



Environmental Product Declaration

according to ISO 14025



Loose-laid carpet tiles

- tufted surface pile 100% PA6.6
- fleece-covered bitumen backing
- flame-proofed on the basis of aluminium hydroxide

Gemeinschaft umweltfreundlicher Teppichboden e.V.

Declaration number
EPD-GUT-2009411-E

Institut Bauen und Umwelt e.V.
www.bau-umwelt.com



Institut Bauen
und Umwelt e.V.



Summary Environmental Product Declaration

| | | |
|--|---|---|
| <p>Institut Bauen und Umwelt e.V. www.bau-umwelt.com</p> | | <p style="text-align: center;">Program operator</p> |
| <p>Gemeinschaft umweltfreundlicher Teppichboden (GUT) e.V. Schönebergstr. 2; 52068 Aachen; mail@gut-ev.de www.gut-ev.org</p> | | <p style="text-align: center;">Owner of the declaration</p> |
| <p>EPD-GUT-2009411-E</p> | | <p style="text-align: center;">Declaration Number</p> |
| <p>Loose-laid carpet tiles having a tufted surface pile made of 100 % polyamide 6.6 and a fleece-covered bitumen backing and flame-protected on the basis of aluminium hydroxide</p> <p>This declaration is an Environmental Product Declaration according to /ISO 14025/ and describes the environmental performance of the floor coverings indicated herein. It is designed to foster the development of ecological and healthy building. In this validated declaration, all relevant environmental data are disclosed.</p> | | <p style="text-align: center;">Declared building product</p> |
| <p>This validated declaration authorises the use of the label of Institut Bauen und Umwelt. It is valid for a period of three years from the date of issue exclusively for the product group indicated and only in conjunction with a valid PRODIS licence. The contents and validity of the licence may be checked online via www.pro-dis.info. The owner of the declaration shall be liable for the underlying information and verifications.</p> | | <p style="text-align: center;">Validity</p> |
| <p>The declaration is complete and furnishes details of:</p> <ul style="list-style-type: none"> - the product definition and relevant building-physics-related information - the raw materials and origin of the raw materials - the descriptions of the product manufacture - the information on product processing - the information on the use stage, extraordinary influences and end-of-life stage - the results of the life cycle assessment | | <p style="text-align: center;">Contents of the declaration</p> |
| <p>08. January 2009</p> | | <p style="text-align: center;">Date of issue</p> |
| | | <p style="text-align: center;">Signatures</p> |
| <p>Prof. Dr.-Ing. Horst J. Bossenmayer (President of Institut Bauen und Umwelt)</p> | | |
| <p>This declaration and the rules on which it is based have been examined in accordance with ISO 14025 /1/ by the independent Committee of Experts (CoE).</p> | | <p style="text-align: center;">Examination of the declaration</p> |
| | | <p style="text-align: center;">Signatures</p> |
| <p>Prof. Dr.-Ing. Hans-Wolf Reinhardt (Chairman of the CoE)</p> | <p>Dr. Eva Schmincke (CoE-appointed Examiner)</p> | |



Summary Environmental Product Declaration

| <p>The declaration covers a group of textile floor coverings having the following features: Kind of manufacture: Tufted Surface pile material: 100 % polyamide 6.6 (PA6.6) - fibres, Back coating: Bitumen finish fleece-covered and flame-protected on the basis of aluminium hydroxide</p> <p>Subject to the weight of the surface pile, the textile floor covering is classified in accordance with luxury classes LC1 to LC5 (Table 1) defined in EN 1307.</p> | | | | | | | Product description | | | | | | | | | | | | | | | | |
|---|-------------------------------|----------------------------------|----------------------|----------------------|----------------------|----------------------|--|-----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---|-------|-------|-------|-------|--------|-----------------------------|--|--|--|--|
| <p>Table 1: Luxury classes</p> <table border="1"> <thead> <tr> <th>Luxury class</th> <th>LC 1</th> <th>LC 2</th> <th>LC 3</th> <th>LC 4</th> <th>LC 5</th> </tr> </thead> <tbody> <tr> <td>Weight of surface pile [g/m²]</td> <td>< 400</td> <td>≥ 400</td> <td>≥ 600</td> <td>≥ 800</td> <td>≥ 1000</td> </tr> </tbody> </table> | | | | | | | Luxury class | LC 1 | LC 2 | LC 3 | LC 4 | LC 5 | Weight of surface pile [g/m ²] | < 400 | ≥ 400 | ≥ 600 | ≥ 800 | ≥ 1000 | Range of application | | | | |
| Luxury class | LC 1 | LC 2 | LC 3 | LC 4 | LC 5 | | | | | | | | | | | | | | | | | | |
| Weight of surface pile [g/m ²] | < 400 | ≥ 400 | ≥ 600 | ≥ 800 | ≥ 1000 | | | | | | | | | | | | | | | | | | |
| <p>As indicated on the PRODIS label, the textile floor covering may be used either in the residential or in the commercial area. Suitability for additional uses is also indicated on the PRODIS label.</p> | | | | | | | Scope of the life cycle assessment | | | | | | | | | | | | | | | | |
| <p>The life cycle assessment was carried out according to /ISO 14040/ seq. in line with the requirements of the Product Declaration Rules (PCR) for "floor coverings". The data reference consisted of specific data provided by GUT member companies and of data from the "GaBi 4" database. The life cycle assessment covers</p> <ul style="list-style-type: none"> - Part 1: Production stage including the supply chains (from cradle to factory gate) - Part 2: Delivery/installation, use - Part 3: End-of-life stage | | | | | | | Result of the life cycle assessment | | | | | | | | | | | | | | | | |
| <p>The initial value for the relevant columns of the table of results is the luxury class of the textile floor covering (Table 1), which is indicated on the PRODIS label.</p> | | | | | | | Result of the life cycle assessment | | | | | | | | | | | | | | | | |
| Table 2: Results of the LCA for | | Part 1 – Production stage | | | | | Part 2 For the values of the delivery/installation and use, see the long version; likewise for the underlying conditions | Part 3 – End-of-life stage | | | | | | | | | | | | | | | |
| Categories evaluated | Unit per m² | LC1 | LC2 | LC3 | LC4 | LC5 | | LC1 | LC2 | LC3 | LC4 | LC5 | | | | | | | | | | | |
| Primary energy not renewable | [MJ] | 165.9 | 213.1 | 260.3 | 307.5 | 354.7 | | -51.4 | -54.6 | -57.7 | -60.8 | -63.9 | | | | | | | | | | | |
| Primary energy renewable | [MJ] | 2.4 | 3.2 | 4.0 | 4.8 | 5.7 | | -0.7 | -0.8 | -0.8 | -0.9 | -0.9 | | | | | | | | | | | |
| Greenhouse potential -(GWP 100) | [kg CO ₂ -eqv.] | 7.5 | 10.3 | 13.1 | 15.9 | 18.8 | | 4.3 | 4.6 | 4.8 | 5.1 | 5.4 | | | | | | | | | | | |
| Ozone degradation potential (ODP) | [kg R11-eqv.] | 8.0·10 ⁻⁷ | 8.9·10 ⁻⁷ | 9.9·10 ⁻⁷ | 1.1·10 ⁻⁶ | 1.2·10 ⁻⁶ | | -1.4·10 ⁻⁷ | -1.5·10 ⁻⁷ | -1.6·10 ⁻⁷ | -1.7·10 ⁻⁷ | -1.8·10 ⁻⁷ | | | | | | | | | | | |
| Acidification potential (AP) | [kg SO ₂ -eqv.] | 2.9·10 ⁻² | 3.9·10 ⁻² | 4.9·10 ⁻² | 6.0·10 ⁻² | 7.0·10 ⁻² | | 4,8·10 ⁻³ | 5.1·10 ⁻³ | 5.4·10 ⁻³ | 5.7·10 ⁻³ | 5.9·10 ⁻³ | | | | | | | | | | | |
| Nutrication (NP) | [kg PO ₄ -eqv.] | 7.2·10 ⁻³ | 9.8·10 ⁻³ | 1.2·10 ⁻² | 1.5·10 ⁻² | 1.8·10 ⁻² | | 1.0·10 ⁻³ | 1.1·10 ⁻³ | 1.1·10 ⁻³ | 1.2·10 ⁻³ | 1.3·10 ⁻³ | | | | | | | | | | | |
| Photochemical oxidant formation (POCP) | [kg ethene-eqv.] | 3.3·10 ⁻³ | 4.1·10 ⁻³ | 4.9·10 ⁻³ | 5.7·10 ⁻³ | 6.5·10 ⁻³ | | 1.0·10 ⁻⁴ | 1.1·10 ⁻⁴ | 1.2·10 ⁻⁴ | 1.2·10 ⁻⁴ | 1.3·10 ⁻⁴ | | | | | | | | | | | |
| <p>The results are based on the life cycle assessment for textile floor coverings conducted by Gemeinschaft umweltfreundlicher Teppichboden (GUT) e.V., Aachen, in cooperation with: Textile and Flooring Institut GmbH, Aachen, critically reviewed by: Prof. Dr. Walter Klöpffer, Int. Journal of Life Cycle Assessment, LCA CONSULT & REVIEW, Frankfurt a.M., Dipl. Natw. ETH Roland Hirschier, Head of unit LCA, EMPA, St Gallen</p> | | | | | | | Verifications and tests | | | | | | | | | | | | | | | | |
| <p>In addition, the following tests are represented in the environmental declaration:</p> <p>VOC emissions GUT product testing criteria based on AgBB scheme for the evaluation of emissions from building products,</p> <p>Tests for contaminants GUT product testing criteria</p> | | | | | | | Verifications and tests | | | | | | | | | | | | | | | | |



Institut Bauen
und Umwelt e.V.

Publisher:

Institut Bauen und Umwelt e.V.

Rheinufer 108

D-53639 Königswinter

Tel.: +49 2223 296679-0

Fax: +49 2223 296679-1

Email: info@bau-umwelt.com

Internet: www.bau-umwelt.com

Layout:

Gemeinschaft umweltfreundlicher Teppichboden (GUT) e.V.

Picture credits:

Gemeinschaft umweltfreundlicher Teppichboden (GUT) e.V.

Schönebergstr. 2;

D-52068 Aachen;

Tel: +49 241 968 431

Fax: +49 241 968 434 00

Email: mail@gut-ev.de

Internet: www.gut-ev.org

In a case of doubt is the original EPD „EPD-GUT-2009411-D“ applicable.