Annexe

For a product with a total pile weight of 540 g/m²

to the

ENVIRONMENTAL PRODUCT DECLARATION
as per ISO 14025 and EN 15804

Owner of the Declaration	**Object Carpet**
Declaration number	**EPD-OBJ-20230573-CBA1-EN**
Issue date	**04.04.2024**
Valid to	**03.04.2029**

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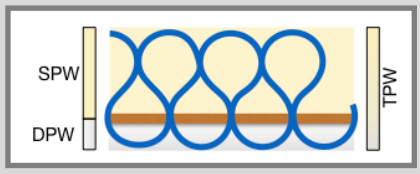
OBJECT CARPET

General Information on the annexe

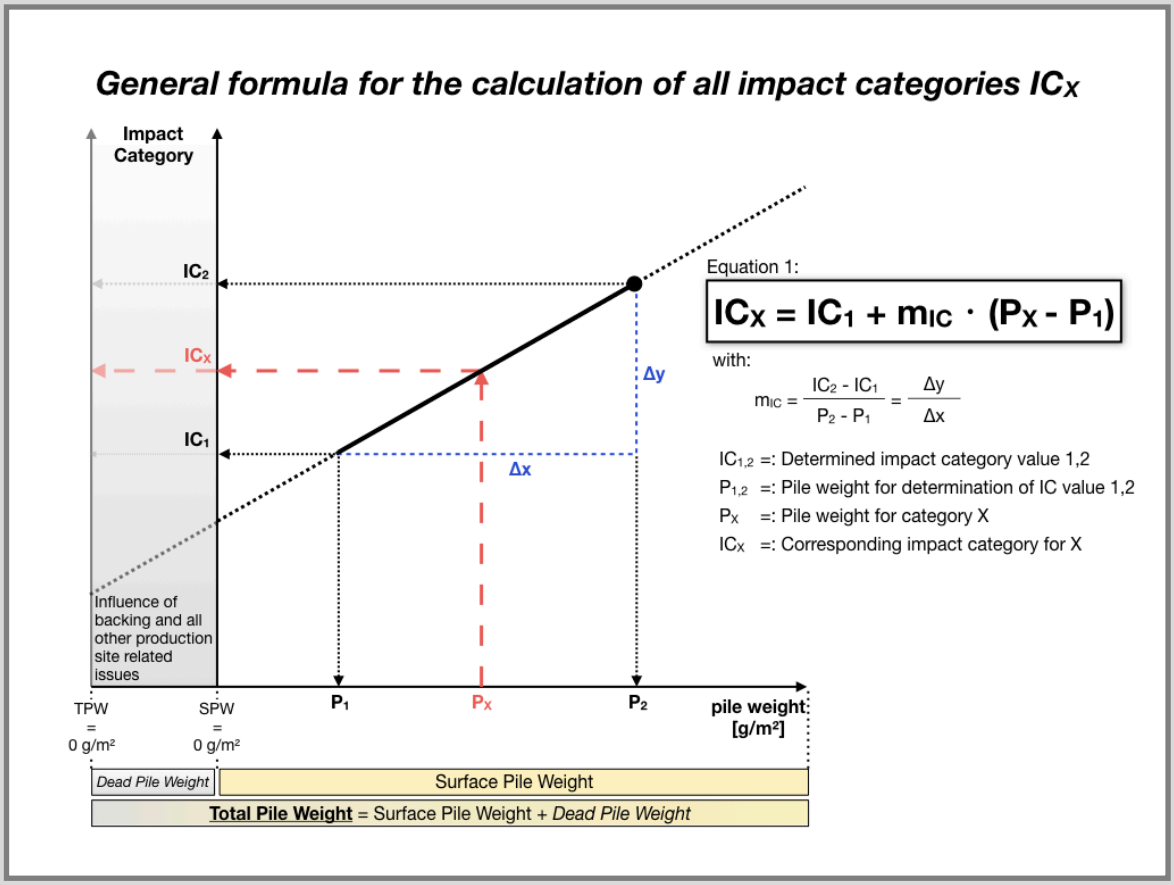
The EPD document is valid for all products with a total pile weight lower or equal to the declared maximum pile weight of 1150 g/m².

LCA results show a linear correlation with the total pile weight for all impact categories (IC) and all modules (A-D). It is possible to calculate specific LCA results (IC_x) for every carpet (x) within the declared group of products in relation to its total pile weight (P_x).
The total pile weight (TPW) is the sum of surface pile weight (SPW) and dead pile weight (DPW):

TPW = SPW + DPW



The surface pile weight is the technical relevant value according to EN 1307 and has to be mentioned in technical specification. As shown in the figure below alternatively to the total pile weight the surface pile weight can be used to calculate LCA results (ICx).



Graph 1: General formula for the calculation of all impact categories IC_X.

OBJECT CARPET

1. Information on the product with a total pile weight of 540 g/m²

Complementary technical data

Base materials / Ancillary materials

Name	Value for category	Unit
Polyamide 6	32,9	%
Polyester	67,1	%
Recycled content out of total weight	66,6	%

LCA: Declared Unit

Name	Value for category	Unit
Declared unit	1,0	m²
Grammage	1,64	kg/m²

LCA: Scenarios and additional technical information

All indicated values refer to the declared functional unit

Transport to the construction site (A4)

Name	Value for category	Unit
Litres of fuel (truck, EURO 0-6 mix)	0,0045	l/100km
Transport distance	700	km
Capacity utilisation (including empty runs)	55	%

Installation in the building (A5)

Name	Value for category	Unit
Material lost	0,15	kg

Maintenance (B2)
Indication per m² and year

Name	Value for category	Unit
Maintenance cycle (wet cleaning)	1,5	1/year
Maintenance cycle (vacuum cleaning)	208	1/year
Water consumption (wet cleaning)	0,004	m³
Cleaning agent (wet cleaning)	0,09	kg
Electricity consumption	0,314	kWh

End of Life (C1-C4)

Name	Value for category	Unit
Collected as mixed construction waste (scenario 1 and 2)	1,640	kg/m²
Collected separately (scenario 3)	1,640	kg/m²
Landfilling (scenario 1)	1,640	kg/m²
Energy recovery (scenario 2)	1,640	kg/m²
Energy recovery (scenario 3)	1,640	kg/m²
Recycling (scenario 3)	0,000	kg/m²

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LCA: Results for the product with a total pile weight of 540 g/m²

The declared result figures in module B2 have to be multiplied by the assumed service time (in years) of the floor covering in the building considered.

Information on non-relevant modules:
Modules B3 - B7 are not relevant during the service life of the carpet.
Modules C3/1, C4/2 and C4/3 cause no additional impact.
Module C2 represents the transport for scenarios 1, 2 and 3.

Description of the system boundary

(X = Included in LCA; MNR = Module not relevant; MND = Module not declared)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
raw material supply	transport	manufacturing	transport from the gate to the site	assembly	use	maintenance	repair	replacement	refurbishment	operational energy use	operational water use	de-construction demolition	transport	waste processing	disposal	reuse, 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	MNR	MNR	MNR	MND	MND	X	X	X	X	X

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Results of the LCA - Environmental impact: 1 m² floor covering

Para-meter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3/2	C3/3	C4/1	D/A5	D/1	D/2	D/3
GWP-total	[kg CO2-eq]	4,60E+00	1,27E-01	7,77E-01	0,00E+00	5,44E-01	0,00E+00	6,72E-03	3,75E+00	3,78E+00	1,11E-01	-3,83E-02	0,00E+00	-4,25E-01	-3,31E-02
GWP-fossil	[kg CO2-eq]	4,75E+00	1,25E-01	7,76E-01	0,00E+00	3,44E-01	0,00E+00	6,65E-03	3,75E+00	3,78E+00	1,11E-01	-3,82E-02	0,00E+00	-4,25E-01	-3,31E-02
GWP-biogenic	[kg CO2-eq]	-1,56E-01	2,93E-04	4,67E-05	0,00E+00	2,86E-03	0,00E+00	1,56E-05	2,19E-04	2,61E-04	0,00E+00	-3,71E-05	0,00E+00	-4,12E-04	-1,45E-05
GWP-lucluc	[kg CO2-eq]	4,39E-03	1,19E-03	5,05E-04	0,00E+00	1,96E-01	0,00E+00	6,29E-05	5,95E-06	1,64E-04	9,28E-05	-2,38E-06	0,00E+00	-2,65E-05	-1,85E-05
ODP	[kg CFC11-eq]	6,70E-09	1,10E-14	6,03E-10	0,00E+00	3,42E-08	0,00E+00	6,08E-16	3,04E-13	3,95E-13	1,90E-13	-1,88E-13	0,00E+00	-2,09E-12	-7,58E-14
AP	[mol H+-eq]	1,16E-02	7,88E-04	1,33E-03	0,00E+00	7,80E-04	0,00E+00	4,18E-05	2,42E-03	2,54E-03	3,38E-04	-4,06E-05	0,00E+00	-4,51E-04	-1,05E-04
EP-fw	[kg P-eq]	3,04E-05	4,67E-07	2,79E-06	0,00E+00	4,98E-06	0,00E+00	2,48E-08	8,29E-08	1,54E-07	2,17E-05	-2,00E-08	0,00E+00	-2,23E-07	-3,94E-08
EP-mar.	[kg N-eq]	4,01E-03	3,86E-04	5,04E-04	0,00E+00	1,97E-04	0,00E+00	2,05E-05	1,19E-03	1,24E-03	7,75E-05	-1,32E-05	0,00E+00	-1,47E-04	-3,57E-05
EP-ter.	[Mol N-eq]	3,82E-02	4,29E-03	5,05E-03	0,00E+00	2,83E-03	0,00E+00	2,27E-04	1,36E-02	2,77E-03	8,51E-04	-1,42E-04	0,00E+00	-1,58E-03	-3,91E-04
POCP	[kg NMVOC-eq]	1,10E-02	7,31E-04	1,33E-03	4,18E-04	9,86E-04	0,00E+00	3,88E-05	3,05E-03	3,15E-03	2,46E-04	-3,75E-05	0,00E+00	-4,16E-04	-1,11E-04
ADPE	[kg Sb-eq]	6,47E-07	8,32E-09	5,92E-08	0,00E+00	2,05E-07	0,00E+00	4,41E-10	2,86E-09	4,43E-09	2,98E-09	-1,13E-09	0,00E+00	-1,25E-08	-1,10E-09
ADPF	[MJ]	8,72E+01	1,74E+00	8,10E+00	0,00E+00	6,70E+00	0,00E+00	9,24E-02	1,01E+00	1,46E+00	1,68E+00	-7,41E-01	0,00E+00	-8,23E+00	-6,07E+00
WDP	[m^3 world eq deprived]	3,45E+00	1,48E-03	3,42E-01	0,00E+00	8,47E-02	0,00E+00	7,83E-05	3,50E-01	3,51E-01	-1,59E-03	-1,62E-03	0,00E+00	-1,80E-02	-4,20E-03

Caption	**GWP** = Global warming potential; **ODP** = Depletion potential of the stratospheric ozone layer; **AP** = Acidification potential of land and water; **EP** = Eutrophication potential (fw = freshwater, mar = marine, ter. = terrestrial; **POCP** = Formation potential of tropospheric ozone photochemical oxidants; **ADPE** = Abiotic depletion potential for non-fossil resources; **ADPF** = Abiotic depletion potential for fossil resources; **WDP** = Water depletion potential

OBJECT CARPET

Results of the LCA - Resource use: 1 m² floor covering

Para-meter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3/2	C3/3	C4/1	D/A5	D/1	D/2	D/3
PERE	[MJ]	3,21E+01	1,23E-01	3,17E+00	0,00E+00	2,92E+00	0,00E+00	6,54E-03	1,84E-01	2,29E-01	1,52E-01	-5,80E-02	0,00E+00	-6,45E-01	-4,61E-02
PERM	[MJ]	2,34E-01	0,00E+00	-2,34E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,23E+01	1,23E-01	2,94E+00	0,00E+00	2,92E+00	0,00E+00	6,54E-03	1,84E-01	2,29E-01	1,52E-01	-5,80E-02	0,00E+00	-6,45E-01	-4,61E-02
PENRE	[MJ]	7,45E+01	1,75E+00	8,41E+00	0,00E+00	6,71E+00	0,00E+00	9,26E-02	1,35E+01	1,40E+01	1,69E+00	-7,41E-01	0,00E+00	-8,23E+00	-6,08E+00
PENRM	[MJ]	1,28E+01	0,00E+00	-2,94E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,25E+01	-1,25E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	8,73E+01	1,75E+00	8,11E+00	0,00E+00	6,71E+00	0,00E+00	9,26E-02	1,02E+00	1,46E+00	1,69E+00	-7,41E-01	0,00E+00	-8,23E+00	-6,08E+00
SM	[kg]	1,22E+00	0,00E+00	1,10E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m³]	9,11E-02	1,36E-04	8,95E-03	0,00E+00	2,90E-03	0,00E+00	7,21E-06	2,27E-01	8,30E-03	1,66E-05	-9,69E-05	0,00E+00	-1,08E-03	-5,21E-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** = Use of net fresh water

Results of the LCA - Output flows and waste categories: 1 m² floor covering

Para-meter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3/2	C3/3	C4/1	D/A5	D/1	D/2	D/3
HWD	[kg]	1,53E-03	6,46E-12	1,38E-04	0,00E+00	4,19E-05	0,00E+00	3,43E-13	9,61E-11	1,09E-10	1,42E-10	-8,13E-11	0,00E+00	-9,04E-10	3,77E-12
NHWD	[kg]	2,18E-01	2,52E-04	2,13E-02	0,00E+00	6,37E-03	0,00E+00	1,33E-05	1,82E-02	1,83E-02	1,63E+00	-1,79E-04	0,00E+00	-1,99E-03	-1,12E-04
RWD	[kg]	3,66E-03	2,26E-06	3,33E-04	0,00E+00	4,93E-04	0,00E+00	1,20E-07	3,96E-05	7,28E-05	1,99E-05	-6,51E-05	0,00E+00	-7,24E-04	-8,61E-06
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,03E-02	0,00E+00	9,27E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	0,00E+00	0,00E+00	5,41E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,01E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	0,00E+00	0,00E+00	9,67E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,07E+01	4,24E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Caption	**HWD** = Hazardous waste disposed; **NHWD** = Non-hazardous waste disposed; **RWD** = Radioactive waste disposed; **CRU** = Components for re-use; **MFR** = Materials for recycling; **MER** = Materials for energy recovery; **EEE** = Exported electrical energy; **EET** = Exported thermal energy

OBJECT CARPET

Results of the LCA - Additional Impact categories: 1 m² floor covering

Para-meter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3/2	C3/3	C4/1	D/A5	D/1	D/2	D/3
PM	[DI]	8,31E-08	4,96E-09	8,53E-09	0,00E+00	6,82E-08	0,00E+00	2,63E-10	6,53E-09	7,32E-09	3,28E-09	-3,63E-10	0,00E+00	-4,03E-09	-1,35E-09
IR	[kBq U235 eq.]	5,63E-01	3,26E-04	5,13E-02	0,00E+00	7,89E-02	0,00E+00	1,73E-05	6,24E-03	1,12E-02	2,95E-03	-9,78E-03	0,00E+00	-1,09E-01	-7,63E-04
ETP-fw	[CTUe]	3,24E+01	1,23E+00	3,06E+00	3,60E-03	1,73E+00	0,00E+00	6,51E-02	2,87E-01	4,68E-01	1,44E+00	-3,93E-02	0,00E+00	1,80E-01	-2,28E+00
HTP-c	[CTUh]	1,54E-09	2,48E-11	1,43E-10	0,00E+00	6,10E-10	0,00E+00	1,32E-12	2,48E-11	2,92E-11	7,38E-11	-4,63E-12	0,00E+00	-5,14E-11	-9,11E-12
HTP-nc	[CTUh]	3,57E-08	1,09E-09	3,35E-09	2,60E-11	6,14E-09	0,00E+00	5,80E-11	3,94E-10	5,74E-10	5,89E-09	-1,69E-10	0,00E+00	-1,88E-09	-2,99E-10
SQP	[Pt]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Caption	**PM** = Incidence of diseases due to PM emissions; **IR** = Human exposure efficiency relative to U235; **ETP-fw** = Comparative toxic unit for ecosystems; **HTP-c** = Comparative toxic unit for humans (carcinogenic); **HTP-nc** = Comparative toxic unit for humans (non-carcinogenic); **SQP** = Soil quality index