**ENVIRONMENTAL PRODUCT DECLARATION**
as per ISO 14025 and EN 15804

<table>
<thead>
<tr>
<th>Owner of the Declaration</th>
<th>egetaepper a/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programme holder</td>
<td>Institut Bauen und Umwelt e.V. (IBU)</td>
</tr>
<tr>
<td>Publisher</td>
<td>Institut Bauen und Umwelt e.V. (IBU)</td>
</tr>
<tr>
<td>Declaration number</td>
<td>EPD-EGE-20150018-CBD1-EN</td>
</tr>
<tr>
<td>Issue date</td>
<td>08.07.2015</td>
</tr>
<tr>
<td>Valid to</td>
<td>07.07.2020</td>
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</table>

**Tufted Loop Pile Ecotrust**
*Tufted carpet tiles,*
*pile material 400-500 g/m² made of polyamide 6,*
*Ecotrust 350 - felt backing made of recycled material*

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

**Programme holder**

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

**Declaration number**

EPD-EGE-20150018-CBD1-EN

**This Declaration is based on the Product Category Rules:**

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

**Issue date**

08.07.2015

**Valid to**

07.07.2020

**Owner of the Declaration**

egetaepper a/s
Industrivej Nord 25
7400 Herning
Denmark

**Declared product / Declared unit**

1 m² tufted carpet tiles with a pile material made of 400-500 g/m² PA 6 and an Ecotrust 350 felt backing

**Scope:**

The declaration applies to a group of similar products with a pile material of 400-500 g/m².

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

The carpet is produced in the ege® manufacturing site Herning, Denmark.

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

**Product**

**Product description**

Tufted loop pile carpet tiles having a pile material of 100% recycled polyamide 6 and an Ecotrust 350 - felt backing made of 100% recycled polyester.

The injection printing system allows the creation of various designs.

The declaration applies to a group of products with a total pile material weight of 400-500 g/m².

The calculations refer to the average pile material weight of 450 g/m².

The recycled content out of total weight amount to 40 %.

**Application**

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

**Technical Data**

of the average product according to EN 1307

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Form</td>
<td>Tiles</td>
<td>-</td>
</tr>
<tr>
<td>Type of manufacture</td>
<td>Tufted loop pile carpet</td>
<td>-</td>
</tr>
<tr>
<td>Yarn type</td>
<td>100% recycled PA 6</td>
<td>-</td>
</tr>
<tr>
<td>Secondary backing</td>
<td>felt backing made of 100% recycled PES</td>
<td>-</td>
</tr>
<tr>
<td>Total pile weight</td>
<td>400-500 g/m²</td>
<td></td>
</tr>
<tr>
<td>Total carpet weight</td>
<td>up to 2350 g/m²</td>
<td></td>
</tr>
</tbody>
</table>

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 manufacturer's technical information section (www.egecarpets.com)
### Base materials / Ancillary materials

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyamide 6</td>
<td>19.6</td>
<td>%</td>
</tr>
<tr>
<td>Polyester</td>
<td>20.4</td>
<td>%</td>
</tr>
<tr>
<td>Limestone</td>
<td>21.1</td>
<td>%</td>
</tr>
<tr>
<td>Aluminiumhydroxide</td>
<td>19.3</td>
<td>%</td>
</tr>
<tr>
<td>SBR-latex</td>
<td>18.8</td>
<td>%</td>
</tr>
<tr>
<td>Additives</td>
<td>0.8</td>
<td>%</td>
</tr>
</tbody>
</table>

### 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 to cleaning and maintenance instructions. A minimum service life of 10 years can be assumed, technical service life can be considerably longer.

### LCA: Calculation rules

#### Declared Unit

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declared unit</td>
<td>1</td>
<td>m²</td>
</tr>
</tbody>
</table>
| Conversion factor to 1 kg
(average product)     | 0.43  | m²/kg|
| Mass reference (average product) | 2.3  | kg/m²|

#### System boundary

**Type of EPD:** Cradle to grave

**System boundaries of 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 disposal 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 factory 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 disposal 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.

**B1 Use:**
Indoor emissions during the use stage. After the first year no product related 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 considered.

**B3 - B7:**
The modules are not relevant and therefore not declared.

**C1 De-construction:**
The floorcovering is de-constructed manually and no additional environmental impact is caused.

**C2 Transport:**
Transport of the carpet waste to a landfill, to the municipal waste incineration plant (MWI) or to the waste collection facility for recycling.

**C3 Waste processing:**
C3-1, C3-2: Landfill disposal and waste incineration need no waste processing.
C3-3: Collection of the carpet waste, waste processing (granulating).

**C4 Disposal**
C4-1, C4-2: Impact from landfill disposal or from waste incineration (credits leave the system boundaries),
C4-3: The pre-processed carpet waste leaves the system and needs no disposal.

**D Recycling potential**
D-1, D-2: Energy credits from landfill disposal and from waste incineration (processing with < 60% efficiency),
D-3: Transport from the reprocessing plant to the cement plant, substitution of material and fuel input in the cement kiln (energetic and substance related 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 refers to the declared modules and is 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)

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Litres of fuel (truck, EURO 0-5 mix)</td>
<td>0.0079</td>
<td>l/100km</td>
</tr>
<tr>
<td>Transport distance</td>
<td>700</td>
<td>km</td>
</tr>
<tr>
<td>Capacity utilisation (including empty runs)</td>
<td>85</td>
<td>%</td>
</tr>
<tr>
<td>Gross density of products transported</td>
<td>315</td>
<td>kg/m³</td>
</tr>
</tbody>
</table>

Installation in the building (A5)

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auxiliary (fixing agent)</td>
<td>0.15</td>
<td>kg</td>
</tr>
<tr>
<td>Material loss</td>
<td>0.07</td>
<td>kg</td>
</tr>
</tbody>
</table>

Cardboard packaging waste leaves the system for recycling. Installation waste is considered to be incinerated in a municipal waste incineration plant.

Maintenance (B2)

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance cycle (wet cleaning)</td>
<td>1.5</td>
<td>1/year</td>
</tr>
<tr>
<td>Maintenance cycle (vacuum cleaning)</td>
<td>208</td>
<td>1/year</td>
</tr>
<tr>
<td>Water consumption (wet cleaning)</td>
<td>0.004</td>
<td>m³</td>
</tr>
<tr>
<td>Cleaning agent (wet cleaning)</td>
<td>0.09</td>
<td>kg</td>
</tr>
<tr>
<td>Electricity consumption</td>
<td>0.314</td>
<td>kWh</td>
</tr>
</tbody>
</table>

Further information on cleaning and maintenance see [www.egecarpets.com](http://www.egecarpets.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 1: 100% landfill
Scenario 2: 100% municipal waste incineration (MWI)
Scenario 3: 100% recycling in the cement industry

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

\[
\text{EOL-impact} = x\% \text{ impact (Scenario 1)} + y\% \text{ impact (Scenario 2)} + z\% \text{ impact (Scenario 3)}
\]

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collected as mixed construction waste (scenario 1 and 2)</td>
<td>2.3</td>
<td>kg</td>
</tr>
<tr>
<td>Collected separately (scenario 3)</td>
<td>2.3</td>
<td>kg</td>
</tr>
<tr>
<td>Landfilling (scenario 1)</td>
<td>2.3</td>
<td>kg</td>
</tr>
<tr>
<td>Energy recovery (scenario 2)</td>
<td>2.3</td>
<td>kg</td>
</tr>
<tr>
<td>Energy recovery (scenario 3)</td>
<td>1.4</td>
<td>kg</td>
</tr>
<tr>
<td>Recycling (scenario 3)</td>
<td>0.9</td>
<td>kg</td>
</tr>
</tbody>
</table>

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 3)**

The organic material of the carpet is used as secondary fuel in a cement kiln. It mainly substitutes for lignite (64.2%), hard coal (25.4%) and petrol coke (10.4%). The inorganic material is substantially integrated in the cement clinker and substitutes for original material input.
LCA: Results

Information on un-declared modules:
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 transportation for scenarios 1, 2 and 3.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED)
Modules B3 - B7 are not relevant during the service life of the carpet and are therefore not declared.

LCA: Results

### RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: 1 m² floorcovering

#### Modules B1 - B7

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>A1-A3</th>
<th>A4</th>
<th>A5</th>
<th>B1</th>
<th>B2</th>
<th>C1</th>
<th>C2</th>
<th>C3/2</th>
<th>C3/3</th>
<th>C3/4</th>
<th>C4/1</th>
<th>C4/2</th>
<th>C4/3</th>
<th>D1/1</th>
<th>D2/1</th>
<th>D3/1</th>
</tr>
</thead>
<tbody>
<tr>
<td>GWP</td>
<td>[kg CO₂-Eq]</td>
<td>8.00</td>
<td>0.10</td>
<td>0.43</td>
<td>0.00</td>
<td>0.35</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.02</td>
<td>2.12</td>
<td>3.52</td>
<td>0.00</td>
<td>0.00</td>
<td>-0.09</td>
<td>-1.49</td>
<td>-0.24</td>
</tr>
<tr>
<td>ODP</td>
<td>[kg SO₃-Eq]</td>
<td>5.00E-3</td>
<td>1.34E-10</td>
<td>9.86E-9</td>
<td>2.00E+0</td>
<td>0.00E+0</td>
<td>0.00E+0</td>
<td>1.12E-11</td>
<td>1.22E-10</td>
<td>1.22E-10</td>
<td>1.22E-10</td>
<td>1.22E-10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AP</td>
<td>[mg PO₄-Eq]</td>
<td>0.47E-3</td>
<td>1.14E-10</td>
<td>9.07E-9</td>
<td>2.12E-4</td>
<td>0.00E+0</td>
<td>0.00E+0</td>
<td>1.22E-4</td>
<td>5.00E-9</td>
<td>4.28E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
</tr>
<tr>
<td>EP</td>
<td>[kg C]-[kg O]-[kg N]</td>
<td>2.00E-3</td>
<td>1.16E-10</td>
<td>9.07E-9</td>
<td>2.00E+0</td>
<td>0.00E+0</td>
<td>0.00E+0</td>
<td>1.22E+0</td>
<td>4.28E-9</td>
<td>2.00E+0</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
</tr>
<tr>
<td>POCPP</td>
<td>[kg Ehren Eq]</td>
<td>0.00E+0</td>
<td>0.00E+0</td>
<td>0.00E+0</td>
<td>0.00E+0</td>
<td>0.00E+0</td>
<td>0.00E+0</td>
<td>0.00E+0</td>
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<td>0.00E+0</td>
<td>0.00E+0</td>
<td>0.00E+0</td>
<td>0.00E+0</td>
<td>0.00E+0</td>
</tr>
<tr>
<td>ADPE</td>
<td>[kg Sb Eq]</td>
<td>2.38E-4</td>
<td>1.98E-10</td>
<td>9.07E-9</td>
<td>2.00E+0</td>
<td>0.00E+0</td>
<td>0.00E+0</td>
<td>1.22E+0</td>
<td>2.00E-9</td>
<td>6.42E-9</td>
<td>2.00E+0</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
</tr>
<tr>
<td>ADPF</td>
<td>[MJ]</td>
<td>1.20E+0</td>
<td>1.16E-10</td>
<td>9.07E-9</td>
<td>2.00E+0</td>
<td>0.00E+0</td>
<td>0.00E+0</td>
<td>1.22E+0</td>
<td>2.00E-9</td>
<td>6.42E-9</td>
<td>2.00E+0</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
<td>2.00E-9</td>
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<td>Caption</td>
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</tbody>
</table>

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.
References

Institut Bauen und Umwelt
Institut Bauen und Umwelt e.V., Königswinter (pub.): Generation of Environmental Product Declarations (EPDs);

General principles
for the EPD range of Institut Bauen und Umwelt e.V. (IBU), 2013/04
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www.bau-umwelt.de

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

EN 15804
EN 15804:2012-04+A1 2013: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products

PCR Part B
Institut Bauen und Umwelt e.V., Berlin (pub.): 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, V1.6, July 2014
www.bau-umwelt.de

EN 1307
DIN EN 1307: 2014-07: Textile floor coverings - Classification

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

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

EN 13501-1:
DIN EN 13501-1:2010-01: Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests

VDZ e.V.:
Umweltdaten der deutschen Zementindustrie 2013