

*Godfrey Hirst*

**Feltex**

Mohawk Group



**COMMERCIAL**



# Designer Jet Carpet Tile with Enviro Bac<sup>®</sup> EPD

**ENVIRONMENTAL PRODUCT  
DECLARATION IN ACCORDANCE  
WITH ISO 14025 AND EN  
15804+A2**

**Program:**

Institut Bauen und Umwelt e.V. (IBU)

**EPD Registration number:**

EPD-GHC-20250191-CBA1-EN

**Publication date:**

17 September 2025

**Valid until:**

16 September 2030

**Version:**

1.0 ([1025])

# GH Commercial's Climate Action.

## SUSTAINABILITY IS A CORE VALUE FOR GH COMMERCIAL.

In addition to being a house of market leading brands GH Commercial is privileged to draw on over 160 years manufacturing experience in Australia and New Zealand giving us a unique understanding of our products and their impacts.

As a key pillar of our Believe in Better® approach to sustainability, we are committed to a climate-positive future through our decarbonisation strategy.



**GH Commercial is committed to contributing to its group SBTi 2030 greenhouse gas emissions reductions targets against a 2020 baseline.**

### CURRENT:



Since 2020, we have made significant progress in reducing our scope 1 and 2 greenhouse gas emissions. At the end of 2024, we had achieved a 34% reduction putting us well on track to meet our 2030 target. We are also committed to reducing our scope 3 emissions and the embodied carbon in our products, which is one of the reasons why we have undertaken life cycle assessments and are publishing this EPD.

### OUR TARGETS:



We recognise that Life Cycle Assessments, and this LCA-based Environmental Product Declaration, are important tools for ensuring our clients and specifiers have the transparent product information they need to make informed and more sustainable decisions.

We are proud to be able to provide you with this level of transparent product information, in addition to our other certifications.

# Benefits of this EPD.

**This EPD can contribute to the achievement of credit points under leading green building rating schemes, including Green Star.**

This EPD may help to contribute up to 5 points of Responsible Product Value.



# Declared Unit.

**This EPD provides data for one square meter (1 m<sup>2</sup>) of Designer Jet Precision Dye Injection Tile with a Maximum total pile weight of 882 g/m<sup>2</sup>, 100% polyamide with Enviro Bac<sup>®</sup>**

LCA results for products with the lowest total pile weight of 576 g/m<sup>2</sup> can be taken from the corresponding tables of the annexe of the EPD. Results for specific products with any other total pile weight can be calculated by using equation 1 given in the annexe (see annexe chapter: 'General Information on the annexe').

In the following table, we have undertaken those calculations to show the A1-A3 GWP result for each of our Designer Jet Precision Dye Injection Tile with Enviro Bac<sup>®</sup> product offerings.

**Embodied carbon in our Designer Jet Precision Dye Injection Tile with Enviro Bac<sup>®</sup> products.**

Pile Weight		GWP (kg CO <sub>2eq</sub> )
Oz	Grams per m <sup>2</sup>	
17	576	14
22	746	15.6
24	814	16.33
26	882	16.6

# ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A2

Owner of the Declaration	GH Commercial
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-GHC-20250191-CBA1-EN
Issue date	17.09.2025
Valid to	16.09.2030

**Tufted carpet tiles - Designer Jet Precision Dye Injection Tile With a maximum total pile weight of 882 g/m<sup>2</sup>, 100% polyamide with Enviro Bac®**

**GH Commercial**

[www.ibu-epd.com](http://www.ibu-epd.com) | <https://epd-online.com>



**General Information**

**GH Commercial**

**Programme holder**

IBU – Institut Bauen und Umwelt e.V.  
 Hegelplatz 1  
 10117 Berlin  
 Germany

**Declaration number**

EPD-GHC-20250191-CBA1-EN

**This declaration is based on the product category rules:**

Floor coverings, 01.08.2021  
 (PCR checked and approved by the SVR)

**Issue date**

17.09.2025

**Valid to**

16.09.2030



Dipl.-Ing. Hans Peters  
 (Chairman of Institut Bauen und Umwelt e.V.)



Florian Pronold  
 (Managing Director Institut Bauen und Umwelt e.V.)

**Tufted carpet tiles - Designer Jet Precision Dye Injection Tile With a maximum total pile weight of 882 g/m<sup>2</sup>, 100% polyamide with Enviro Bac®**

**Owner of the declaration**

GH Commercial  
 Factories Road 7  
 3220 South Geelong Victoria  
 Australia

**Declared product / declared unit**

1 m<sup>2</sup> tufted carpet tiles having a pile material of polyamide 6 and a bitumen-based heavy backing.

**Scope:**

The manufacturer's declaration applies to a group of similar products with a maximum total pile weight of 882 g/m<sup>2</sup>. The carpet is manufactured at the Godfrey Hirst production site in Victoria, Australia.

LCA result for products with the lightest total pile weight of 576 g/m<sup>2</sup> can be taken from the corresponding tables of the annexe. Specific data for every product within the declared group of products in relation to its total pile weight can be calculated by using equation 1 given in the annexe (see annexe chapter: 'General Information on the annexe').

The declaration is only valid in conjunction with a valid license from ACCS. The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

The EPD was created according to the specifications of EN 15804+A2. In the following, the standard will be simplified as *EN 15804*.

**Verification**

The standard EN 15804 serves as the core PCR	
Independent verification of the declaration and data according to ISO 14025:2011	
<input type="checkbox"/>	internally
<input checked="" type="checkbox"/>	externally



Sr Lucas Berman,  
 (Independent verifier)

## Product

### Product description/Product definition

Tufted carpet tiles having a pile material of dye injected polyamide 6, a bitumen-based backing and a PET secondary scrim.

The declaration applies to a group of products with a maximum total pile weight of 882 g/m<sup>2</sup>.

LCA results for products with the lightest total pile weight of 576 g/m<sup>2</sup> can be taken from the corresponding tables of the annexe. Results for specific products with any other total pile weight can be calculated by using equation 1 given in the annexe (see annexe chapter: 'General Information on the annexe'). For the placing on the market of the product in the Asia-Pacific (APAC) region, Regulations apply. There are no mandatory regional requirements to place a carpet on the market in Australia and New Zealand.

### Application

According to the Australian Carpet Classification Scheme (ACCS), the products can be used in the contract market. Carpet qualities are classified under the ACCS labelling system according to their ability to perform to expected traffic loadings in standard site conditions. For the contract market, the highest rating is 4 stars. CIAL (Carpet Institute of Australia Limited).

### Technical Data

The performance data listed in the DoP apply.

Name	Value	Unit
Product Form	Tiles 304.8mm x 914.4mm	-
Type of manufacture	Tufted carpet	-
Yarn type	Polyamide 6	-
Colouration	Dye injected	-
Primary backing	Polyester 50% recycled	-
Secondary backing	Polyester	-
Total pile weight	max. 882	g/m <sup>2</sup>
Total carpet weight	max. 3592	g/m <sup>2</sup>

The Australian Carpet Classification Scheme (ACCS), is a national carpet grading scheme covering all types of carpet and all carpet fibres. ACCS carpets are independently tested

according to established procedures and internationally recognised tests (see <http://carpetinstitute.com.au>). Additional product properties in accordance with the Australian Carpet Classification Scheme can be found in the manufacturer's technical information section ([www.ghcommercial.com](http://www.ghcommercial.com)).

### Base materials/Ancillary materials

Name	Value	Unit
Polyamide 6	24,6	%
Polyethylene terephthalate	5,8	%
Bitumen	14,8	%
Limestone	49,5	%
SBS Copolymer	1,1	%
SBR Latex	4,2	%
Additives	0,1	%

The recycled content based on the total weight of the product amounts to a minimum of 1,8 %.

This product contains substances listed in the *ECHA candidate list* (27.06.2024) or other carcinogenic, mutagenic or reprotoxic (CMR) substances in categories 1A or 1B which are not on the candidate list exceeding 0.1 percentage by mass: no  
The products are registered in the ACCS System. The ACCS system ensures compliance with limitations of various chemicals and Volatile Organic Compound (VOC) emissions and a ban on the use of all substances that are listed as 'Substances of Very High Concern' (SVHC) under *REACH*.

### Reference service life

A calculation of the reference service life according to *ISO 15686* is not possible.

The service life of textile floor coverings strongly depends on the correct installation, taking into account the declared use classification and the adherence to cleaning and maintenance instructions.

A minimum service life of 15 years can be assumed; technical service life can be considerably longer.

## LCA: Calculation rules

### Declared Unit

Name	Value	Unit
Declared unit	1	m <sup>2</sup>
Grammage	3.592	kg/m <sup>2</sup>
Layer thickness	0.009	m

The declared unit refers to 1 m<sup>2</sup> of produced textile floor covering. The output of module A5 'Assembly' is 1 m<sup>2</sup> of installed textile floor covering.

### System boundary

#### Type of EPD:

Cradle-to-gate with options, module C1-C4, module D, and additional modules A4, A5, B1, B2.

System boundaries of modules A, B, C, D: Modules C3, C4 and D are indicated separately for three end-of-life scenarios:

0 - landfill disposal (columns C3, C4, D)

1 - municipal waste incineration (columns C3/1, C4/1, D/1)

2 - recovery in a cement plant (columns C3/2, C4/2, D/2)

#### A1-A3 Production:

Energy supply and production of the basic material, processing of secondary material, auxiliary material, transport of the material to the manufacturing site, emissions, waste water landfill disposal of residual waste (except radioactive waste).

Electricity mix: GWPTotal (AU: Grid Mix): 0,796 kg CO<sub>2</sub> eq. / kWh, GWPTotal (AU: Electricity from photovoltaik): 0,0224 kg CO<sub>2</sub> eq. / kWh

#### A4 Transport:

Transport of the packed textile floor covering from factory gate to the place of installation.

#### A5 Installation:

Installation of the textile floor covering, processing of installation waste and packaging waste up to the landfill

disposal of residual waste (except radioactive waste), the production of the amount of carpet that occurs as installation waste, including its transport to the place of installation. Preparation of the floor and auxiliary materials (adhesives, fixing agents, PET connectors) are beyond the system boundaries and not taken into account.

**B1 Use:**

Indoor emissions during the use stage. After the first year, no product-related Volatile Organic Compound (VOC) emissions are relevant due to known VOC decay curves of the product.

**B2 Maintenance:**

Cleaning of the textile floor covering for a period of 1 year: Vacuum cleaning – electricity supply  
Wet cleaning – electricity, water consumption, production of the cleaning agent, waste water treatment.  
The declared values in this module have to be multiplied by the assumed service life of the floor covering in the building in question.

**B3 - B5:**

The modules are not relevant within the assumed reference service life of 15 years.

**B6 - B7:**

No energy and water input are required for the operation of the carpet in the use stage. The modules are not relevant and not declared.

**C1 De-construction:**

The floor covering is deconstructed manually and no additional environmental impact is caused.

**C2 Transport:**

Transport of the carpet waste to a landfill, or to the municipal waste incineration plant (MWI) or to the waste collection facility for recycling.

**C3 Waste processing:**

C3-0: Landfill disposal needs no waste processing.

C3-1: Impact from waste incineration (plant with R1 > 0.6), generated electricity and steam are listed in the result table as exported energy.

C3-2: Collection of the carpet waste for recovery in the cement industry, waste processing (granulating), transport to the cement plant, and emissions from the incineration. The biogenic carbon that is stored in the renewable materials of the floor covering is released into the air as carbon dioxide emissions.

**C4 Disposal:**

C4-0: Impact from landfill disposal,

C4-1: The carpet waste leaves the system in module C3-1,

C4-2: The pre-processed carpet waste leaves the system in module C3-2.

D Recycling potential: Calculated benefits result from materials exclusive of secondary materials (net materials).

D-0: Benefits for generated energy due to landfill disposal of carpet waste at the end of life,

D-1: Benefits for generated energy due to incineration of carpet waste at the end-of-life (incineration plant with R1 > 0.6),

D-2: Benefits for saved fossil energy and saved inorganic material due to the recovery of the carpet in a cement plant.

D-A5 (declared as D/3 in the results table): Benefits for generated energy due to landfill disposal of carpet waste at the installation phase,

**Geographic Representativeness**

Land or region, in which the declared product system is manufactured, used or handled at the end of the product's lifespan: Australia

**Comparability**

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to EN 15804 and the building context, respectively the product-specific characteristics of performance, are taken into account. Background data are taken from the Sphera MLC (fka GaBi) CUP 2024-1. Remaining data gaps are covered by the ecoinvent 3.9 database 2022.

**LCA: Scenarios and additional technical information**

**Characteristic product properties of biogenic carbon**

**Information on describing the biogenic Carbon Content at factory gate**

Name	Value	Unit
Biogenic carbon content in product	-	kg C
Biogenic carbon content in accompanying packaging	0.056	kg C

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO<sub>2</sub>.

The following information refer to the declared modules and are the basis for calculations or can be used for further calculations. The indicated values refer to the declared functional unit of all products with a max. total pile weight of 882 g/m<sup>2</sup>.

**Transport to the construction site (A4)**

Name	Value	Unit
Litres of fuel (truck, EURO 0-6 mix)	0.0099	l/100km
Transport distance truck	909	km
Transport distance ship	365	km
Capacity utilisation (including empty runs)	55	%
Gross density of products transported	399	kg/m <sup>3</sup>

**Installation in the building (A5)**

Name	Value	Unit
Material loss	0.108	kg

Polyethylene packaging waste and installation waste are considered to be incinerated in a municipal waste incineration plant. Cardboard packaging waste is going to be recycled. Preparation of the floor and auxiliaries (adhesives, fixing agents, PET connectors, etc.) are not taken into account.

**Maintenance (B2)**

The values for cleaning refer to 1 m<sup>2</sup> floor covering used in commercial areas per year. Depending on the application based on ISO 10874, the technical service life recommended by the manufacturer and the anticipated strain on the floor by customers, the case-specific useful life can be established. Based on this useful life, the effects of Module B2 need to be

calculated in order to obtain the overall environmental impacts.

Name	Value	Unit
Maintenance cycle (wet cleaning)	1.5	1/year
Maintenance cycle (vacuum cleaning)	208	1/year
Water consumption (wet cleaning)	0.0044	m <sup>3</sup>
Cleaning agent (wet cleaning)	0.09	kg
Electricity consumption	0.314	kWh

Further information on cleaning and maintenance see [www.ghcommercial.com](http://www.ghcommercial.com)

#### Reference service life

Name	Value	Unit
Life Span (according to BBSR)	15	a
Declared product properties (at the gate) and finishes	Corresponds to the specifications of EN 1307	-
An assumed quality of work, when installed in accordance with the manufacturer's instructions	Conforms to the manufacturer's instructions	-
Usage conditions, e.g. frequency of use, mechanical exposure	Use in areas defined by use class according to EN 1307	-
Maintenance e.g. required frequency, type and quality and replacement of components	According to manufacturer's instructions	-

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

Three different end-of-life scenarios are declared and the results are indicated separately in module C.

Each scenario is calculated as a 100 % scenario.

Scenario 0: 100 % landfill disposal

Scenario 1: 100 % municipal waste incineration (MWI) with R1>0.6

Scenario 2: 100 % recovery in the cement industry

If combinations of these scenarios have to be calculated, this should be done according to the following scheme:

EOL-impact = x % impact (Scenario 0)

+ y % impact (Scenario 1)

+ z % impact (Scenario 2)

with x % + y % + z % = 100 %

Name	Value	Unit
Collected as mixed construction waste (scenario 0 and 1)	3.592	kg
Collected separately waste type (scenario 2)	3.592	kg
Landfilling (scenario 0)	3.592	kg
Energy recovery (scenario 1)	3.592	kg
Energy recovery (scenario 2)	1.814	kg
Recycling (scenario 2)	1.778	kg

#### Reuse, recovery and/or recycling potentials (D), relevant scenario information

Recovery or recycling potentials due to the three end-of-life scenarios (module C) are indicated separately.

Recycling in the cement industry (scenario 2) *VDZ e.V.*

The organic material of the carpet is used as an alternative fuel in a cement kiln. It mainly substitutes for lignite (68.8 %), hard coal (23.6 %) and petrol coke (7.6 %). The inorganic material is substantially integrated into the cement clinker and substitutes for original material input.

Column D/3 represents module D/A5.

## LCA: Results

The LCA results refer to all declared products with a maximum total pile weight of 882 g/m<sup>2</sup>. LCA results for products with the lightest total pile weight of 576 g/m<sup>2</sup> can be taken from the corresponding tables of the annexe. Results for specific products with any other total pile weight can be calculated by using equation 1 given in the annexe (see annexe chapter: 'General Information on the annexe').

The declared result figures in module B2 have to be multiplied by the assumed service life (in years) of the floor covering in the building under consideration. Information on non-relevant modules: Modules B3 - B7 are not relevant during the service life of the carpet. Modules C3, C4/1 and C4/2 cause no additional impact (see chapter "LCA: Calculation rules" in this document). Module C2 represents the transport for scenarios 0, 1 and 2. The values in column D/3 result from module D-A5.

Version number of the characterisation factors used: EN 15804+A2 (EF 3.1)

**DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)**

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-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

### RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m<sup>2</sup> floorcovering

Parameter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3	C3/1	C3/2	C4	C4/1	C4/2	D	D/1	D/2	D/3
GWP-total	kg CO <sub>2</sub> eq	1.66E+01	3.63E-01	6.56E-01	0	5.09E-01	0	1.48E-02	0	4.27E+00	4.32E+00	1.06E-01	0	0	0	-1.03E+00	-5.23E-01	0
GWP-fossil	kg CO <sub>2</sub> eq	1.67E+01	3.56E-01	5.29E-01	0	3.09E-01	0	1.45E-02	0	4.27E+00	4.32E+00	1.03E-01	0	0	0	-1.03E+00	-5.23E-01	0
GWP-biogenic	kg CO <sub>2</sub> eq	-1.23E-01	8.8E-04	1.27E-01	0	3.6E-03	0	3.68E-05	0	1.89E-04	4.15E-04	2.42E-03	0	0	0	-4.42E-03	6.7E-04	0
GWP-luluc	kg CO <sub>2</sub> eq	4.39E-03	5.83E-03	3.4E-04	0	1.96E-01	0	2.48E-04	0	4.63E-04	1.08E-03	3.89E-04	0	0	0	-9.31E-05	-5.69E-04	0
ODP	kg CFC11 eq	7.16E-11	3.61E-14	2.18E-12	0	3.42E-08	0	1.49E-15	0	9.18E-13	1.26E-12	3.48E-13	0	0	0	-9.08E-12	-1.34E-12	0
AP	mol H <sup>+</sup> eq	4.76E-02	2.63E-03	1.57E-03	0	7.45E-04	0	9.08E-05	0	4.45E-03	4.7E-03	6.32E-04	0	0	0	-1.08E-03	-1.48E-03	0
EP-freshwater	kg P eq	1.01E-04	1.49E-06	6.37E-06	0	5.26E-06	0	6.29E-08	0	7.32E-07	9.51E-07	6.06E-05	0	0	0	-1.7E-06	-6.9E-07	0
EP-marine	kg N eq	1.43E-02	1.17E-03	5.45E-04	0	1.81E-04	0	4.46E-05	0	2.18E-03	2.3E-03	1.36E-04	0	0	0	-3.29E-04	-5.23E-04	0
EP-terrestrial	mol N eq	1.44E-01	1.3E-02	4.92E-03	0	2.66E-03	0	4.94E-04	0	2.43E-02	2.56E-02	1.49E-03	0	0	0	-3.53E-03	-5.73E-03	0
POCP	kg NMVOC eq	4.2E-02	2.35E-03	1.43E-03	4.18E-04	9.44E-04	0	8.54E-05	0	5.6E-03	5.83E-03	4.36E-04	0	0	0	-9.32E-04	-1.68E-03	0
ADPE	kg Sb eq	1.06E-06	2.99E-08	3.31E-08	0	2.15E-07	0	1.26E-09	0	1.29E-08	1.88E-08	7.02E-09	0	0	0	-8.87E-08	-2.73E-08	0
ADPF	MJ	3.26E+02	4.71E+00	1.01E+01	0	5.62E+00	0	1.92E-01	0	2.62E+00	3.41E+00	1.78E+00	0	0	0	-1.84E+01	-8.75E+01	0
WDP	m <sup>3</sup> world eq deprived	1.85E+00	5.2E-03	5.68E-02	0	9.97E-02	0	2.2E-04	0	5.7E-01	5.75E-01	1.36E-02	0	0	0	-1.11E-01	-7.01E-02	0

GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; 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 (user) deprivation potential

### RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 m<sup>2</sup> floorcovering

Parameter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3	C3/1	C3/2	C4	C4/1	C4/2	D	D/1	D/2	D/3
PERE	MJ	3.71E+01	3.84E-01	1.4E+00	0	4.03E+00	0	1.63E-02	0	5.69E-01	8.36E-01	2.7E-01	0	0	0	-6.08E+00	-7.87E-01	0
PERM	MJ	2.49E-01	0	-2.49E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	3.74E+01	3.84E-01	1.15E+00	0	4.03E+00	0	1.63E-02	0	5.69E-01	8.36E-01	2.7E-01	0	0	0	-6.08E+00	-7.87E-01	0
PENRE	MJ	2.7E+02	4.71E+00	1.02E+01	0	5.62E+00	0	1.92E-01	0	5.85E+01	5.93E+01	1.78E+00	0	0	0	-1.84E+01	-8.75E+01	0
PENRM	MJ	5.61E	0	-1.37E-	0	0	0	0	0	-5.59E	-5.59E	0	0	0	0	0	0	0

		+01		01						+01	+01							
PENRT	MJ	3.26E+02	4.71E+00	1.01E+01	0	5.62E+00	0	1.92E-01	0	2.62E+00	3.41E+00	1.78E+00	0	0	0	-1.84E+01	-8.75E+01	0
SM	kg	1.81E-01	0	5.42E-03	0	0	0	0	0	0	0	0	0	0	0	0	9.95E-01	0
RSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FW	m <sup>3</sup>	4.95E-02	4.31E-04	1.53E-03	0	3.31E-03	0	1.83E-05	0	1.35E-02	1.37E-02	4.08E-04	0	0	0	-4.67E-03	-7.55E-03	0

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 – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2:

1 m<sup>2</sup> floorcovering

Parameter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3	C3/1	C3/2	C4	C4/1	C4/2	D	D/1	D/2	D/3
HWD	kg	9.79E-08	1.52E-10	2.97E-09	0	4.19E-05	0	6.22E-12	0	1.16E-09	1.63E-09	4.41E-10	0	0	0	-1.23E-08	-1.71E-09	0
NHWD	kg	5.2E-01	7.22E-04	2.01E-01	0	7.35E-03	0	2.99E-05	0	9.37E-01	9.38E-01	3.58E+00	0	0	0	-9.51E-03	-1.76E-03	0
RWD	kg	3.64E-03	6.06E-06	1.12E-04	0	3.54E-04	0	2.49E-07	0	8.92E-05	1.4E-04	2.52E-05	0	0	0	-1.34E-03	-1.49E-04	0
CRU	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0	9.95E-01	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	5.03E+00	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	9.4E+00	5.74E+01	0	0	0	0	0	0	0

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

## RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional:

1 m<sup>2</sup> floorcovering

Parameter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3	C3/1	C3/2	C4	C4/1	C4/2	D	D/1	D/2	D/3
PM	Disease incidence	4.49E-07	2.25E-08	1.47E-08	0	6.78E-08	0	5.83E-10	0	2E-08	2.17E-08	6.54E-09	0	0	0	-8.81E-09	-3.4E-08	0
IR	kBq U235 eq	5.72E-01	8.46E-04	1.75E-02	0	6.31E-02	0	3.47E-05	0	1.35E-02	2.19E-02	3.45E-03	0	0	0	-2.21E-01	-1.24E-02	0
ETP-fw	CTUe	1.2E+02	3.47E+00	4.09E+00	3.6E-03	2.01E+00	0	1.42E-01	0	1.2E+00	1.64E+00	3.86E+00	0	0	0	-2.57E+00	-3.35E+01	0
HTP-c	CTUh	3.99E-09	6.95E-11	1.26E-10	0	6.23E-10	0	2.85E-12	0	5.43E-11	6.65E-11	5.73E-11	0	0	0	-2.1E-10	-1.38E-10	0
HTP-nc	CTUh	1.29E-07	3.06E-09	4.22E-09	2.6E-11	5.85E-09	0	1.27E-10	0	2.37E-09	2.76E-09	1.2E-09	0	0	0	-4.94E-09	-4.61E-09	0
SQP	SQP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

No substantiated values can be given for the SQP indicator with the existing database.

The result figures given in module B2 refer to a period of 1 year because a reference service life is not declared. They have to be multiplied by the assumed service life (in years) of the floor covering in the building under consideration.

Disclaimer 1 – for the indicator 'Potential Human exposure efficiency relative to U235'. 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 or radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, radon and from some construction materials is also not measured by this indicator.

Disclaimer 2 – for the indicators 'abiotic depletion potential for non-fossil resources', 'abiotic depletion potential for fossil resources', 'water (user) deprivation potential, deprivation-weighted water consumption', 'potential comparative toxic unit for ecosystems', 'potential comparative toxic unit for humans – cancerogenic', 'Potential comparative toxic unit for humans - not cancerogenic', 'potential soil quality index'. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high as there is limited experience with the indicator.

## References

### EN 1307

DIN EN 1307: 2014+A1:2016+A2:2018-05: Textile floor coverings - Classification

### EN 13501-1

DIN EN 13501-1:2019-05: Fire classification of construction

products and building elements - Part 1: Classification using data from reaction to fire tests

**EN 14041**

DIN EN 14041: 2018-05 and DIN EN 14041: 2008-05: Resilient, textile and laminate floor coverings - Essential characteristics

**EN 15804**

DIN EN 15804:2012+A2:2019 + AC:2021, Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products

**EN 16810**

DIN EN 16810: 2017-08: Resilient, textile and laminate floor coverings – Environmental product declarations – Product category rules

**ISO 10874**

DIN EN ISO 10874: 2012+A1:2021-04: Resilient, textile and laminate floor coverings - Classification

**ISO 14025**

DIN EN /ISO 14025:2011-10/, Environmental labels and declarations — Type III environmental declarations — Principles and procedures

**ISO 14040**

DIN EN ISO 14040:2006+A1:2020 Environmental management - Life cycle assessment - Principles and framework

**ISO 14044**

DIN EN ISO 14044:2006+A1:2018+A2:2020 Environmental management - Life cycle assessment - Requirements and guidelines

**ISO 15686**

ISO 15686: Buildings and constructed assets - Service life planning

ISO 15686-1: 2011-05: Part 1: General principles and framework

ISO 15686-2: 2012-05: Part 2: Service life prediction procedures

ISO 15686-7: 2017-04: Part 7: Performance evaluation for feedback of service life data from practice

ISO 15686-8: 2008-06: Part 8: Reference service life and service life estimation

**Regulation (EU) No. 305/2011**

Regulation No. 305/2011 Construction Products Regulation (CPR) of the European Council and of the European Parliament, April 2011

**General Instructions for the IBU-EPD Program**

General Instructions for the EPD-Program of the Institut Bauen und Umwelt e.V., The Preparation of Environmental Product Declarations - EPDs, version 2.0, Institut Bauen und Umwelt

e.V., Berlin, January 2021, [www.ibu-epd.de](http://www.ibu-epd.de)

**ACCS**

Australian Carpet Classification Scheme by Carpet Institute of Australia Limited (CIAL)

**BBSR**

Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR) im Bundesamt für Bauwesen und Raumordnung (BBR), Bonn

**BNB, Nutzungsdauer von Bauteilen**

Bewertungssystem Nachhaltiges Bauen (BNB), Nutzungsdauer von Bauteilen, Bundesministerium des Inneren, für Bau und Heimat, 24.02.2017

**ECHA candidate list**

Candidate List of substances of very high concern (SVHCs) for authorisation, last update 27.06.2024, European Chemicals Agency (ECHA), Helsinki, Finland

**ecoinvent 3.9**

ecoinvent, Zurich, Switzerland, database version 3.9, published September 2022

**Sphera MLC database 2024-1**

LCA for experts Software-System and database for Life Cycle Engineering, thinkstep AG, Sphera Solutions Inc, Stuttgart, 2024-1

**PCR Part A**

Product Category Rules for Construction Products from the range of Environmental Product Declarations. Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Background Report, V1.4, Berlin: Institut Bauen und Umwelt e.V. (IBU), April 2024

**PCR Part B**

Product Category Rules for Construction Products from the range of Environmental Product Declarations of Institut Bauen und Umwelt (IBU), Part B: Requirements on the EPD for floor coverings, V1.3, Berlin: Institut Bauen und Umwelt e.V. (IBU), September 2022

**PRODIS**

Product Information System (PRODIS) of the European Carpet Industry, Gemeinschaft umweltfreundlicher Teppichboden e.V (GUT) and European Carpet and Rug Association (ECRA), <http://www.pro-dis.info>

**REACH**

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Last update: 27.06.2024

**VDZ e.V.**

Association of German Cement Works, Ed. Environmental Data of the German Cement Industry 2020



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# Annex

For products with a max. total pile weight of 576g/m<sup>2</sup>

Annex for EPD: Tufted carpet tiles - Designer Jet Precision Dye Injection Tile With a maximum total pile weight of 882 g/m<sup>2</sup>, 100% polyamide with Enviro Bac®

to the

## ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804

Owner of the Declaration	GH Commercial
Declaration number	EPD-GHC-20250191-CBA1-EN
Issue date	17.09.2025
Valid to	16.09.2030

[www.bau-umwelt.com](http://www.bau-umwelt.com) / <https://epd-online.com>



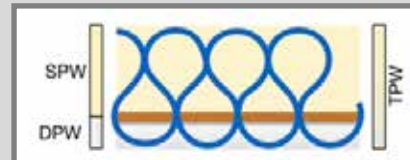
## General Information on the annex

The EPD document is valid for all products with a total pile weight lower or equal to the declared maximum pile weight of 882 g/m<sup>2</sup>.

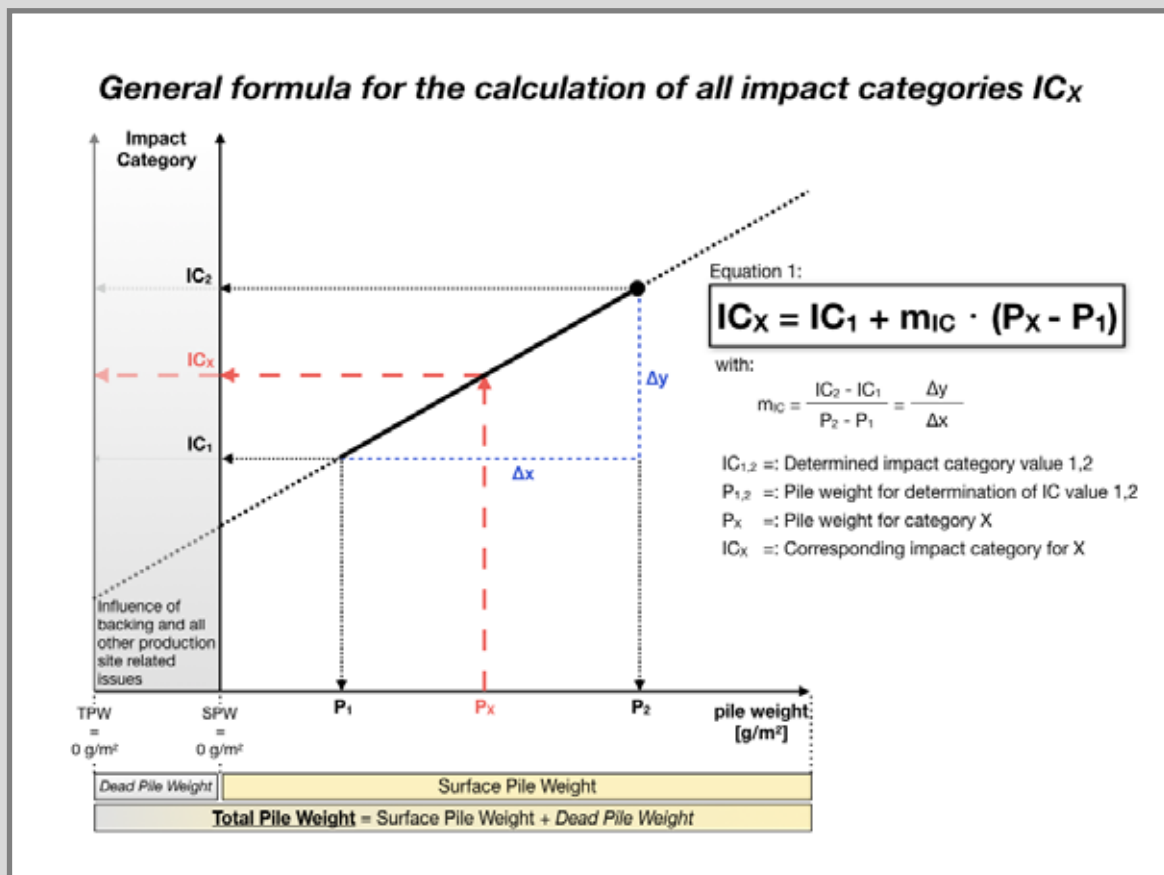
LCA results show a linear correlation with the total pile weight for all impact categories (IC) and all modules (A-D). It is possible to calculate specific LCA results (IC<sub>x</sub>) for every carpet (x) within the declared group of products in relation to its total pile weight (P<sub>x</sub>).

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 (IC<sub>x</sub>).



**Graph 1:** General formula for the calculation of all impact categories IC<sub>x</sub>.

## 1. Information on products with a max total pile weight of 576 g/m<sup>2</sup>

### Complementary technical data

#### Base materials / Ancillary materials

Name	Value for category	Unit
Polyamide 6	17,5	%
Polyester	6,3	%
Limestone	54,1	%
SBR-Latex	4,6	%
SBS-Copolymer	1,2	%
Bitumen	16,2	%
Additives	0,1	%
Total	100,0	%

### LCA: Declared Unit

Name	Value for category	Unit
Declared unit	1,0	m <sup>2</sup>
Grammage	3,29	kg/m <sup>2</sup>

### 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)	0,0091	l/100km
Transport distance (Truck)	909	km
Transport distance (Ship)	365	km
Capacity utilisation (including empty runs)	55	%

#### Installation in the building (A5)

Name	Value for category	Unit
Material lost	0,10	kg

#### Maintenance (B2)

Indication per m<sup>2</sup> 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	m <sup>3</sup>
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 0 and 1)	3,286	kg/m <sup>2</sup>
Collected separately (scenario 2)	3,286	kg/m <sup>2</sup>
Landfilling (scenario 0)	3,286	kg/m <sup>2</sup>
Energy recovery (scenario 1)	3,286	kg/m <sup>2</sup>
Energy recovery (scenario 2)	1,504	kg/m <sup>2</sup>
Recycling (scenario 2)	1,782	kg/m <sup>2</sup>

## LCA: Results for products with a max. total pile weight of 576 g/m<sup>2</sup>

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.  
Module C2 represents the transport for scenarios 0, 1 and 2.

### 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 A1 <input checked="" type="checkbox"/> transport A2 <input checked="" type="checkbox"/> manufacturing A3 <input checked="" type="checkbox"/>	transport from the gate to the site A4 <input checked="" type="checkbox"/> assembly A5 <input checked="" type="checkbox"/>	use B1 <input checked="" type="checkbox"/> maintenance B2 <input checked="" type="checkbox"/> repair B3 <input type="checkbox"/> MNR R replacement B4 <input type="checkbox"/> MNR R refurbishment B5 <input type="checkbox"/> MNR R operational energy use B6 <input type="checkbox"/> MNR D operational water use B7 <input type="checkbox"/> MNR D	de-contruction C1 <input checked="" type="checkbox"/> transport C2 <input checked="" type="checkbox"/> waste processing C3 <input checked="" type="checkbox"/> disposal C4 <input checked="" type="checkbox"/>	reuse, recovery and recycling potential D <input checked="" type="checkbox"/>

Results of the LCA - Environmental impact: 1 m<sup>2</sup> floor covering

Parameter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3	C3/1	C3/2	C4	C4/1	C4/2	D	D/1	D/2	D/3
GWP-total	[kg CO2-eq]	1,40E+01	3,33E-01	5,65E-01	0,00E+00	5,09E-01	0,00E+00	1,35E-02	0,00E+00	3,57E+00	3,62E+00	9,67E-02	0,00E+00	0,00E+00	0,00E+00	-7,52E-01	-3,58E-01	0,00E+00
GWP-fossil	[kg CO2-eq]	1,41E+01	3,27E-01	4,49E-01	0,00E+00	3,09E-01	0,00E+00	1,32E-02	0,00E+00	3,57E+00	3,62E+00	9,41E-02	0,00E+00	0,00E+00	0,00E+00	-7,49E-01	-3,58E-01	0,00E+00
GWP-biogenic	[kg CO2-eq]	-1,32E-01	8,08E-04	1,16E-01	0,00E+00	3,60E-03	0,00E+00	3,37E-05	0,00E+00	1,15E-04	3,22E-04	2,21E-03	0,00E+00	0,00E+00	0,00E+00	-3,19E-03	5,78E-04	0,00E+00
GWP-lucluc	[kg CO2-eq]	3,65E-03	5,36E-03	3,01E-04	0,00E+00	1,96E-01	0,00E+00	2,27E-04	0,00E+00	4,60E-04	1,03E-03	3,56E-04	0,00E+00	0,00E+00	0,00E+00	-6,73E-05	-4,14E-04	0,00E+00
ODP	[kg CFC11-eq]	6,08E-11	3,36E-14	1,85E-12	0,00E+00	3,42E-08	0,00E+00	1,34E-15	0,00E+00	8,32E-13	1,15E-12	3,19E-13	0,00E+00	0,00E+00	0,00E+00	-6,53E-12	-9,38E-13	0,00E+00
AP	[kg mol H <sup>+</sup> eq]	4,15E-02	2,41E-03	1,37E-03	0,00E+00	7,45E-04	0,00E+00	8,31E-05	0,00E+00	3,21E-03	3,45E-03	5,78E-04	0,00E+00	0,00E+00	0,00E+00	-7,76E-04	-1,02E-03	0,00E+00
EP-fw	[kg P-eq]	9,65E-05	1,36E-06	5,94E-06	0,00E+00	5,26E-06	0,00E+00	5,76E-08	0,00E+00	7,07E-07	9,07E-07	5,54E-05	0,00E+00	0,00E+00	0,00E+00	-1,22E-06	-4,82E-07	0,00E+00
EP-mar.	[kg N-eq]	1,28E-02	1,07E-03	4,91E-04	0,00E+00	1,81E-04	0,00E+00	4,08E-05	0,00E+00	1,55E-03	1,66E-03	1,24E-04	0,00E+00	0,00E+00	0,00E+00	-2,38E-04	-3,62E-04	0,00E+00
EP-ter.	[Mol N-eq]	1,31E-01	1,19E-02	4,47E-03	0,00E+00	2,66E-03	0,00E+00	4,52E-04	0,00E+00	1,72E-02	6,05E-03	1,17E-03	0,00E+00	0,00E+00	0,00E+00	-2,56E-03	-3,96E-03	0,00E+00
POCP	[kg NIMVOC-eq]	3,69E-02	2,16E-03	1,26E-03	4,18E-04	9,44E-04	0,00E+00	7,81E-05	0,00E+00	3,98E-03	4,19E-03	3,98E-04	0,00E+00	0,00E+00	0,00E+00	-6,75E-04	-1,16E-03	0,00E+00
ADPE	[kg Sb-eq]	8,71E-07	2,74E-08	2,75E-08	0,00E+00	2,15E-07	0,00E+00	1,15E-09	0,00E+00	1,18E-08	1,73E-08	6,42E-09	0,00E+00	0,00E+00	0,00E+00	-6,39E-08	-1,91E-08	0,00E+00
ADPF	[MJ]	2,73E+02	4,32E+00	8,48E+00	0,00E+00	5,62E+00	0,00E+00	1,76E-01	0,00E+00	2,27E+00	3,00E+00	1,63E+00	0,00E+00	0,00E+00	0,00E+00	-1,33E+01	-5,96E+01	0,00E+00
WDP	[m <sup>3</sup> world eq deprived]	1,75E+00	4,77E-03	5,35E-02	0,00E+00	9,97E-02	0,00E+00	2,01E-04	0,00E+00	4,99E-01	5,03E-01	1,25E-02	0,00E+00	0,00E+00	0,00E+00	-8,00E-02	-4,78E-02	0,00E+00

**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

Results of the LCA - Resource use: 1 m<sup>2</sup> floor covering

Parameter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3	C3/1	C3/2	C4	C4/1	C4/2	D	D/1	D/2	D/3
PERE	[MJ]	3,11E+01	3,52E-01	1,22E+00	0,00E+00	4,03E+00	0,00E+00	1,49E-02	0,00E+00	5,20E-01	7,64E-01	2,47E-01	0,00E+00	0,00E+00	0,00E+00	-4,37E+00	-5,51E-01	0,00E+00
PERM	[MJ]	2,49E-01	0,00E+00	-2,49E-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	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,14E+01	3,52E-01	9,70E-01	0,00E+00	4,03E+00	0,00E+00	1,49E-02	0,00E+00	5,20E-01	7,64E-01	2,47E-01	0,00E+00	0,00E+00	0,00E+00	-4,37E+00	-5,51E-01	0,00E+00
PENRE	[MJ]	2,27E+02	4,32E+00	8,61E+00	0,00E+00	5,62E+00	0,00E+00	1,76E-01	0,00E+00	4,84E+01	4,91E+01	1,63E+00	0,00E+00	0,00E+00	0,00E+00	-1,33E+01	-5,96E+01	0,00E+00
PENRM	[MJ]	4,63E+01	0,00E+00	-1,37E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-4,61E+01	-4,61E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	2,73E+02	4,32E+00	8,48E+00	0,00E+00	5,62E+00	0,00E+00	1,76E-01	0,00E+00	2,27E+00	3,00E+00	1,63E+00	0,00E+00	0,00E+00	0,00E+00	-1,33E+01	-5,96E+01	0,00E+00
SM	[kg]	1,81E-01	0,00E+00	5,42E-03	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	9,95E-01	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	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	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	4,19E-02	3,96E-04	1,30E-03	0,00E+00	3,31E-03	0,00E+00	1,67E-05	0,00E+00	3,69E-01	1,20E-02	3,73E-04	0,00E+00	0,00E+00	0,00E+00	-3,36E-03	-5,15E-03	0,00E+00

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; PERNM = 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 m<sup>2</sup> floor covering

Parameter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3	C3/1	C3/2	C4	C4/1	C4/2	D	D/1	D/2	D/3
HWD	[kg]	8,48E-08	1,40E-10	2,58E-09	0,00E+00	4,19E-05	0,00E+00	5,69E-12	0,00E+00	1,05E-09	1,48E-09	4,03E-10	0,00E+00	0,00E+00	0,00E+00	-8,84E-09	-1,19E-09	0,00E+00
NHWD	[kg]	4,66E-01	6,63E-04	1,84E-01	0,00E+00	7,35E-03	0,00E+00	2,74E-05	0,00E+00	9,34E-01	9,34E-01	3,27E+00	0,00E+00	0,00E+00	0,00E+00	-6,87E-03	-1,21E-03	0,00E+00
RWD	[kg]	2,72E-03	5,57E-06	8,37E-05	0,00E+00	3,54E-04	0,00E+00	2,27E-07	0,00E+00	8,13E-05	1,28E-04	2,30E-05	0,00E+00	0,00E+00	0,00E+00	-9,65E-04	-1,02E-04	0,00E+00
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	0,00E+00	0,00E+00	0,00E+00
MFR	[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	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	0,00E+00	0,00E+00	0,00E+00
EEE	[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	3,67E+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
EET	[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	6,99E+00	4,76E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

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

Results of the LCA - Additional Impact categories: 1 m<sup>2</sup> floor covering


Parameter	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3	C3/1	C3/2	C4	C4/1	C4/2	D	D/1	D/2	D/3
<b>PM</b>	[Dl]	3,86E-07	2,07E-08	1,27E-08	0,00E+00	6,78E-08	0,00E+00	5,33E-10	0,00E+00	1,88E-08	1,88E-08	5,99E-09	0,00E+00	0,00E+00	0,00E+00	-6,38E-09	-2,77E-08	0,00E+00
<b>IR</b>	[kBq U235 eq.]	4,29E-01	7,77E-04	1,32E-02	0,00E+00	6,31E-02	0,00E+00	3,18E-05	0,00E+00	2,00E-02	2,00E-02	3,16E-03	0,00E+00	0,00E+00	0,00E+00	-1,59E-01	-8,57E-03	0,00E+00
<b>ETP-fw</b>	[CTUe]	1,02E+02	3,18E+00	3,50E+00	3,60E-03	2,01E+00	0,00E+00	1,30E-01	0,00E+00	1,53E+00	1,53E+00	1,93E+00	0,00E+00	0,00E+00	0,00E+00	-1,85E+00	2,27E+01	0,00E+00
<b>HTP-c</b>	[CTUh]	3,33E-09	6,37E-11	1,06E-10	0,00E+00	6,23E-10	0,00E+00	2,60E-12	0,00E+00	5,93E-11	5,93E-11	5,24E-11	0,00E+00	0,00E+00	0,00E+00	-1,52E-10	-9,49E-11	0,00E+00
<b>HTP-nc</b>	[CTUh]	1,10E-07	2,81E-09	3,62E-09	2,60E-11	5,85E-09	0,00E+00	1,16E-10	0,00E+00	2,59E-09	2,59E-09	1,10E-09	0,00E+00	0,00E+00	0,00E+00	-3,59E-09	-3,18E-09	0,00E+00
<b>SQP</b>	[Pt]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**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



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