

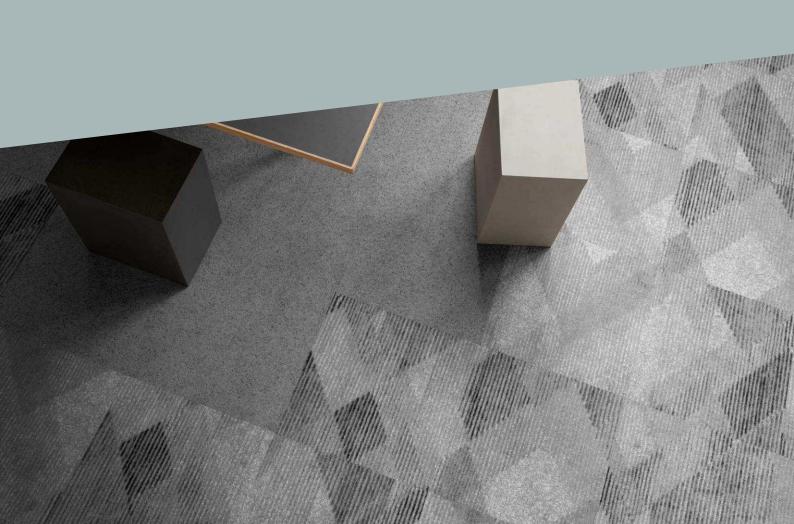


Owner: Ege Carpets A/S
No.: MD-21082-EN
Issued: 23-03-2022
Valid to: 23-03-2027

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





Programme

EPD Danmark www.epddanmark.dk



☐ Industry EPD

 $oxed{\boxtimes}$ Product EPD

Declared products

 1 m^2 Tufted carpet tile with PA6 pile material and ECT350 felt (PET) backing.

Number of declared datasets/product variations: 2

- Highline 630 Ecotrust 350.
- o Highline 750 Ecotrust 350.

Production site

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

Products use

Tufted carpet tiles for use as floor coverings in buildings.

Functional unit

1 m² of tufted carpet tile

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-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

 $oxed{\boxtimes}$ external

Third party verifier:



artha Katrine Sørensen EPD Danmark

Life cycle stages and modules (MND = module not declared) Construction Beyond the system Product End of life Use process boundary Waste processing Re-use, recovery and recycling potential De-construction Manufacturing Refurbishment Replacement Operational water use potential Raw material Maintenance Operational energy use Installatior demolition Transport Transport Transport Disposal process supply Repair Use Α1 Α2 А3 Α4 Α5 В1 B2 ВЗ В4 В5 В6 В7 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	Highline 630 Ecotrust 350	Highline 750 Ecotrust 350	Weight- percent age
Polyamide 6	24	28	%
Polyester	18	17	%
Limestone filler	12	11	%
Aluminium- hydroxide filler	12	11	%
Dolomite filler	20	20	%
Latex	12	12	%
Auxiliaries	1	1	%

Representativity

This declaration, including data collection and the modeled foreground system including results, represents the production of 1 m² tufted carpet tile, 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 carpet tiles 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 tile 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 $1 \, \text{m}^2$ tufted carpet tile, for the three product variants listed below.

Highline 630 Ecotrust 350	Value	Unit
Declared unit	1	m ²
Mass	2,60	kg/m²
Conversion factor to 1 kg.	0,3844	-
Highline 750 Ecotrust 350	Value	Unit
Declared unit	1	m ²
Mass	2,72	kg/m²
Conversion factor to 1 kg.	0,3674	-

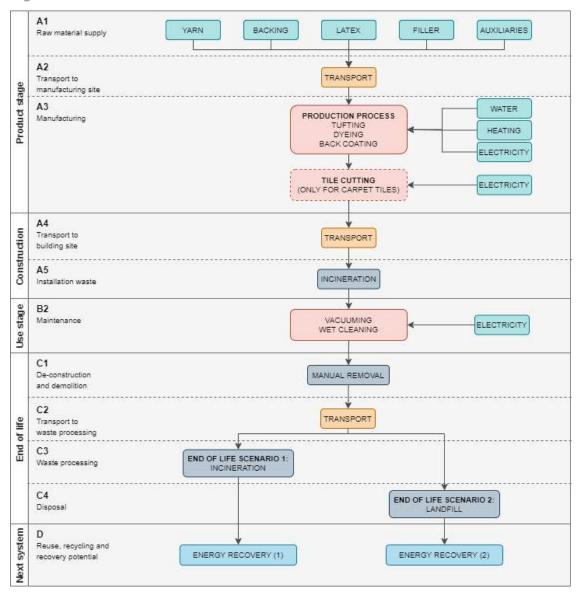
Functional unit

1 m² Tufted carpet tiles 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 tile. Waste flows are allocated per kg, due to a heavier carpet tile 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 carpet tiles are comprised of pile material consisting of nylon, a primary backing of polyester, a secondary backing consisting of polyester, a variety of filler materials, and auxiliary materials for the application of precoating and dyes to the carpet tile. Recycled materials constitute 17% of the content of the carpet tiles.

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 carpet tiles as required to deliver 1 m2 of installed carpet tile, which includes the production of additional carpet tiles 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 m² carpet tile in order to deliver 1 m² of installed carpet tile.

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 carpet tiles 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 carpet tiles in buildings. This is done manually, and no machinery or energy is required, instead the module includes the percentage of carpet tiles 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 carpet tiles. The impacts arising in module B2 are due to vacuuming and wet cleaning of the carpet tile, 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 tile in the following LCA. This is done due to the RSL of the carpet tiles 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 tile is sent to municipal waste incineration, and scenario 2 where the carpet tile is sent to a landfill.

There are no impacts occurring in module C1, as the carpet tiles 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 carpet tiles 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 carpet tiles sent to landfill, including treatment of waste and collection of gas, which is utilized on site resulting in exported electrical energy¹.

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 carpet tiles 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 tile, along with covering the potentials for energy recoverv form End-of-Life scenario (incineration), and secondly 'D/2' covering the same potentials arising during the life of the carpet tile, along with exported energy from Endof-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 630 Ecotrust 350.

	ENVIRONMENTAL IMPACTS PER m2 Highline 630 Ecotrust 350												
Indicator	Unit	A1-A3	A4	A5	В1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
GWP-total	kg CO₂ eq.	1,25E+01	2,30E-01	1,95E-01	0	2,42E-01	0	0	8,76E-03	3,88E+00	4,01E+00	-1,33E+00	-1,38E-01
GWP-fossil	kg CO₂ eq.	1,19E+01	2,26E-01	5,36E-02	0	2,39E-01	0	0	8,59E-03	1,06E+00	3,49E-01	-1,32E+00	-1,38E-01
GWP- biogenic	kg CO₂ eq.	5,86E-01	2,55E-03	1,41E-01	0	-2,73E-03	0	0	9,73E-05	2,82E+00	3,66E+00	-5,45E-03	-5,57E-04
GWP-luluc	kg CO₂ eq.	1,71E-02	1,87E-03	3,56E-06	0	6,14E-03	0	0	7,11E-05	0,00E+00	1,56E-04	-1,87E-03	-2,71E-04
ODP	kg CFC 11 eq.	3,75E-08	4,51E-17	2,94E-10	0	1,05E-09	0	0	1,72E-18	5,88E-09	4,50E-16	-1,10E-14	-2,96E-15
AP	mol H ⁺ eq.	2,00E-02	8,05E-04	1,70E-04	0	5,14E-04	0	0	3,07E-05	3,38E-03	9,52E-04	-2,44E-03	-2,46E-04
EP- freshwater	kg PO₄ eq.	2,27E-04	6,78E-07	2,97E-09	0	9,65E-07	0	0	2,58E-08	3,35E-08	3,52E-05	-6,30E-06	-7,65E-07
EP-marine	kg N eq.	6,37E-03	3,73E-04	7,52E-05	0	1,23E-04	0	0	1,42E-05	1,49E-03	1,85E-03	-7,64E-04	-8,03E-05
EP-terrestrial	mol N eq.	6,21E-02	4,16E-03	8,58E-04	0	1,30E-03	0	0	1,58E-04	1,70E-02	3,44E-03	-7,77E-03	-7,97E-04
POCP	kg NMVOC eq.	1,75E-02	7,27E-04	1,93E-04	0	3,52E-04	0	0	2,77E-05	3,83E-03	2,03E-03	-1,97E-03	-1,99E-04
ADPm ¹	kg Sb eq.	3,47E-06	2,02E-08	3,86E-11	0	8,21E-08	0	0	7,71E-10	6,51E-13	1,28E-08	-2,19E-07	-4,75E-08
ADPf ¹	MJ	2,14E+02	3,04E+00	9,63E-02	0	4,33E+00	0	0	1,16E-01	1,81E+00	2,72E+00	-1,53E+01	-1,63E+00
WDP ¹	m³	m³ 6,67E-01 2,12E-03 2,33E-02 0 4,42E-02 0 0 8,07E-05 4,66E-01 1,34E-02 -1,24E-01 -1,29E-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;												
					= Ab		on Potent	ial – n	ninerals and			Eutrophication Depletion Pote	
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 630 Ecotrust 350												
Parameter	Unit	A1-A3	A4	A5	В1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
PM	[Disease incidence]	1,77E-07	4,63E-09	4,89E-10	0	6,25E-09	0	0	1,76E-10	9,60E-09	9,18E-09	-2,04E-08	-2,17E-09
IRP ²	[kBq U235 eq.]	5,36E-01	8,10E-04	7,43E-05	0	9,79E-02	0	0	3,08E-05	1,45E-03	4,53E-03	-4,20E-02	-1,10E-02
ETP-fw ¹	[CTUe]	1,44E+02	2,26E+00	6,61E-02	0	1,82E+00	0	0	8,60E-02	1,24E+00	6,36E+00	-4,08E+00	-5,12E-01
HTP-c ¹	[CTUh]	5,71E-09	4,56E-11	4,99E-12	0	6,76E-11	0	0	1,74E-12	9,81E-11	1,26E-10	-2,73E-10	-4,60E-11
HTP-nc ¹	[CTUh]	2,43E-07	2,72E-09	5,07E-10	0	2,44E-09	0	0	1,04E-10	1,00E-08	1,40E-08	-1,13E-08	-1,24E-09
SQP ¹	-	6,56E+01	1,05E+00	1,99E-03	0	1,56E+00	0	0	3,98E-02	0,00E+00	1,85E-01	-2,53E+01	-2,67E+00
Caption	PM = Pa	articulate Ma				radiation – nc = Human						TP-c = Humar	toxicity –
Disclaimers	¹ The	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.											
		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 onsider 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 630 Ecotrust 350												
Parameter	Unit	A1-A3	A4	A5	В1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
PERE	[MJ]	4,02E+01	1,75E-01	4,33E-04	0	1,91E+00	0	0	6,67E-03	1,99E-03	1,97E-01	-1,20E+01	-2,39E+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]	4,02E+01	1,75E-01	4,33E-04	0	1,91E+00	0	0	6,67E-03	1,99E-03	1,97E-01	-1,20E+01	-2,39E+00
PENRE	[MJ]	1,61E+02	3,05E+00	9,63E-02	0	4,33E+00	0	0	1,16E-01	1,81E+00	2,72E+00	-1,53E+01	-1,63E+00
PENRM	[MJ]	5,35E+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]	2,14E+02	3,05E+00	9,63E-02	0	4,33E+00	0	0	1,16E-01	1,81E+00	2,72E+00	-1,53E+01	-1,63E+00
SM	[kg]	5,84E-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]	4,14E+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]	3,53E-02	2,00E-04	5,43E-04	0	1,98E-03	0	0	7,64E-06	1,09E-02	3,90E-04	-5,87E-03	-1,03E-03
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources; PENRE = Use of non renewable primary energy resources; PENRE = Use of non renewable primary energy resources; PENRE = Use of 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												

				econdary rac	,				ic secondary				
	WASTE CATEGORIES AND OUTPUT FLOWS PER m2 Highline 630 Ecotrust 350												
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
HWD	[kg]	4,33E-04	1,61E-10	3,06E-13	0	7,11E-06	0	0	6,13E-12	0,00E+00	4,89E-10	-2,21E-08	-2,88E-09
NHWD	[kg]	1,81E-01	4,79E-04	9,12E-07	0	3,19E-03	0	0	1,82E-05	0,00E+00	1,89E+00	-5,71E-02	-6,28E-03
RWD	[kg]	2,24E-03	5,54E-06	4,59E-06	0	5,94E-04	0	0	2,11E-07	9,16E-05	3,16E-05	-3,76E-04	-9,85E-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]	2,35E-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]	5,35E-01	0,00E+00	1,30E-01	0	0,00E+00	0	0	0,00E+00	2,60E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	2,58E+00	0,00E+00	1,53E-01	0	0,00E+00	0	0	0,00E+00	5,65E+00	1,09E+00	0,00E+00	0,00E+00
EET	[MJ]	1,10E+01	0,00E+00	6,54E-01	0	0,00E+00	0	0	0,00E+00	2,42E+01	0,00E+00	0,00E+00	0,00E+00
Caption								cover				d; CRU = Cor EET = Export	mponents for ed Thermal





Highline 750 Ecotrust 350.

	ENVIRONMENTAL IMPACTS PER m2 Highline 750 Ecotrust 350												
Indicator	Unit	A1-A3	A4	A5	В1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
GWP-total	kg CO₂ eq.	1,40E+01	2,41E-01	2,03E-01	0	2,42E-01	0	0	9,17E-03	4,06E+00	4,19E+00	-1,39E+00	-1,45E-01
GWP-fossil	kg CO₂ eq.	1,34E+01	2,36E-01	5,60E-02	0	2,39E-01	0	0	8,99E-03	1,11E+00	3,65E-01	-1,38E+00	-1,44E-01
GWP- biogenic	kg CO₂ eq.	6,30E-01	2,67E-03	1,47E-01	0	-2,73E-03	0	0	1,02E-04	2,95E+00	3,83E+00	-5,70E-03	-5,82E-04
GWP-luluc	kg CO₂ eq.	1,74E-02	1,95E-03	3,72E-06	0	6,14E-03	0	0	7,44E-05	0,00E+00	1,63E-04	-1,95E-03	-2,83E-04
ODP	kg CFC 11 eq.	3,77E-08	4,72E-17	3,08E-10	0	1,05E-09	0	0	1,80E-18	6,15E-09	4,70E-16	-1,15E-14	-3,10E-15
AP	mol H ⁺ eq.	2,18E-U2 8,42E-U4 1,/8E-U4 U 5,14E-U4 U U 3,21E-U5 3,53E-U3 9,96E-U4 -2,56E-U3 -2,58E-U4											
EP- freshwater	kg PO₄ eq.	2,29E-04	7,10E-07	3,10E-09	0	9,65E-07	0	0	2,70E-08	3,50E-08	3,69E-05	-6,59E-06	-8,00E-07
EP-marine	kg N eq.	7,00E-03	3,90E-04	7,87E-05	0	1,23E-04	0	0	1,48E-05	1,56E-03	1,93E-03	-7,99E-04	-8,40E-05
EP-terrestrial	mol N eq.	6,77E-02	4,35E-03	8,98E-04	0	1,30E-03	0	0	1,66E-04	1,78E-02	3,60E-03	-8,13E-03	-8,34E-04
POCP	kg NMVOC eq.	1,93E-02	7,61E-04	2,02E-04	0	3,52E-04	0	0	2,90E-05	4,01E-03	2,12E-03	-2,06E-03	-2,09E-04
ADPm ¹	kg Sb eq.	3,65E-06	2,12E-08	4,04E-11	0	8,21E-08	0	0	8,07E-10	6,81E-13	1,34E-08	-2,29E-07	-4,97E-08
ADPf ¹	MJ	2,41E+02	3,18E+00	1,01E-01	0	4,33E+00	0	0	1,21E-01	1,89E+00	2,84E+00	-1,60E+01	-1,70E+00
WDP ¹	m³	m³ 6,11E-01 2,22E-03 2,44E-02 0 4,42E-02 0 0 8,44E-05 4,88E-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;												
					= Ab		on Potent	tial – n	ninerals and			Eutrophication Depletion Pote	
Disclaimer	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.												

	,	ADDITIO	NAL EN	/IRONM	ENT	AL IMPA	CTS PI	ER m2	Highlin	e 750 E c	otrust 3	50	
Parameter	Unit	A1-A3	A4	A5	В1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
PM	[Disease incidence]	1,88E-07	4,84E-09	5,12E-10	0	6,25E-09	0	0	1,84E-10	1,00E-08	9,60E-09	-2,13E-08	-2,27E-09
IRP ²	[kBq U235 eq.]	5,52E-01	8,47E-04	7,77E-05	0	9,79E-02	0	0	3,23E-05	1,52E-03	4,74E-03	-4,40E-02	-1,15E-02
ETP-fw ¹	[CTUe]	1,59E+02	2,36E+00	6,91E-02	0	1,82E+00	0	0	8,99E-02	1,29E+00	6,65E+00	-4,26E+00	-5,35E-01
HTP-c ¹	[CTUh]	6,13E-09	4,77E-11	5,22E-12	0	6,76E-11	0	0	1,82E-12	1,03E-10	1,32E-10	-2,85E-10	-4,81E-11
HTP-nc ¹	[CTUh]	2,63E-07	2,85E-09	5,31E-10	0	2,44E-09	0	0	1,09E-10	1,05E-08	1,46E-08	-1,18E-08	-1,30E-09
SQP ¹	-	6,64E+01	1,09E+00	2,08E-03	0	1,56E+00	0	0	4,17E-02	0,00E+00	1,93E-01	-2,64E+01	-2,79E+00
Caption	PM = Pa	articulate Ma		,	_	radiation – nc = Human		,		,	,	TP-c = Humar	toxicity –
Disclaimers	¹ The	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 750 Ecotrust 350												
Parameter	Unit	A1-A3	A4	A5	В1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
PERE	[MJ]	4,13E+01	1,83E-01	4,53E-04	0	1,91E+00	0	0	6,97E-03	2,08E-03	2,06E-01	-1,26E+01	-2,50E+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]	4,13E+01	1,83E-01	4,53E-04	0	1,91E+00	0	0	6,97E-03	2,08E-03	2,06E-01	-1,26E+01	-2,50E+00
PENRE	[MJ]	1,83E+02	3,19E+00	1,01E-01	0	4,33E+00	0	0	1,22E-01	1,89E+00	2,84E+00	-1,60E+01	-1,70E+00
PENRM	[MJ]	5,82E+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]	2,41E+02	3,19E+00	1,01E-01	0	4,33E+00	0	0	1,22E-01	1,89E+00	2,84E+00	-1,60E+01	-1,70E+00
SM	[kg]	5,85E-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]	4,15E+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	FW [m³] 3,69E-02 2,10E-04 5,68E-04 0 1,98E-03 0 0 7,99E-06 1,14E-02 4,08E-04 -6,15E-03 -1,08E-03												
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources; PENRE = Use of non renewable primary energy resources; PENRE = Use of non renewable primary energy resources; PENRE = Use of non renewable primary energy resources used as raw materials; PENRT = Use of non renewable primary energy resources; SM = Use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of non renewable secondary fuels; FW = Net use of fresh water												

	WASTE CATEGORIES AND OUTPUT FLOWS PER m2 Highline 750 Ecotrust 350												
Parameter	Unit	A1-A3	A4	А5	В1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
HWD	[kg]	4,34E-04	1,68E-10	3,21E-13	0	7,11E-06	0	0	6,41E-12	0,00E+00	5,11E-10	-2,31E-08	-3,01E-09
NHWD	[kg]	1,91E-01	5,01E-04	9,54E-07	0	3,19E-03	0	0	1,91E-05	0,00E+00	1,97E+00	-5,98E-02	-6,57E-03
RWD	[kg]	2,40E-03	5,79E-06	4,80E-06	0	5,94E-04	0	0	2,21E-07	9,58E-05	3,30E-05	-3,93E-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]	2,46E-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]	5,60E-01	0,00E+00	1,36E-01	0	0,00E+00	0	0	0,00E+00	2,72E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	2,70E+00	0,00E+00	1,82E-01	0	0,00E+00	0	0	0,00E+00	6,36E+00	1,15E+00	0,00E+00	0,00E+00
EET	[MJ]	1,15E+01	0,00E+00	7,78E-01	0	0,00E+00	0	0	0,00E+00	2,73E+01	0,00E+00	0,00E+00	0,00E+00
Caption							energy r						omponents for rted Thermal





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/m³
Capacity utilisation volume factor	1	-

Installation of the product in the building (A5)

Scenario information	Value	Unit
Ancillary materials	0	kg
Water use	0	m³
Other resource use	0	kg
Energy type and consumption	0	kWh
Waste materials (5%)	0,13 - 0,136	kg
Output materials (installed carpet tile)	2,6 – 2,72	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				
Design application parameters				
Assumed quality of work	Information for all topics can be found on the			
Outdoor environment	following website, by entering the product information:			
Indoor environment	https://www.egecarpets.com/carpets			
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	m³
Net fresh water consumption during maintenance	2,93E-04	m³
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	2,6 – 2,72	kg
For reuse	0	kg
For recycling	0	kg
For energy recovery – Scenario 1	2,6 – 2,72	kg
For final disposal – Scenario 2	2,6 – 2,72	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	0,232 - 0,242	MJ
Exported thermal energy	0,688 - 0,72	MJ

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

Scenario information/Materiel	Value	Unit
Exported electrical energy	4,63 – 4,85	MJ
Exported thermal energy	13,8 - 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	1,09 – 1,15	МЈ
Exported thermal energy	0	МЈ

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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

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	L epddanmark
	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
3 rd party verifier	Linda Høibye Life Cycle Assessment Consulting <u>Hoeibye@gmail.com</u>

General programme instructions

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



LCA Results acc. EN15804+A1:2013

Appendix for MD-21082-EN Valid to: 23-03-2027



This appendix refers to the EPD >MD-21082-EN<, developed according to EN15804+A2:2019. Results in the appendix communicates LCA results in the format described in EN15804+A1:2013, in order to accommodate a need in the transition period between the two standard revisions. The appendix cannot stand alone, as the reference EPD describes the basis of the assessment.

		ENV1	RONM	ENTAL :	[MPAC	TS PER	m2 Hig	hline 6	530 Eco	trust 3	50		
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
GWP	[kg CO₂- eq.]	1,22E+01	2,24E-01	1,94E-01	0	2,30E-01	0	0	8,53E-03	3,88E+00	2,97E+00	-1,30E+00	-1,35E-01
ODP	[kg CFC11- eq.]	3,60E-08	6,01E-17	3,77E-10	0	1,40E-09	0	0	2,29E-18	7,55E-09	6,00E-16	-1,47E-14	-3,95E-15
AP	[kg SO₂- eq.]	1,55E-02	5,55E-04	1,18E-04	0	4,12E-04	0	0	2,11E-05	2,34E-03	7,27E-04	-1,88E-03	-1,89E-04
EP	[kg PO ₄ ³ eq.]	3,37E-03	1,34E-04	2,65E-05	0	6,23E-05	0	0	5,11E-06	5,25E-04	4,36E-03	-3,46E-04	-3,75E-05
POCP	[kg ethene- eq.]	1,63E-03	-1,99E-04	6,41E-06	0	4,60E-05	0	0	-7,58E-06	1,36E-04	7,36E-04	-2,03E-04	-1,98E-05
ADPE	[kg Sb-eq.]	3,15E-06	2,03E-08	-6,40E-08	0	8,57E-08	0	0	7,72E-10	-1,28E-06	1,30E-08	-2,21E-07	-4,81E-08
ADPF	[MJ]	2,08E+02	3,01E+00	7,88E-02	0	2,81E+00	0	0	1,15E-01	1,46E+00	2,63E+00	-1,41E+01	-1,37E+00
Caption	GWP = Global warming potential; ODP = Ozone depletion potential; AP = Acidification potential of soil and water; EP = Eutrophication												

			RES	SOURCE	USE P	ER m2	Highlin	e 63	0 Ecotr	ust 350			
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
PERE	[MJ]	4,02E+01	1,75E-01	4,33E-04	0	1,91E+00	0	0	6,67E-03	1,99E-03	1,97E-01	-1,20E+01	-2,39E+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]	4,02E+01	1,75E-01	4,33E-04	0	1,91E+00	0	0	6,67E-03	1,99E-03	1,97E-01	-1,20E+01	-2,39E+00
PENRE	[MJ]	1,61E+02	3,05E+00	9,63E-02	0	4,33E+00	0	0	1,16E-01	1,81E+00	2,72E+00	-1,53E+01	-1,63E+00
PENRM	[MJ]	5,35E+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]	2,14E+02	3,05E+00	9,63E-02	0	4,33E+00	0	0	1,16E-01	1,81E+00	2,72E+00	-1,53E+01	-1,63E+00
SM	[kg]	5,84E-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]	4,14E+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]	3,53E-02	2,00E-04	5,43E-04	0	1,98E-03	0	0	7,64E-06	1,09E-02	3,90E-04	-5,87E-03	-1,03E-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 pop renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM =												

		idels; FW = Ose of flet fresh water											
	WASTE CATEGORIES AND OUTPUT FLOWS PER m2 Highline 630 Ecotrust 350												
Parameter	Unit	A1-A3	A4	A5	В1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
HWD	[kg]	4,33E-04	1,61E-10	3,06E-13	0	7,11E-06	0	0	6,13E-12	0,00E+00	4,89E-10	-2,21E-08	-2,88E-09
NHWD	[kg]	1,81E-01	4,79E-04	9,12E-07	0	3,19E-03	0	0	1,82E-05	0,00E+00	1,89E+00	-5,71E-02	-6,28E-03
RWD	[kg]	2,24E-03	5,54E-06	4,59E-06	0	5,94E-04	0	0	2,11E-07	9,16E-05	3,16E-05	-3,76E-04	-9,85E-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]	2,35E-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]	5,35E-01	0,00E+00	1,30E-01	0	0,00E+00	0	0	0,00E+00	2,60E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	2,58E+00	0,00E+00	1,53E-01	0	0,00E+00	0	0	0,00E+00	5,65E+00	1,09E+00	0,00E+00	0,00E+00
EET	[MJ]	1,10E+01	0,00E+00	6,54E-01	0	0,00E+00	0	0	0,00E+00	2,42E+01	0,00E+00	0,00E+00	0,00E+00
Caption						= Non haz ecycling; N EET = Ex		erials for	energy rec				



LCA Results acc. EN15804+A1:2013

Appendix for MD-21082-EN Valid to: 23-03-2027



	ENVIRONMENTAL IMPACTS PER m2 Highline 750 Ecotrust 350													
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2	
GWP	[kg CO₂- eq.]	1,37E+01	2,34E-01	2,03E-01	0	2,30E-01	0	0	8,93E-03	4,06E+00	3,11E+00	-1,36E+00	-1,41E-01	
ODP	[kg CFC11- eq.]	3,61E-08	6,29E-17	3,95E-10	0	1,40E-09	0	0	2,40E-18	7,89E-09	6,27E-16	-1,54E-14	-4,13E-15	
AP	[kg SO₂- eq.]	1,69E-02	5,80E-04	1,24E-04	0	4,12E-04	0	0	2,21E-05	2,45E-03	7,61E-04	-1,97E-03	-1,97E-04	
EP	[kg PO ₄ ³ eq.]	3,62E-03	1,40E-04	2,77E-05	0	6,23E-05	0	0	5,34E-06	5,49E-04	4,56E-03	-3,62E-04	-3,93E-05	
POCP	[kg ethene- eq.]	1,85E-03	-2,08E-04	6,71E-06	0	4,60E-05	0	0	-7,92E-06	1,42E-04	7,70E-04	-2,13E-04	-2,07E-05	
ADPE	[kg Sb-eq.]	3,32E-06	2,12E-08	-6,70E-08	0	8,57E-08	0	0	8,08E-10	-1,34E-06	1,36E-08	-2,31E-07	-5,03E-08	
ADPF	[MJ]	2,34E+02	3,15E+00	8,25E-02	0	2,81E+00	0	0	1,20E-01	1,53E+00	2,75E+00	-1,47E+01	-1,43E+00	
Caption	GWP = Glol potential; P				reation po		PE = Abiot	ic depletio	n potentia					

			RES	OURCE	USE PE	R m2 F	lighline	750 E	cotrust	350			
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
PERE	[MJ]	4,13E+01	1,83E-01	4,53E-04	0	1,91E+00	0	0	6,97E-03	2,08E-03	2,06E-01	-1,26E+01	-2,50E+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]	4,13E+01	1,83E-01	4,53E-04	0	1,91E+00	0	0	6,97E-03	2,08E-03	2,06E-01	-1,26E+01	-2,50E+00
PENRE	[MJ]	1,83E+02	3,19E+00	1,01E-01	0	4,33E+00	0	0	1,22E-01	1,89E+00	2,84E+00	-1,60E+01	-1,70E+00
PENRM	[MJ]	5,82E+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]	2,41E+02	3,19E+00	1,01E-01	0	4,33E+00	0	0	1,22E-01	1,89E+00	2,84E+00	-1,60E+01	-1,70E+00
SM	[kg]	5,85E-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]	4,15E+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]	3,69E-02	2,10E-04	5,68E-04	0	1,98E-03	0	0	7,99E-06	1,14E-02	4,08E-04	-6,15E-03	-1,08E-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;												

WASTE CATEGORIES AND OUTPUT FLOWS PER m2 Highline 750 Ecotrust 350													
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3-B7	C1	C2	C3/1	C4/2	D/1	D/2
HWD	[kg]	4,34E-04	1,68E-10	3,21E-13	0	7,11E-06	0	0	6,41E-12	0,00E+00	5,11E-10	-2,31E-08	-3,01E-09
NHWD	[kg]	1,91E-01	5,01E-04	9,54E-07	0	3,19E-03	0	0	1,91E-05	0,00E+00	1,97E+00	-5,98E-02	-6,57E-03
RWD	[kg]	2,40E-03	5,79E-06	4,80E-06	0	5,94E-04	0	0	2,21E-07	9,58E-05	3,30E-05	-3,93E-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]	2,46E-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]	5,60E-01	0,00E+00	1,36E-01	0	0,00E+00	0	0	0,00E+00	2,72E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	2,70E+00	0,00E+00	1,82E-01	0	0,00E+00	0	0	0,00E+00	6,36E+00	1,15E+00	0,00E+00	0,00E+00
EET	[MJ]	1,15E+01	0,00E+00	7,78E-01	0	0,00E+00	0	0	0,00E+00	2,73E+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												

Checked and approved by

Linda Høibye
Third party verifier of MD-21082-EN

Martha Katrine Sørensen EPD Danmark