-04	7,06E-07	0	3,19E-03	0	0	0,00E+00	1,46E+00	-2,11E-03	-4,42E-02	-4,86E-03
RWD	[kg]	2,62E-03	4,28E-06	3,55E-06	0	5,94E-04	0	0	7,09E-05	2,44E-05	-1,38E-05	-2,91E-04	-7,62E-05
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]	1,82E-02	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
MER	[kg]	2,09E-01	0,00E+00	1,01E-01	0	0,00E+00	0	0	0,00E+00	2,01E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,01E+00	0,00E+00	1,07E-01	0	0,00E+00	0	0	0,00E+00	3,48E+00	8,47E-01	0,00E+00	0,00E+00
EET	[MJ]	4,31E+00	0,00E+00	4,55E-01	0	0,00E+00	0	0	0,00E+00	1,49E+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; EEE = Exported Electrical Energy, EET = Exported Thermal Energy												

Highline Loop / Reform Calico WT.

ENVIRONMENTAL IMPACTS PER m2 Highline Loop / Reform Calico WT													
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
GWP-total	kg CO_2 eq.	5,56E+00	2,03E-01	1,72E-01	0	2,42E-01	0	0	7,73E-03	3,43E+00	3,54E+00	-1,17E+00	-1,22E-01
GWP-fossil	kg CO_2 eq.	5,25E+00	1,99E-01	4,73E-02	0	2,39E-01	0	0	7,58E-03	9,38E-01	3,08E-01	-1,17E+00	-1,21E-01
GWP-biogenic	kg CO_2 eq.	2,99E-01	2,25E-03	1,24E-01	0	-2,73E-03	0	0	8,58E-05	2,49E+00	3,23E+00	-4,81E-03	-4,91E-04
GWP-luluc	kg CO_2 eq.	1,45E-02	1,65E-03	3,14E-06	0	6,14E-03	0	0	6,28E-05	0,00E+00	1,38E-04	-1,65E-03	-2,39E-04
ODP	kg CFC 11 eq.	4,92E-08	3,98E-17	2,60E-10	0	1,05E-09	0	0	1,52E-18	5,19E-09	3,97E-16	-9,73E-15	-2,61E-15
AP	mol H^+ eq.	1,43E-02	7,10E-04	1,50E-04	0	5,14E-04	0	0	2,71E-05	2,98E-03	8,40E-04	-2,16E-03	-2,17E-04
EP-freshwater	kg PO_4 eq.	2,99E-04	5,99E-07	2,62E-09	0	9,65E-07	0	0	2,28E-08	2,95E-08	3,11E-05	-5,56E-06	-6,75E-07
EP-marine	kg N eq.	3,72E-03	3,29E-04	6,64E-05	0	1,23E-04	0	0	1,25E-05	1,32E-03	1,63E-03	-6,74E-04	-7,09E-05
EP-terrestrial	mol N eq.	3,93E-02	3,67E-03	7,58E-04	0	1,30E-03	0	0	1,40E-04	1,50E-02	3,04E-03	-6,86E-03	-7,04E-04
POCP	kg NMVOC eq.	1,04E-02	6,42E-04	1,70E-04	0	3,52E-04	0	0	2,44E-05	3,38E-03	1,79E-03	-1,74E-03	-1,76E-04
ADPm[1]	kg Sb eq.	3,15E-06	1,79E-08	3,41E-11	0	8,21E-08	0	0	6,80E-10	5,74E-13	1,13E-08	-1,93E-07	-4,19E-08
ADPf[1]	MJ	1,05E+02	2,68E+00	8,50E-02	0	4,33E+00	0	0	1,02E-01	1,60E+00	2,40E+00	-1,35E+01	-1,44E+00
WDP[1]	m^3	1,12E+00	1,87E-03	2,06E-02	0	4,42E-02	0	0	7,12E-05	4,12E-01	1,18E-02	-1,09E-01	-1,14E-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 = 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												
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 m2 Highline Loop / Reform Calico WT													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
PM	[Disease incidence]	1,39E-07	4,08E-09	4,32E-10	0	6,25E-09	0	0	1,56E-10	8,48E-09	8,10E-09	-1,80E-08	-1,92E-09
IRP[2]	[kBq U235 eq.]	8,81E-01	7,15E-04	6,56E-05	0	9,79E-02	0	0	2,72E-05	1,28E-03	3,99E-03	-3,71E-02	-9,68E-03
ETP-fw[1]	[CTUe]	9,02E+01	1,99E+00	5,83E-02	0	1,82E+00	0	0	7,59E-02	1,09E+00	5,61E+00	-3,60E+00	-4,52E-01
HTP-c[1]	[CTUh]	4,52E-09	4,03E-11	4,41E-12	0	6,76E-11	0	0	1,53E-12	8,66E-11	1,12E-10	-2,41E-10	-4,06E-11
HTP-nc[1]	[CTUh]	1,38E-07	2,40E-09	4,48E-10	0	2,44E-09	0	0	9,16E-11	8,86E-09	1,23E-08	-9,94E-09	-1,10E-09
SQP[1]	-	2,84E+01	9,23E-01	1,76E-03	0	1,56E+00	0	0	3,51E-02	0,00E+00	1,63E-01	-2,23E+01	-2,36E+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	[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 Highline Loop / Reform Calico WT													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
PERE	[MJ]	3,68E+01	1,54E-01	3,82E-04	0	1,91E+00	0	0	5,88E-03	1,76E-03	1,74E-01	-1,06E+01	-2,11E+00
PERM	[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
PERT	[MJ]	3,68E+01	1,54E-01	3,82E-04	0	1,91E+00	0	0	5,88E-03	1,76E-03	1,74E-01	-1,06E+01	-2,11E+00
PENRE	[MJ]	5,55E+01	2,69E+00	8,50E-02	0	4,33E+00	0	0	1,03E-01	1,60E+00	2,40E+00	-1,35E+01	-1,44E+00
PENRM	[MJ]	4,99E+01	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
PENRT	[MJ]	1,05E+02	2,69E+00	8,50E-02	0	4,33E+00	0	0	1,03E-01	1,60E+00	2,40E+00	-1,35E+01	-1,44E+00
SM	[kg]	9,22E-01	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]	3,59E+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^3]	3,35E-02	1,77E-04	4,80E-04	0	1,98E-03	0	0	6,74E-06	9,58E-03	3,44E-04	-5,18E-03	-9,07E-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 Highline Loop / Reform Calico WT													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
HWD	[kg]	5,76E-04	1,42E-10	2,70E-13	0	7,11E-06	0	0	5,41E-12	0,00E+00	4,31E-10	-1,95E-08	-2,54E-09
NHWD	[kg]	2,40E-01	4,23E-04	8,05E-07	0	3,19E-03	0	0	1,61E-05	0,00E+00	1,66E+00	-5,04E-02	-5,54E-03
RWD	[kg]	3,49E-03	4,89E-06	4,05E-06	0	5,94E-04	0	0	1,86E-07	8,08E-05	2,79E-05	-3,32E-04	-8,69E-05

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]	2,07E-02	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
MER	[kg]	2,38E-01	0,00E+00	1,15E-01	0	0,00E+00	0	0	0,00E+00	2,30E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,15E+00	0,00E+00	1,65E-01	0	0,00E+00	0	0	0,00E+00	4,79E+00	9,66E-01	0,00E+00	0,00E+00
EET	[MJ]	4,91E+00	0,00E+00	7,03E-01	0	0,00E+00	0	0	0,00E+00	2,05E+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; EEE = Exported Electrical Energy, EET = Exported Thermal Energy												

Reform Artworks / Reform Discovery WT.

ENVIRONMENTAL IMPACTS PER m2 Reform Artworks / Reform Discovery WT													
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
GWP-total	kg CO_2 eq.	5,85E+00	2,18E-01	1,84E-01	0	2,42E-01	0	0	8,30E-03	3,68E+00	3,80E+00	-1,26E+00	-1,31E-01
GWP-fossil	kg CO_2 eq.	5,52E+00	2,14E-01	5,08E-02	0	2,39E-01	0	0	8,14E-03	1,01E+00	3,31E-01	-1,25E+00	-1,30E-01
GWP-biogenic	kg CO_2 eq.	3,16E-01	2,42E-03	1,34E-01	0	-2,73E-03	0	0	9,22E-05	2,67E+00	3,47E+00	-5,16E-03	-5,28E-04
GWP-luluc	kg CO_2 eq.	1,48E-02	1,77E-03	3,37E-06	0	6,14E-03	0	0	6,74E-05	0,00E+00	1,48E-04	-1,77E-03	-2,57E-04
ODP	kg CFC 11 eq.	5,54E-08	4,27E-17	2,79E-10	0	1,05E-09	0	0	1,63E-18	5,57E-09	4,26E-16	-1,04E-14	-2,81E-15
AP	mol H^+ eq.	1,53E-02	7,63E-04	1,62E-04	0	5,14E-04	0	0	2,91E-05	3,20E-03	9,02E-04	-2,32E-03	-2,33E-04
EP-freshwater	kg PO_4 eq.	3,27E-04	6,43E-07	2,81E-09	0	9,65E-07	0	0	2,45E-08	3,17E-08	3,34E-05	-5,97E-06	-7,25E-07
EP-marine	kg N eq.	3,96E-03	3,53E-04	7,13E-05	0	1,23E-04	0	0	1,34E-05	1,41E-03	1,75E-03	-7,24E-04	-7,61E-05
EP-terrestrial	mol N eq.	4,19E-02	3,94E-03	8,13E-04	0	1,30E-03	0	0	1,50E-04	1,61E-02	3,26E-03	-7,36E-03	-7,56E-04
POCP	kg NMVOC eq.	1,11E-02	6,89E-04	1,83E-04	0	3,52E-04	0	0	2,63E-05	3,63E-03	1,92E-03	-1,87E-03	-1,89E-04
ADPm[1]	kg Sb eq.	3,54E-06	1,92E-08	3,66E-11	0	8,21E-08	0	0	7,31E-10	6,17E-13	1,22E-08	-2,07E-07	-4,50E-08
ADPf[1]	MJ	1,11E+02	2,88E+00	9,12E-02	0	4,33E+00	0	0	1,10E-01	1,71E+00	2,58E+00	-1,45E+01	-1,54E+00
WDP[1]	m^3	1,16E+00	2,01E-03	2,21E-02	0	4,42E-02	0	0	7,65E-05	4,42E-01	1,27E-02	-1,17E-01	-1,22E-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 = 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												
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 m2 Reform Artworks / Reform Discovery WT													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
PM	[Disease incidence]	1,50E-07	4,38E-09	4,63E-10	0	6,25E-09	0	0	1,67E-10	9,10E-09	8,70E-09	-1,93E-08	-2,06E-09
IRP[2]	[kBq U235 eq.]	9,34E-01	7,67E-04	7,04E-05	0	9,79E-02	0	0	2,92E-05	1,38E-03	4,29E-03	-3,98E-02	-1,04E-02
ETP-fw[1]	[CTUe]	9,73E+01	2,14E+00	6,26E-02	0	1,82E+00	0	0	8,15E-02	1,17E+00	6,02E+00	-3,86E+00	-4,85E-01
HTP-c[1]	[CTUh]	4,86E-09	4,33E-11	4,73E-12	0	6,76E-11	0	0	1,65E-12	9,30E-11	1,20E-10	-2,58E-10	-4,36E-11
HTP-nc[1]	[CTUh]	1,49E-07	2,58E-09	4,81E-10	0	2,44E-09	0	0	9,84E-11	9,52E-09	1,33E-08	-1,07E-08	-1,18E-09
SQP[1]	-	2,90E+01	9,91E-01	1,89E-03	0	1,56E+00	0	0	3,77E-02	0,00E+00	1,75E-01	-2,39E+01	-2,53E+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	[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 Reform Artworks / Reform Discovery WT													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
PERE	[MJ]	3,72E+01	1,66E-01	4,10E-04	0	1,91E+00	0	0	6,32E-03	1,89E-03	1,87E-01	-1,14E+01	-2,26E+00
PERM	[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
PERT	[MJ]	3,72E+01	1,66E-01	4,10E-04	0	1,91E+00	0	0	6,32E-03	1,89E-03	1,87E-01	-1,14E+01	-2,26E+00
PENRE	[MJ]	5,88E+01	2,89E+00	9,13E-02	0	4,33E+00	0	0	1,10E-01	1,71E+00	2,58E+00	-1,45E+01	-1,54E+00
PENRM	[MJ]	5,24E+01	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
PENRT	[MJ]	1,11E+02	2,89E+00	9,13E-02	0	4,33E+00	0	0	1,10E-01	1,71E+00	2,58E+00	-1,45E+01	-1,54E+00
SM	[kg]	9,43E-01	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]	3,60E+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^3]	3,44E-02	1,90E-04	5,15E-04	0	1,98E-03	0	0	7,24E-06	1,03E-02	3,70E-04	-5,57E-03	-9,74E-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 Reform Artworks / Reform Discovery WT													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
HWD	[kg]	6,39E-04	1,52E-10	2,90E-13	0	7,11E-06	0	0	5,81E-12	0,00E+00	4,63E-10	-2,09E-08	-2,73E-09
NHWD	[kg]	2,48E-01	4,54E-04	8,64E-07	0	3,19E-03	0	0	1,73E-05	0,00E+00	1,79E+00	-5,41E-02	-5,95E-03
RWD	[kg]	3,60E-03	5,25E-06	4,35E-06	0	5,94E-04	0	0	2,00E-07	8,68E-05	2,99E-05	-3,56E-04	-9,33E-05
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]	2,23E-02	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
MER	[kg]	2,55E-01	0,00E+00	1,23E-01	0	0,00E+00	0	0	0,00E+00	2,47E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,24E+00	0,00E+00	1,68E-01	0	0,00E+00	0	0	0,00E+00	4,89E+00	1,04E+00	0,00E+00	0,00E+00
EET	[MJ]	5,28E+00	0,00E+00	7,19E-01	0	0,00E+00	0	0	0,00E+00	2,09E+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; EEE = Exported Electrical Energy, EET = Exported Thermal Energy												

Reform: Heritage / Construction / Transition / Legend / A New Wave / Memory / Radiant WT.

ENVIRONMENTAL IMPACTS PER m2 Reform Heritage / Construction / Transition / Legend / A New Wave / Memory / Radiant WT													
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
GWP-total	kg CO_2 eq.	6,39E+00	2,40E-01	2,03E-01	0	2,42E-01	0	0	9,14E-03	4,05E+00	4,18E+00	-1,39E+00	-1,44E-01
GWP-fossil	kg CO_2 eq.	6,02E+00	2,35E-01	5,59E-02	0	2,39E-01	0	0	8,97E-03	1,11E+00	3,65E-01	-1,38E+00	-1,44E-01
GWP-biogenic	kg CO_2 eq.	3,58E-01	2,66E-03	1,47E-01	0	-2,73E-03	0	0	1,02E-04	2,94E+00	3,82E+00	-5,69E-03	-5,81E-04
GWP-luluc	kg CO_2 eq.	1,54E-02	1,95E-03	3,71E-06	0	6,14E-03	0	0	7,42E-05	0,00E+00	1,63E-04	-1,95E-03	-2,83E-04
ODP	kg CFC 11 eq.	5,43E-08	4,70E-17	3,07E-10	0	1,05E-09	0	0	1,79E-18	6,14E-09	4,69E-16	-1,15E-14	-3,09E-15
AP	mol H^+ eq.	1,63E-02	8,40E-04	1,78E-04	0	5,14E-04	0	0	3,20E-05	3,53E-03	9,93E-04	-2,55E-03	-2,57E-04
EP-freshwater	kg PO_4 eq.	3,30E-04	7,08E-07	3,10E-09	0	9,65E-07	0	0	2,70E-08	3,49E-08	3,68E-05	-6,57E-06	-7,98E-07
EP-marine	kg N eq.	4,23E-03	3,89E-04	7,85E-05	0	1,23E-04	0	0	1,48E-05	1,56E-03	1,93E-03	-7,97E-04	-8,38E-05
EP-terrestrial	mol N eq.	4,47E-02	4,34E-03	8,96E-04	0	1,30E-03	0	0	1,65E-04	1,77E-02	3,59E-03	-8,11E-03	-8,32E-04
POCP	kg NMVOC eq.	1,18E-02	7,59E-04	2,01E-04	0	3,52E-04	0	0	2,89E-05	4,00E-03	2,12E-03	-2,06E-03	-2,08E-04
ADPm[1]	kg Sb eq.	3,52E-06	2,11E-08	4,03E-11	0	8,21E-08	0	0	8,05E-10	6,79E-13	1,34E-08	-2,28E-07	-4,96E-08
ADPf[1]	MJ	1,19E+02	3,17E+00	1,00E-01	0	4,33E+00	0	0	1,21E-01	1,89E+00	2,84E+00	-1,59E+01	-1,70E+00
WDP[1]	m^3	1,15E+00	2,21E-03	2,43E-02	0	4,42E-02	0	0	8,42E-05	4,87E-01	1,40E-02	-1,29E-01	-1,35E-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 = 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												
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 m2 Reform Heritage / Construction / Transition / Legend / A New Wave / Memory / Radiant WT													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
PM	[Disease incidence]	1,57E-07	4,83E-09	5,10E-10	0	6,25E-09	0	0	1,84E-10	1,00E-08	9,58E-09	-2,13E-08	-2,27E-09
IRP[2]	[kBq U235 eq.]	1,08E+00	8,45E-04	7,75E-05	0	9,79E-02	0	0	3,22E-05	1,52E-03	4,72E-03	-4,38E-02	-1,14E-02
ETP-fw[1]	[CTUe]	1,01E+02	2,36E+00	6,89E-02	0	1,82E+00	0	0	8,97E-02	1,29E+00	6,63E+00	-4,25E+00	-5,34E-01
HTP-c[1]	[CTUh]	5,00E-09	4,76E-11	5,21E-12	0	6,76E-11	0	0	1,81E-12	1,02E-10	1,32E-10	-2,85E-10	-4,80E-11
HTP-nc[1]	[CTUh]	1,57E-07	2,84E-09	5,29E-10	0	2,44E-09	0	0	1,08E-10	1,05E-08	1,46E-08	-1,18E-08	-1,30E-09
SQP[1]	-	3,08E+01	1,09E+00	2,08E-03	0	1,56E+00	0	0	4,16E-02	0,00E+00	1,93E-01	-2,64E+01	-2,79E+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	[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 Reform Heritage / Construction / Transition / Legend / A New Wave / Memory / Radiant WT													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
PERE	[MJ]	3,98E+01	1,83E-01	4,52E-04	0	1,91E+00	0	0	6,96E-03	2,08E-03	2,06E-01	-1,25E+01	-2,49E+00
PERM	[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
PERT	[MJ]	3,98E+01	1,83E-01	4,52E-04	0	1,91E+00	0	0	6,96E-03	2,08E-03	2,06E-01	-1,25E+01	-2,49E+00
PENRE	[MJ]	5,71E+01	3,19E+00	1,00E-01	0	4,33E+00	0	0	1,21E-01	1,89E+00	2,84E+00	-1,59E+01	-1,70E+00
PENRM	[MJ]	6,18E+01	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
PENRT	[MJ]	1,19E+02	3,19E+00	1,00E-01	0	4,33E+00	0	0	1,21E-01	1,89E+00	2,84E+00	-1,59E+01	-1,70E+00
SM	[kg]	1,25E+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]	3,61E+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^3]	3,57E-02	2,09E-04	5,67E-04	0	1,98E-03	0	0	7,97E-06	1,13E-02	4,07E-04	-6,13E-03	-1,07E-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												

WASTE CATEGORIES AND OUTPUT FLOWS PER m2 Reform Heritage / Construction / Transition / Legend / A New Wave / Memory / Radiant WT													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
HWD	[kg]	6,40E-04	1,68E-10	3,20E-13	0	7,11E-06	0	0	6,39E-12	0,00E+00	5,10E-10	-2,30E-08	-3,00E-09
NHWD	[kg]	3,12E-01	5,00E-04	9,52E-07	0	3,19E-03	0	0	1,90E-05	0,00E+00	1,97E+00	-5,96E-02	-6,55E-03
RWD	[kg]	4,51E-03	5,78E-06	4,79E-06	0	5,94E-04	0	0	2,20E-07	9,56E-05	3,29E-05	-3,92E-04	-1,03E-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]	2,45E-02	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
MER	[kg]	2,81E-01	0,00E+00	1,36E-01	0	0,00E+00	0	0	0,00E+00	2,71E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,36E+00	0,00E+00	2,30E-01	0	0,00E+00	0	0	0,00E+00	6,28E+00	1,14E+00	0,00E+00	0,00E+00
EET	[MJ]	5,81E+00	0,00E+00	9,82E-01	0	0,00E+00	0	0	0,00E+00	2,68E+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; EEE = Exported Electrical Energy, EET = Exported Thermal Energy												

Highline 1100 WT.

ENVIRONMENTAL IMPACTS PER m2 Highline 1100 WT.													
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
GWP-total	kg CO_2 eq.	6,10E+00	2,27E-01	1,92E-01	0	2,42E-01	0	0	8,66E-03	3,83E+00	3,96E+00	-1,31E+00	-1,37E-01
GWP-fossil	kg CO_2 eq.	5,72E+00	2,23E-01	5,29E-02	0	2,39E-01	0	0	8,49E-03	1,05E+00	3,45E-01	-1,31E+00	-1,36E-01
GWP-biogenic	kg CO_2 eq.	3,58E-01	2,52E-03	1,39E-01	0	-2,73E-03	0	0	9,61E-05	2,79E+00	3,62E+00	-5,38E-03	-5,50E-04
GWP-luluc	kg CO_2 eq.	1,63E-02	1,84E-03	3,51E-06	0	6,14E-03	0	0	7,02E-05	0,00E+00	1,54E-04	-1,84E-03	-2,68E-04
ODP	kg CFC 11 eq.	3,51E-08	4,45E-17	2,91E-10	0	1,05E-09	0	0	1,70E-18	5,81E-09	4,44E-16	-1,09E-14	-2,92E-15
AP	mol H^+ eq.	1,32E-02	7,95E-04	1,68E-04	0	5,14E-04	0	0	3,03E-05	3,34E-03	9,40E-04	-2,41E-03	-2,43E-04
EP-freshwater	kg PO_4 eq.	2,09E-04	6,70E-07	2,93E-09	0	9,65E-07	0	0	2,55E-08	3,31E-08	3,48E-05	-6,22E-06	-7,56E-07
EP-marine	kg N eq.	3,66E-03	3,68E-04	7,43E-05	0	1,23E-04	0	0	1,40E-05	1,47E-03	1,82E-03	-7,55E-04	-7,94E-05
EP-terrestrial	mol N eq.	3,83E-02	4,11E-03	8,48E-04	0	1,30E-03	0	0	1,56E-04	1,68E-02	3,40E-03	-7,68E-03	-7,88E-04
POCP	kg NMVOC eq.	1,01E-02	7,18E-04	1,91E-04	0	3,52E-04	0	0	2,74E-05	3,79E-03	2,01E-03	-1,95E-03	-1,97E-04
ADPm[1]	kg Sb eq.	3,01E-06	2,00E-08	3,81E-11	0	8,21E-08	0	0	7,62E-10	6,43E-13	1,27E-08	-2,16E-07	-4,70E-08
ADPf[1]	MJ	1,13E+02	3,00E+00	9,51E-02	0	4,33E+00	0	0	1,14E-01	1,79E+00	2,69E+00	-1,51E+01	-1,61E+00
WDP[1]	m^3	1,01E+00	2,09E-03	2,30E-02	0	4,42E-02	0	0	7,98E-05	4,61E-01	1,32E-02	-1,22E-01	-1,28E-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 = 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												
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 m2 Highline 1100 WT.													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
PM	[Disease incidence]	1,25E-07	4,57E-09	4,83E-10	0	6,25E-09	0	0	1,74E-10	9,49E-09	9,07E-09	-2,02E-08	-2,15E-09
IRP[2]	[kBq U235 eq.]	1,01E+00	8,00E-04	7,34E-05	0	9,79E-02	0	0	3,05E-05	1,44E-03	4,47E-03	-4,15E-02	-1,08E-02
ETP-fw[1]	[CTUe]	7,69E+01	2,23E+00	6,53E-02	0	1,82E+00	0	0	8,49E-02	1,22E+00	6,28E+00	-4,03E+00	-5,06E-01
HTP-c[1]	[CTUh]	3,62E-09	4,51E-11	4,93E-12	0	6,76E-11	0	0	1,72E-12	9,69E-11	1,25E-10	-2,69E-10	-4,54E-11
HTP-nc[1]	[CTUh]	1,30E-07	2,69E-09	5,01E-10	0	2,44E-09	0	0	1,03E-10	9,92E-09	1,38E-08	-1,11E-08	-1,23E-09
SQP[1]	-	3,21E+01	1,03E+00	1,97E-03	0	1,56E+00	0	0	3,93E-02	0,00E+00	1,83E-01	-2,50E+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	[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 Highline 1100 WT.													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
PERE	[MJ]	4,19E+01	1,73E-01	4,28E-04	0	1,91E+00	0	0	6,59E-03	1,97E-03	1,95E-01	-1,19E+01	-2,36E+00
PERM	[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
PERT	[MJ]	4,19E+01	1,73E-01	4,28E-04	0	1,91E+00	0	0	6,59E-03	1,97E-03	1,95E-01	-1,19E+01	-2,36E+00
PENRE	[MJ]	5,23E+01	3,02E+00	9,51E-02	0	4,33E+00	0	0	1,15E-01	1,79E+00	2,69E+00	-1,51E+01	-1,61E+00
PENRM	[MJ]	6,11E+01	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
PENRT	[MJ]	1,13E+02	3,02E+00	9,51E-02	0	4,33E+00	0	0	1,15E-01	1,79E+00	2,69E+00	-1,51E+01	-1,61E+00
SM	[kg]	1,29E+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]	3,60E+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^3]	3,36E-02	1,98E-04	5,37E-04	0	1,98E-03	0	0	7,54E-06	1,07E-02	3,85E-04	-5,80E-03	-1,02E-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												

WASTE CATEGORIES AND OUTPUT FLOWS PER m2 Highline 1100 WT.													
Parameter	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3-B7**	**C1**	**C2**	**C3/1**	**C4/2**	**D/1**	**D/2**
HWD	[kg]	3,26E-04	1,59E-10	3,03E-13	0	7,11E-06	0	0	6,05E-12	0,00E+00	4,83E-10	-2,18E-08	-2,84E-09
NHWD	[kg]	3,32E-01	4,73E-04	9,01E-07	0	3,19E-03	0	0	1,80E-05	0,00E+00	1,86E+00	-5,65E-02	-6,21E-03
RWD	[kg]	5,05E-03	5,47E-06	4,53E-06	0	5,94E-04	0	0	2,08E-07	9,05E-05	3,12E-05	-3,71E-04	-9,73E-05
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]	2,32E-02	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
MER	[kg]	2,66E-01	0,00E+00	1,29E-01	0	0,00E+00	0	0	0,00E+00	2,57E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,29E+00	0,00E+00	2,66E-01	0	0,00E+00	0	0	0,00E+00	7,64E+00	1,08E+00	0,00E+00	0,00E+00
EET	[MJ]	5,50E+00	0,00E+00	1,14E+00	0	0,00E+00	0	0	0,00E+00	3,26E+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; EEE = Exported Electrical Energy, EET = Exported Thermal Energy												

Additional information

Technical information on scenarios

Transport to the building site (A4)

Scenario information	Value	Unit
Fuel type	Diesel	-
Vehicle type	GLO: Truck, Euro 5, 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^3
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^3
Other resource use	0	kg
Energy type and consumption	0	kWh
Waste materials (5%)	0,101 – 0,136	kg
Output materials (installed carpet)	2,01 – 2,71	kg
Direct emissions to air, soil or water	0	kg

Reference service life

RSL information	Unit
Reference service Life	Minimum 10 Years
Declared product properties	Information for all topics can be found on the following website, by entering the product information: https://www.egecarpets.com/carpets
Design application parameters	
Assumed quality of work	
Outdoor environment	
Indoor environment	
Usage conditions	
Maintenance	

Use (B1-B7)

Scenario information	Value	Unit
B2 - Maintenance		
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^3
Net fresh water consumption during maintenance	2,93E-04	m^3
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	2,01 – 2,71	kg
For reuse	0	kg
For recycling	0	kg
For energy recovery – Scenario 1	2,01 – 2,71	kg
For final disposal – Scenario 2	2,01 – 2,71	kg
Assumptions for scenario development	Assumed to be either 100% incineration or 100% landfill, depending on national waste management scenarios.	As appropriate

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

Scenario information/Materiel	Value	Unit
Exported electrical energy	0,179 – 0,242	MJ
Exported thermal energy	0,532 – 0,718	MJ

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

Scenario information/Materiel	Value	Unit
Exported electrical energy	3,58 – 4,83	MJ
Exported thermal energy	10,6 – 14,4	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	0,847 – 1,14	MJ
Exported thermal energy	0	MJ

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

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

Publisher	www.epddanmark.dk
Programme operator	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA-practitioner	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA software /background data	Thinkstep GaBi 10.5 2021, incl. databases www.gabi.sphera.com Ecoinvent 3.6 www.ecoinvent.org
3rd party verifier	Linda Høibye Life Cycle Assessment Consulting Hoeibye@gmail.com

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Version 2.0
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