ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804

Owner of the Declaration Forbo Flooring BV

Programme holder Institut Bauen und Umwelt e.V. (IBU

Publisher Institut Bauen und Umwelt e.V. (IBU)

Declaration number EPD-FOR-20140224-CAC1-EN

Issue date 21.01.2014

Valid to 20.01.201

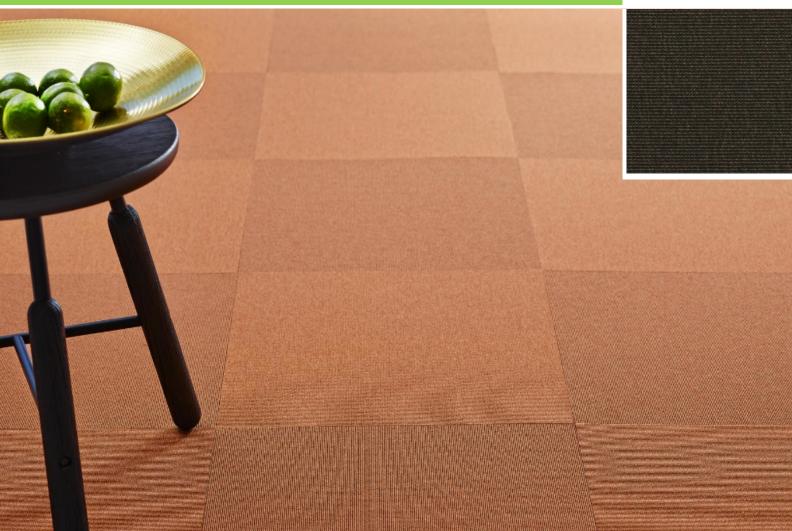
Forbo Peace tile

Woven carpet tiles, pile material 550-650 g/m² polyamide 6.6

Forbo Flooring Systems



www.bau-umwelt.com / https://epd-online.com





General Information

Forbo Flooring Systems

Programme holder

IBU - Institut Bauen und Umwelt e.V. Panoramastr. 1 10178 Berlin Germany

Declaration number

EPD-FOR-20140224-CAC1-EN

This Declaration is based on the Product Category Rules:

Floor coverings, 07.2014 (PCR tested and approved by the independent expert committee)

Menmanes

Issue date

21.01.2014

Valid to 20.01.2019

Prof. Dr.-Ing. Horst J. Bossenmayer (President of Institut Bauen und Umwelt e.V.)

Dr. Burkhart Lehmann (Managing Director IBU)

Forbo Peace tiles

Woven carpet tiles, pile material 550-650 g/m² PA 6.6

Owner of the Declaration

Forbo Flooring BV P.O. Box 13 1560 AA Krommenie The Netherlands

Declared product / Declared unit

1 m² woven carpet tiles Forbo Peace tiles

Scope:

The declaration applies for a group of similar products with a pile material of $550-650 \text{ g/m}^2$.

It is only valid in conjunction with a valid PRODIS licence.

The carpet is woven, dyed and precoated at the manufacturing site, Bording, Denmark and it is back coated at the manufacturing site Hameln, Germany.

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.

Verification

The CEN Norm EN 15804 serves as the core PCR Independent verification of the declaration according to ISO 14025

internally

x externally



Dr. Eva Schmincke (Independent tester appointed by SVA)

Product

Product description

Forbo Peace tiles - woven carpet tiles having a pile material of polyamide 6.6 and a heavy-duty polyolefin layer with recycled material. It includes a multi-axial glass fabric reinforcement and it is covered with a fleece fabric backing from 100% recycled polyester. The woven upper side is continuous dved.

The declaration applies for a group of products with a total pile material input of 550-650 g/m².

The calculations refer to the average pile material of 600 g/m²

Recycled content out of total weight: 50,7%

Application

According to the use class as defined in /EN 1307/ the products can be used in all professional areas which require class 33 or less.



Technical Data

of the average product according to /EN 1307/

| Name | Value | Unit |
|---------------------|------------------------|------|
| Product Form | Tiles | - |
| Type of manufacture | Woven loop pile carpet | - |
| Yarn type | PA 6.6 | - |
| Secondary backing | Heavy-duty backing | - |
| Total pile weight | 550-650 | g/m² |
| Total carpet weight | 3700 - 3800 | g/m² |

Additional product properties and performance ratings according to /EN 1307/ can be found on the Product Information System (PRODIS) using the PRODIS registration number of the product (www.pro-dis.info) or on the technical information of the declared product by Forbo Flooring Systems (www.forbo-flooring.com)



Base materials / Ancillary materials

| Name | Value | Unit |
|------------------------------|-------|------|
| Polyamide 6.6 | 16,0 | % |
| Polyester | 22,4 | % |
| SBR-latex | 4,7 | % |
| Aluminiumhydroxide | 2,8 | % |
| Iron oxide | 37,4 | % |
| Ethylene vinyl acetate (EVA) | 16,0 | % |
| Glass fibre | 0,4 | % |
| Additives | 0,3 | % |

Reference service life

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

A minimum service life of 10 years could be assumed, technical service life can be considerably longer.

LCA: Calculation rules

Declared Unit

| Name | Value | Unit |
|---|-------|----------------|
| Declared unit | 1 | m ² |
| Conversion factor to 1 kg (average product) | 0.27 | - |
| Mass reference (average product) | 3,75 | kg/m² |

System boundary

Type of the EPD: Cradle-to-grave

System boundaries of the modules A, B, C, D:

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 treatment, packaging material and waste processing up to the landfill of residual waste (except radioactive waste). Credits for electricity and steam from the incineration of production waste are aggregated.

A4 Transport:

Transport of the packed textile floorcovering from manufacturing gate to the place of installation.

A5 Installation:

Installation of the textile floorcovering, production and transport of auxiliary material, waste processing up to the landfill of residual waste (except radioactive waste), the production of the amount of carpet that occurs as installation waste incl. its transport to the place of installation.

Credits for electricity and steam from the incineration of packaging and installation waste leave the product system.

<u>B1 Use:</u>

Indoor emissions during the use stage. Due to known VOC-decay curves of the product after the first year no product related VOC-emissions are relevant.

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 with the assumed service life of the floor covering in the building considered.

B3 - B7:

The modules are not relevant and therefore not declared.

C1 De-construction:

De-construction of the floorcovering is made by handcraft and causes no additional impacts.

C2 Transport:

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

C3 Waste processing:

C3-0, C3-1: Landfill and waste incineration need no waste processing.

C3-2: Collection of the carpet waste, waste processing (granulating).

C4 Disposal

C4-0, C4-1: Impacts from landfill or from waste incineration (credits leave the system boundaries), C4-2: The processed carpet waste leaves the system and need no disposal.

D Recycling potential:

D-0, D-1: Energy credits from landfill and from waste incineration (processing with < 60% efficiency), D-2: Transport from the reprocessing plant to the cement plant, substitution of material and fuel input in the cement kiln (substantial and energetic credits).

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.



LCA: Scenarios and additional technical information

The following information refer to the declared modules and are the basis for calculations or can be used for further calculations. All indicated values refer to the declared functional unit.

Transport to the construction site (A4)

| Name | Value | Unit |
|---|-------|---------|
| Litres of fuel (truck, EURO 0-5 mix) | 29.4 | l/100km |
| Transport distance | 700 | km |
| Capacity utilisation (including empty runs) | 85 | % |
| Gross density of products transported | 750 | kg/m³ |

Installation in the building (A5)

| Name | Value | Unit |
|----------------------|-------|------|
| Auxiliary (adhesive) | 0.2 | kg |
| Material loss | 0.11 | kg |

Packaging waste leaves the system for recycling. Carpet installation waste is considered to be incinerated in a municipal waste incineration plant.

Maintenance (B2)

| Name | Value | Unit |
|-------------------------------------|-------|----------------|
| Maintenance cycle (wet cleaning) | 1,5 | 1/year |
| Maintenance cycle (vacuum cleaning) | 208 | 1/year |
| Water consumption (wet cleaning) | 0.003 | m ³ |
| Cleaning agent (wet cleaning) | 0,06 | kg |
| Electricity consumption | 0.314 | kWh |

Further information on cleaning and maintenance see www.forbo-flooring.com

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

Scenario 1: 100% municipal waste incineration (MWI) Scenario 2: 100% recycling 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)

| Name | Value | Unit |
|---------------------------------------|-------|------|
| Collected as mixed construction waste | 3.75 | l.a |
| (scenario 0 and 1) | 3.75 | kg |
| Collected separately (scenario 2) | 3.75 | kg |
| Landfilling (scenario 0) | 3.75 | kg |
| Energy recovery (scenario 1) | 3.75 | kg |
| Energy recovery (scenario 2) | 2,23 | kg |
| Recycling (scenario 2) | 1.52 | kg |

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

The 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 secondary fuel in a cement kiln. It substitutes mainly lignite (62,7%), hard coal (27,3%) and petrol coke (10,0%).

The inorganic material is substantially integrated in the cement clinker and substitutes original material input.



LCA: Results

Information on not declared modules:

The modules B3 - B7 are not relevant during the service life of the carpet and are therefore not declared. Module C1 causes no additional impact (see "LCA: Calculation rules", "C1 De-construction") and is therefore not declared.

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

| DESC | RIP | TION (| OF THE | E SYS | TEM E | BOUND | ARY | (X = IN) | CLUD | ED IN | LCA: | MND = | MOD | ULE N | OT DE | CLAR | (ED) |
|---|--|--|--|--|--|--|--|--|--|--|--|---|--|---|---|--|--|
| | PRODUCT STAGE CONSTRUCTION PROCESS STAGE | | | | ı | EM BOUNDARY (X = INCLUDED IN LCA; I USE STAGE | | | | | | END OF LIFE STAGE | | | | BENEFI LOA BEYON SYS | TS AND ADS ND THE TEM DARYS |
| Raw material supply | Transport | Manufacturing | Transport from the gate to the site | Assembly | Ose | Maintenance | Repair | Replacement ¹⁾ | Refurbishment ¹⁾ | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse- Recovery- | Recycling- potential |
| A1 | A2 | А3 | A4 | A5 | B1 | B2 | В3 | B4 | B5 | В6 | B7 | C1 | C2 | СЗ | C4 | [| ס |
| Х | Х | Х | Х | Х | Х | Х | MND | MND | MND | MND | MND | MND | Х | Х | Х |) | X |
| RESU | ILTS | OF T | HE LC | A - EN | IVIROI | NMENT | AL IN | /IPACT | : 1 m² | floorc | overir | ng | | | | | |
| Param eter | ι | Jnit | A1-A3 | A4 | A5 | B1 | B2 | C2 | СЗ | C3/1 | C3/2 | C4 | C4/1 | C4/2 | D | D/1 | D/2 |
| GWP ODP | [kg CF | CO ₂ -Eq.] C11-Eq. CO ₂ -Eq.] | 14.00] 5.19E-8 2.88E-2 | 12 | 1.95E-∂ | 0.00 8 0.00E+0 3 0.00E+0 | | 13 | | 0.00 0.00E+0 | 11 | 8.37 1.00E- 10 1.03E-3 | 7.06 3.40E- 10 | 0.00 0.00E+0 | 10 | -2.18 -4.50E- 10 | -2.41 -8.97E-8 |
| EP POCP | [kg (PC | O₄)³ Eq.; then Eq.] | | 3 1.65E- | 4 8.44E- | 4 0.00E+0 4 1.11E-4 | 1.99E-4 | 4 9.22E-6 | 0.00E+0 | 0.00E+0 | 6.26E-6 | 4.82E-3 | 1.22E-3 | 0.00E+0 | -5.28E-5 | -2.94E-4 | -1.04E-3 |
| ADPE | [kg S | Sb Eq.] | 1.06E-5 | 5.85E-9 | 9 1.74E- | 6 0.00E+0 | 5.44E-7 | 7 3.30E- 10 | 0.00E+0 | 0.00E+0 | 3.45E-9 | 3.89E-8 | 1.34E-6 | 0.00E+0 | -2.91E-8 | -1.29E-7 | -4.38E-6 |
| ADPF | _ | MJ] | 283.00 | | 29.40 | | 6.55 | 0.12 | 0.00 | 0.00 | 0.44 | 2.87 | 5.84 | 0.00 | -3.72 | -36.30 | -96.30 |
| Captio | n Eut | trophicat | | | CP = For | Depleted a point of the poin | tential of | f tropospl | neric ozor | ne photod | chemical | oxidants; | ADPE = | | | | |
| DECL | | | | | | | | | | | enual ioi | 1055111650 | Juices | | | | |
| RESU | ILTS | OF T | HE LC | A - RE | SOUR | RCE US | E: 1 r | | | | ential for | 105511 1650 | | | | | |
| Parame | eter | Unit | A1-A3 | A4 | A5 | B1 | B2 | n² floc C2 | rcover C3 | ring C3/1 | C3/2 | C4 | C4/1 | C4/2 | D | D/1 | D/2 |
| | e ter | | | | | | | n² floc | rcover | ring | | | | C4/2 0.00 0.00 | D -0.62 0.00 | D/1 -1.45 0.00 | D/2 -3.84 0.00 |
| PERI PERI PERI | E M | Unit [MJ] [MJ] [MJ] | A1-A3 15.30 0.00 15.30 | 0.09 0.00 0.09 | 2.89 0.00 2.89 | 0.00 0.00 0.00 0.00 | 0.50 0.00 0.50 | C2 0.00 0.00 0.00 | C3 0.00 0.00 0.00 | C3/1 0.00 0.00 0.00 | C3/2 0.07 0.00 0.07 | C4 0.14 0.00 0.14 | C4/1 0.30 0.00 0.30 | 0.00 0.00 0.00 | -0.62 0.00 -0.62 | -1.45 0.00 -1.45 | -3.84 0.00 -3.84 |
| PERI PERI PERI PERI PENF | E M T RE | Unit [MJ] [MJ] [MJ] [MJ] | 15.30 0.00 15.30 229.65 | 0.09 0.00 0.09 0.09 2.17 | 2.89 0.00 2.89 29.40 | 0.00 0.00 0.00 0.00 0.00 | 0.50 0.00 0.50 6.55 | 0.00 0.00 0.00 0.00 0.12 | C3 0.00 0.00 0.00 0.00 | 0.00 0.00 0.00 0.00 0.00 | C3/2 0.07 0.00 0.07 0.44 | 0.14 0.00 0.14 2.87 | C4/1 0.30 0.00 0.30 5.84 | 0.00 0.00 0.00 0.00 | -0.62 0.00 -0.62 -3.73 | -1.45 0.00 -1.45 -36.30 | -3.84 0.00 -3.84 -96.30 |
| Paramo PERI PERI PENF PENF PENF | E M T RE | Unit [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] | A1-A3 15.30 0.00 15.30 229.65 53.35 283.00 | 0.09 0.00 0.09 2.17 0.00 2.17 | 2.89 0.00 2.89 29.40 0.00 29.40 | B1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 | 0.50 0.00 0.50 0.50 6.55 0.00 6.55 | 0.00 0.00 0.00 0.12 0.00 0.12 | C3 0.00 0.00 0.00 0.00 0.00 0.00 0.00 | C3/1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 | C3/2 0.07 0.00 0.07 0.44 0.00 0.44 | C4 0.14 0.00 0.14 2.87 0.00 2.87 | C4/1 0.30 0.00 0.30 5.84 0.00 5.84 | 0.00 0.00 0.00 0.00 0.00 0.00 | -0.62 0.00 -0.62 -3.73 0.00 -3.73 | -1.45 0.00 -1.45 -36.30 0.00 -36.30 | -3.84 0.00 -3.84 -96.30 0.00 -96.30 |
| PERI PERI PERI PENE PENE PENE SM | E M T RE | Unit [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] | A1-A3 15.30 0.00 15.30 229.65 53.35 283.00 1.52 | 0.09 0.00 0.09 2.17 0.00 2.17 0.00 | 2.89 0.00 2.89 29.40 0.00 29.40 0.13 | B1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 | 0.50 0.00 0.50 6.55 0.00 6.55 0.00 | 0.00 0.00 0.00 0.12 0.00 0.12 0.00 | C3 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 | C3/1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0. | C3/2 0.07 0.00 0.07 0.44 0.00 0.44 0.00 | 0.14 0.00 0.14 2.87 0.00 2.87 0.00 | C4/1 0.30 0.00 0.30 5.84 0.00 5.84 0.00 | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 | -0.62 0.00 -0.62 -3.73 0.00 -3.73 0.00 | -1.45 0.00 -1.45 -36.30 0.00 -36.30 0.00 | -3.84 0.00 -3.84 -96.30 0.00 -96.30 0.00 |
| Paramo PERI PERI PENF PENF PENF | E M T RE | Unit [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [kg] [MJ] | 15.30 0.00 15.30 229.65 53.35 283.00 1.52 5.48E-3 | 0.09 0.00 0.09 2.17 0.00 2.17 0.00 1.37E-5 | 2.89 0.00 2.89 29.40 0.00 29.40 0.13 5.52E-4 | B1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 | 0.50 0.00 0.50 6.55 0.00 6.55 0.00 2.03E-4 | 0.00 0.00 0.00 0.12 0.00 0.12 0.00 7.66E-7 | C3 0.00 0.00 0.00 0.00 0.00 0.00 0.00 | C3/1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 | 0.07 0.00 0.07 0.44 0.00 0.44 0.00 9.03E-6 | 0.14 0.00 0.14 2.87 0.00 2.87 0.00 2.29E-3 | 0.30 0.00 0.30 5.84 0.00 5.84 0.00 1.66E-4 | 0.00 0.00 0.00 0.00 0.00 0.00 | -0.62 0.00 -0.62 -3.73 0.00 -3.73 0.00 -7.62E-5 | -1.45 0.00 -1.45 -36.30 0.00 -36.30 0.00 -4.20E-4 | -3.84 0.00 -3.84 -96.30 0.00 -96.30 0.00 -3.07E-2 |
| PERI PERI PERI PENE PENE PENE SM RSF | E M T RE | Unit [MJ] [MJ] [MJ] [MJ] [MJ] [kg] [MJ] [MJ] [MJ] [MJ] | A1-A3 15.30 0.00 15.30 229.65 53.35 283.00 1.52 5.48E-3 15.74E-2 1.47E+1 | 0.09 0.00 0.09 2.17 0.00 2.17 0.00 1.37E-5 1.44E-4 3.49E-3 | 2.89 0.00 2.89 29.40 0.00 29.40 0.13 5.52E-4 5.78E-3 1.79E+0 | B1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00E+0 2 0.00E+0 8 | 0.50 0.00 0.50 6.55 0.00 6.55 0.00 2.03E-4 2.13E-3 8.49E-1 | 0.00 0.00 0.00 0.12 0.00 0.12 0.00 7.66E-7 8.02E-6 4.73E-4 | C3 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0. | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | 0.07 0.00 0.07 0.44 0.00 0.44 0.00 9.03E-6 9.46E-5 9.58E-2 | C4 0.14 0.00 0.14 2.87 0.00 2.87 0.00 2.29E-3 5.48E-3 1.06E-1 | C4/1 0.30 0.00 0.30 5.84 0.00 5.84 0.00 1.66E-4 1.72E-3 2.91E-1 | 0.00 0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 | -0.62 0.00 -0.62 -3.73 0.00 -3.73 0.00 -7.62E-5 -7.98E-4 -8.08E-1 | -1.45 0.00 -1.45 -36.30 0.00 -36.30 0.00 -4.20E-4 -4.40E-3 -1.89E+0 | -3.84 0.00 -3.84 -96.30 0.00 -96.30 0.00 -3.07E-2 -3.22E-1 -3.57E+0 |
| Parame PERI PERI PENE PENE PENE SM RSF NRS | E M T RE | Unit [MJ] [m³] PERE = ewable pronore ewable wable properties and the properties are properties and the properties are properties | A1-A3 15.30 0.00 15.30 229.65 53.35 283.00 1.52 5.48E-3 1 5.74E-2 1 4.47E+1 8 Use of rozimary e ewable porimary e | 0.09 0.00 0.09 2.17 0.00 2.17 0.00 1.37E-5 1.44E-4 3.49E-3 energy reprinary contracts | 2.89 0.00 2.89 29.40 0.00 29.40 0.13 5.52E-4 5.78E-3 1.79E+0 le prima seources energy e | B1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 | B2 0.50 0.00 0.50 6.55 0.00 6.55 0.00 6.55 0.00 6.21 2.13E-3 8.49E-1 7 excluded raw manon ren | 0.00 0.00 0.00 0.12 0.00 0.12 0.00 7.66E-7 8.02E-6 4.73E-4 ing reneviterials; F letwable paterials; I | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | C3/1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 mary en otal use energy re Total us F = Use | 0.07 0.00 0.07 0.44 0.00 9.03E-6 9.46E-5 9.58E-2 ergy resources se of nor | 0.14 0.00 0.14 2.87 0.00 2.87 0.00 2.29E-3 5.48E-3 1.06E-1 ources uswable prinused as an renewa | 0.30 0.00 0.30 5.84 0.00 5.84 0.00 1.66E-4 1.72E-3 2.91E-1 sed as r mary en raw ma ble prim | 0.00 0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 aw mate ergy resterials; Farry ener | -0.62 0.00 -0.62 -3.73 0.00 -3.73 0.00 -7.62E-5 -7.98E-4 -8.08E-1 -rials; PE ources; IPENRM = | -1.45 0.00 -1.45 -36.30 0.00 -36.30 0.00 4.20E-4 4.40E-3 -1.89E+0 RM = Us PENRE: = Use of urces; SM | -3.84 -3.84 -96.30 0.00 -96.30 0.00 -3.07E-2 -3.22E-1 -3.57E+0 se of se Use of non |
| Per Per Pen | E M T RE RM RT F P P P P P P P P P P P P P P P P P P | Unit [MJ] | A1-A3 15.30 0.00 15.30 229.65 53.35 283.00 1.52 5.48E-3 1 5.74E-2 1 1.47E+1 8 Use of normary even be proprimary even be proprim | 0.09 0.00 0.09 2.17 0.00 2.17 0.00 1.37E-5 1.44E-4 3.49E-3 enewab nergy re orimary cenergy re orimary cenergy re | 2.89 0.00 2.89 29.40 0.00 29.40 0.13 5.52E-4 5.78E-3 1.79E+0 le prima esources energy e esources = Use of | B1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0. | 0.50 0.00 0.50 6.55 0.00 6.55 0.00 2.03E-4 2.13E-3 8.49E-1 r exclud raw manon ren raw mable seco | 0.00 0.00 0.00 0.12 0.00 0.12 0.00 7.66E-7 8.02E-6 4.73E-4 ing renerterials; Fuewable paterials; Indery fu | C3 0.00 0. | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | 0.07 0.00 0.07 0.44 0.00 0.44 0.00 9.03E-6 9.58E-2 ergy res of reneves | 0.14 0.00 0.14 2.87 0.00 2.87 0.00 2.29E-3 5.48E-3 1.06E-1 ources usable pri used as a renewable | 0.30 0.00 0.30 5.84 0.00 5.84 0.00 1.66E-4 1.72E-3 2.91E-1 sed as r mary en raw ma ble prim | 0.00 0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 aw mate ergy resterials; Farry ener | -0.62 0.00 -0.62 -3.73 0.00 -3.73 0.00 -7.62E-5 -7.98E-4 -8.08E-1 -rials; PE ources; IPENRM = | -1.45 0.00 -1.45 -36.30 0.00 -36.30 0.00 4.20E-4 4.40E-3 -1.89E+0 RM = Us PENRE: = Use of urces; SM | -3.84 -3.84 -96.30 0.00 -96.30 0.00 -3.07E-2 -3.22E-1 -3.57E+0 se of se Use of non |
| Per Per Pen | E MM T T REE MM T T T T T T T T T T T T T T T T T | Multi [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] | A1-A3 15.30 0.00 15.30 229.65 53.35 283.00 1.52 5.48E-3 1 5.74E-2 1 1.47E+1 8 Use of normary even be proprimary even be proprim | 0.09 0.00 0.09 2.17 0.00 2.17 0.00 1.37E-5 1.44E-4 3.49E-3 enewab nergy re orimary cenergy re orimary cenergy re | 2.89 0.00 2.89 29.40 0.00 29.40 0.13 5.52E-4 5.78E-3 1.79E+0 le prima esources energy e esources = Use of | B1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0. | 0.50 0.00 0.50 6.55 0.00 6.55 0.00 2.03E-4 2.13E-3 8.49E-1 r exclud raw manon ren raw mable seco | 0.00 0.00 0.00 0.12 0.00 0.12 0.00 7.66E-7 8.02E-6 4.73E-4 ing renerterials; Fuewable paterials; Indery fu | C3 0.00 0. | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | 0.07 0.00 0.07 0.44 0.00 0.44 0.00 9.03E-6 9.58E-2 ergy res of reneves | 0.14 0.00 0.14 2.87 0.00 2.87 0.00 2.29E-3 5.48E-3 1.06E-1 ources usable pri used as a renewable | 0.30 0.00 0.30 5.84 0.00 5.84 0.00 1.66E-4 1.72E-3 2.91E-1 sed as r mary en raw ma ble prim | 0.00 0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 aw mate ergy resterials; Farry ener | -0.62 0.00 -0.62 -3.73 0.00 -3.73 0.00 -7.62E-5 -7.98E-4 -8.08E-1 -rials; PE ources; IPENRM = | -1.45 0.00 -1.45 -36.30 0.00 -36.30 0.00 4.20E-4 4.40E-3 -1.89E+0 RM = Us PENRE: = Use of urces; SM | -3.84 0.00 -3.84 -96.30 0.00 -96.30 0.00 -3.07E-2 -3.22E-1 -3.57E+0 se of se Use of non |
| Perame PER PERI PENF PENF PENF SM RSF NRS FW Caption | E M T T T RE E MM T T T T T T T T T T T T T T T T T | Unit [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ | A1-A3 15.30 0.00 15.30 229.65 53.35 283.00 1.52 5.48E-3 1.47E+1 Use of reprimary equals primary equals primary equals primary equals and a second and a | 0.09 0.00 0.00 0.00 2.17 0.00 2.17 0.00 1.37E-5 1.44E-4 3.49E-3 enewab nergy reprint of the property of the proper | 2.89 0.00 2.89 0.00 2.89 2.940 0.00 29.40 0.13 5.52E-4 5.78E-3 1.79E+0 else primales sources energy else sources else use of | 0.00 | 0.50 0.00 0.50 0.50 6.55 0.00 6.55 0.00 2.03E-4 2.13E-3 8.49E-1 7 excludiraw manon ren raw maole seco | 0.00 0.00 0.00 0.12 0.00 0.12 0.00 7.66E-7 8.02E-6 4.73E-4 ing renewable paterials; Indiany full | C3 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 | C3/1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 | C3/2 0.07 0.00 0.07 0.44 0.00 0.44 0.00 9.03E-6 9.46E-5 9.58E-2 ergy ressources see of nor of non r | C4 0.14 0.00 0.14 2.87 0.00 2.87 0.00 2.29E-3 5.48E-3 1.06E-1 ources used as a renewalenewable C4 | C4/1 0.30 0.00 0.30 5.84 0.00 5.84 0.00 1.66E-4 1.72E-3 2.91E-1 sed as r mary en raw ma ble prim e second | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | -0.62 -0.00 -0.62 -3.73 0.00 -3.73 0.00 -7.62E-5 -7.98E-4 -8.08E-1 rials; PEources; I PENRM = rgy resou s; FW = | -1.45 0.00 -1.45 -36.30 0.00 -36.30 0.00 -4.20E-4 -4.40E-3 -1.89E+0 RM = Us PENRE : = Use of rurces; SN Use of ru | -3.84 0.00 -3.84 -96.30 0.00 -96.30 0.00 -3.07E-2 -3.27E-1 -3.57E+0 se of = Use of non M = Use net fresh |
| Perame PERI PENI PENI PENI PENI PENI SM RSF NRS FW Caption RESU 1 m² 1 Parame HWI NHW | E M T T T T T T T T T T T T T T T T T T | Unit [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ | A1-A3 15.30 0.00 15.30 229.65 53.35 283.00 1.52 5.74E-2 1.47E+1 8 Use of romary evenue wable perimary evenue wable perimary expenses of the control of the | 0.09 0.00 0.00 0.09 2.17 0.00 2.17 0.00 1.37E-5 1.44E-4 3.49E-3 energy real; RSF | 2.89 0.00 2.89 0.00 2.9.40 0.00 29.40 0.13 5.52E-4 5.78E-3 1.79E+0 le primal sources energy e esources = Use of the sources of | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | 0.50 0.00 0.50 0.50 0.50 0.00 6.55 0.00 2.03E-4 2.13E-3 3.49E-1 raw manon ren raw manon raw manon raw manon ren raw manon raw manon r | 0.00 0.00 0.00 0.12 0.00 0.12 0.00 7.66E-7 8.02E-6 4.73E-4 indary further interials; product for the company further interials; andary further interials; and inte | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | C3/1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 | C3/2 0.07 0.00 0.07 0.44 0.00 0.44 0.00 9.03E-6 9.58E-2 ergy res of renew sources se of nor of renew sources C3/2 0.00E+0 1.00E-1 | 0.14 0.00 0.14 2.87 0.00 2.29E-3 5.48E-3 1.06E-1 ources uswable pri used as a renewale enewable C4 0.00E+0 2.86E+0 | C4/1 0.30 0.00 0.30 5.84 0.00 1.66E-4 1.72E-3 2.91E-1 sed as r mary en raw ma ble prime e second | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | -0.62 -0.00 -0.62 -3.73 -0.00 -3.73 -0.00 -7.62E-5 -7.98E-4 -8.08E-1 -rials; PE ources; I PENRM = gy resous; FW = | -1.45 -0.00 -1.45 -36.30 -0.00 -36.30 -0.00 -4.20E4 -4.40E-3 -1.89E+0 -1.89E of n D/1 0.00E+0 -1.98E+0 | -3.84 -3.84 -96.30 -0.00 -96.30 -9.00 -3.07E-2 -3.22E-1 -3.57E+0 se of = Use of non M = Use et fresh |
| Parame PERI PERI PENE PENE PENE SM RSF NRS FW Caption RESU 1 m² 1 Parame HWI NHW RWI | E MM T T T T T T T T T T T T T T T T T T | Unit [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ | A1-A3 15.30 0.00 15.30 0.00 15.30 229.65 53.35 283.00 1.52 5.48E-3 15.74E-2 14.7E+1 Use of romary even be primary even be pri | 0.09 0.00 0.09 0.00 0.09 2.17 0.00 2.17 0.00 1.37E-5 1.44E-4 3.49E-3 energy real; RSF A — Ol A4 0.00E+0 7.74E-3 3.02E-6 | 2.89 0.00 2.89 0.00 2.9.40 0.00 29.40 0.13 5.52E-4 5.78E-3 1.79E+0 le prima esources energy e esources = Use of | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | 0.50 0.00 0.50 0.50 0.50 0.50 6.55 0.00 2.03E-4 2.13E-3 8.49E-1 raw manon ren raw manon raw ma | 0.00 0.00 0.00 0.12 0.00 0.12 0.00 7.66E-7 8.02E-6 4.73E-4 ing renewable aterials; andary full D WA C2 0.00E+0 4.31E-4 1.68E-7 | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | C3/1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 | C3/2 0.07 0.00 0.07 0.44 0.00 0.44 0.00 9.03E-6 9.46E-5 9.58E-2 ergy resources se of nor of renevisources se of nor of non r C3/2 0.00E+0 1.00E-1 6.50E-5 | 0.14 0.00 0.14 2.87 0.00 2.87 0.00 2.29E-3 5.48E-3 1.06E-1 owned be pri used as an renewal enewable C4 0.00E+0 2.86E+0 5.26E-5 | C4/1 0.30 0.00 0.30 5.84 0.00 1.66E-4 1.72E-3 2.91E-1 sed as r mary en raw mar yen raw mar yen raw mar yen raw mary en raw mary e | 0.00 0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 0.00E+0 aw mate ergy resterials; F tarials; F tarialy ener dary fuel | -0.62 -0.00 -0.62 -3.73 0.00 -3.73 0.00 -7.62E-5 -7.98E-4 -8.08E-1 rials; PE ources; I PE PSY resoo s; FW = | -1.45 0.00 -1.45 -36.30 0.00 -36.30 0.00 -36.30 -36.30 -36.30 -36.30 -36.30 Use of n | -3.84 0.00 -3.84 -96.30 0.00 -96.30 0.00 -3.07E-2 -3.22E-1 -3.57E+0 se of = Use of non VI = Use et fresh D/2 0.00E+0 -5.50E+1 -2.23E-3 |
| Parame PERI PERI PENI PENI PENI PENI SM PENI SM FW Caption RESU 1 m² 1 Parame HWI NHWI RWI CRU | E STATE STAT | Unit [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ | A1-A3 15.30 0.00 15.30 229.65 53.35 283.00 1.52 5.48E-3 1.47E+1 Use of rorimary e ewable primary erry material HE LC/ing A1-A3 4.34E-6 0.00 | 0.09 0.00 0.09 2.17 0.00 2 | 2.89 0.00 2.89 2.940 0.00 29.40 0.13 5.52E-4 5.78E-3 1.79E+0 lle primal | B1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0. | 0.50 0.00 0.50 6.55 0.00 6.55 0.00 6.55 0.00 2.13E-3 3.49E-1 excludiraw manon ren a raw manon ren a raw manon ren 5 raw manon ren 6 raw manon re | 0.000 m² floor C2 0.00 0.00 0.00 0.12 0.00 0.12 0.00 7.66E-7 8.02E-6 4.73E-4 ing reneraterials; Flewable paterials; indary further | C3 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 | C3/1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 Total use F = Use T ATEG C3/1 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 | C3/2 0.07 0.00 0.07 0.44 0.00 9.03E-6 9.46E-5 9.58E-2 ergy res of reneviseources se of nor of non r | 0.14 0.00 0.14 0.287 0.00 2.87 0.00 2.29E-3 5.48E-3 1.06E-1 ources uswable prinused as a renewale enewable C4 0.00E+0 2.86E+0 5.26E-5 0.00 | C4/1 0.30 0.00 0.30 5.84 0.00 1.66E-4 1.72E-3 2.91E-1 sed as r mary en raw ma ble prime e second C4/1 0.00E+0 1.30E+0 1.81E-4 0.00 | 0.00 0.00 0.00 0.00 0.00 0.00 0.00E+0 0.00E+0 aw mate lergy resiterials; Parary ener dary fuel | -0.62 -0.00 -0.62 -3.73 0.00 -3.73 0.00 -7.62E-5 -7.98E-4 -8.08E-1 rials; PE ources; I PENRM = 9 gy resous; FW = | -1.45 0.00 -1.45 -36.30 0.00 -36.30 0.00 -36.30 -0.00 -4.20E-4 -4.40E-3 -1.89E+0 RM = Us PENRE: = Use of n D/1 0.00E+0 -1.98E-40 -1.28E-3 0.00 | -3.84 -0.00 -3.84 -96.30 0.00 -96.30 0.00 -3.07E-2 -3.22E-1 -3.57E+0 se of = Use of non vi = Use let fresh -5.50E+1 -2.23E-3 0.00 |
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| Perame PERI PENI PENI PENI PENI PENI PENI SM RSF NRS FW Caption Caption HWI NHW RWI CRU MIFF MEF EEE | E M T T RE RE REPORT RE | Unit [MJ] PERE = ewable percent of the condard of the c | A1-A3 15.30 0.00 15.30 0.00 15.30 229.65 53.35 283.00 1.52 5.48E-3 1.47E+1 8 Use of rimary e ewable primary e ewable primary en a comparable primary | A4 0.09 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | A5 2.89 0.00 2.89 0.00 2.89 0.00 29.40 0.13 5.52E-4 5.78E-3 1.79E+0 le primal sources energy e esources = Use of 1 A5 3.81E-7 1.92E+0 9.06E-4 0.00 0.09 0.00 0.30 | B1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0. | B2 0.50 0.00 0.50 0.00 0.50 0.00 6.55 0.00 2.03E-4 2.13E-3 8.49E-1 7 exclud raw manon ren raw mable seco VS AN B2 0.00E+0 6.20E-1 3.95E-4 0.00 0.00 0.00 | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | C3/1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0 | C3/2 0.07 0.00 0.07 0.44 0.00 0.44 0.00 9.03E-6 9.58E-2 ergy res of reneves of reneves of reneves of nor of non relation of non rela | C4 0.14 0.00 0.14 2.87 0.00 2.87 0.00 2.29E-3 5.48E-3 1.06E-1 0.00rces uswable pri used as a renewable 0.00E-0 2.86E+0 5.26E-5 0.00 0.00 0.00 1.58 | C4/1 0.30 0.00 0.30 5.84 0.00 5.84 0.00 1.66E-4 1.72E-3 2.91E-1 sed as r mary en raw ma ble prime e second | 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0 | -0.62 -0.00 -0.62 -3.73 -0.00 -3.73 -3.73 -7.62E-5 -7.98E-4 -8.08E-1 -rials; PE ources; I PENRM = gy resot s; FW = | -1.45 -0.00 -1.45 -36.30 -0.00 -36.30 -0.00 -36.30 -1.89E+0 -1.89E+0 -1.89E of n -1.89E+0 -1.89E+0 -1.98E+0 | -3.84 -0.00 -3.84 -96.30 -0.00 -96.30 -0.00 -3.07E-2 -3.27E-1 -3.57E+0 |
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The declared values in module B2 have to be multiplied with the assumed service time (in years) of the floor covering in the building considered.

thermal energy



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