burmatex®

# Environmental Product Declaration

EPD®

In accordance with ISO 14025 and EN 15804 for:

# osaka

**Modular Carpet Tile**
**Pile weight:** 795g/m$^2$
**Pile material:** 100% Solution Dyed Nylon (Polyamide-PA)
**Backing:** Accummen™ minimum 75% recycled content
from

burmatex®

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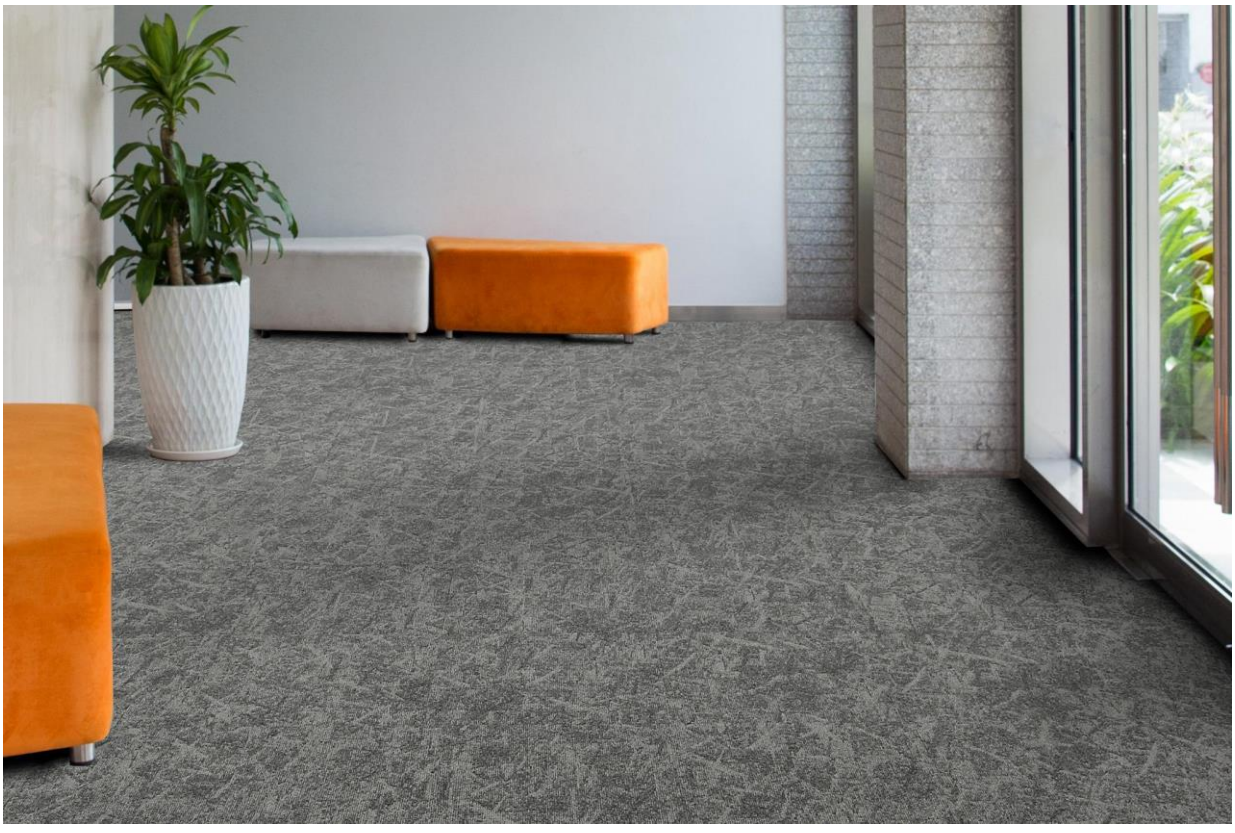
|---|---|
| Programme: | The International EPD® System, www.environdec.com |
| Programme operator: | EPD International AB |
| EPD registration number: | S-P-01831 |
| Publication date: | 2020-02-03 |
| Valid until: | 2025-02-02 |



# Programme information

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|---|---|
| **Programme:** | The International EPD® System<br><br>EPD International AB<br>Box 210 60<br>SE-100 31 Stockholm<br>Sweden<br><br>www.environdec.com<br>info@environdec.com |

| |
|---|
| Product category rules (PCR):<br>PCR 2012:01. Construction Products and Construction Services. Version 2.3<br>PCR 2012:01-SUB-PCR-F. Resilient, Textile and Laminate Floor Coverings (EN 16810:2017). Date 2018-11-22<br>UN CPC Code: 27230 |
| PCR review was conducted by: Martin Erlandsson, IVL Swedish Environmental Research Institute, martin.erlandsson@ivl.se |
| Independent third-party verification of the declaration and data, according to ISO 14025:2006:<br><br>☐ EPD process certification ☒ EPD verification |
| Third party verifier: Dr. Hudai Kara, Metsims Sustainability Consulting [www.metsims.com]<br><br>Approved by: The International EPD® System |
| Procedure for follow-up of data during EPD validity involves third party verifier:<br><br>☒ Yes ☐ No |

The EPD owner has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804.

## LCA information

Functional unit / declared unit: 1 $m^2$
Reference service life: one year
Time representativeness: Production year January to December 2018
Database(s) and LCA software used: Ecoinvent 3.0, SimaPro 9.0
Description of system boundaries: Cradle to Grave (modules A1-A3, A4, A5, B2, B3, C2, C4, EN15804)

Excluded lifecycle stages: B4-B7 (in service), C1, C3 (demolition and waste processing), D (recycling and re-use).
More information:
https://www.burmatex.co.uk/contract-carpets/tivoli-carpet-tiles2
LCA practitioner: Callum Hill of Renuables Ltd, www.renuables.co.uk.

## Company information

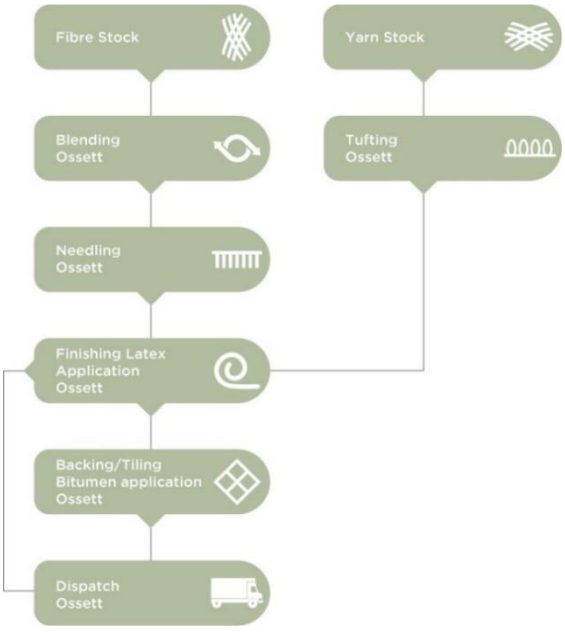
Owner of the EPD: Burmatex Ltd, Victoria Mills, The Green, Ossett, WF5 0AN
Burmatex is a company within AIREA plc (www.aireaplc.co.uk).

## Product information

Product name: Osaka
Product identification: Multilevel Loop
Type of Manufacture: Tufted Tiles
Yarn type: 100% Solution Dyed Nylon (Polyamide-PA)
Product description:
Tile Dimensions: 50cmx50cm
Pile Yarn Weight: 795g/$m^2$ +/-10%
Total Weight: 4200g/$m^2$ +/-10%
Pile Height: 5.0mm +/-10%

Wear Classification: BS EN 1307 HeavyCommercial Use Class 33

Total Thickness: 7.5mm +/-10%
Tufts per $m^2$ / Pile Density: 226,771/$m^2$ +/-10%
Secondary Backing: Accummen™, min. 75% recycled content
UN CPC code: 27230 - Carpets and other textile flooring, tufted.
Geographical scope: Global




- All **burmatex®** carpet/carpet tile/carpet plank ranges are made at its single UK manufacturing site in Ossett
- Wherever possible, raw materials including yarn/fibre are sourced locally i.e. within 20 miles
- Over 75% of **burmatex®** Accummen™ backing comes from recycled materials

# Content declaration

The product contains no substances of very high concern which require registration.
[https://echa.europa.eu/candidate-list-table]

Product contents: nylon yarn, polyester fibre, glass fibre, latex, bitumen, limestone.

## Packaging

Distribution packaging: Cardboard and polyethylene – included in the LCA.

## Recycled material

Recycled limestone used in the backing is from pre-consumer waste.

## Modules declared in the EPD

| A1-A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X | X | X | MND | X | MND | MND | MND | MND | MND | MND | X | MND | X | MND |

## LCA: Calculation Rules

This assessment covers the life cycle stages for production, installation, maintenance and disposal. The reference service life used for the analysis is one year. Therefore, the declared results for module B2 have to be multiplied by the assumed service life (in years) of the floor covering in the building under consideration. Modules B1, B3, B4, B5, B6, B7 are not relevant during the service life of the carpet and are therefore not included. Module C1 (deconstruction) causes no additional impact (manual removal at end of life) and is therefore not declared. No additional waste processing is assumed and module C3 is not considered. Module D is not considered in this EPD, a variety of different scenarios are possible. Cut off criteria were based upon input flows being less than 1% of the total individually, subject to the sum of all flows being less than 5% of the total, subject to verification that the impacts associated with such flows were not of a magnitude to affect the reported data significantly (less than 5% in total). Not included in the analysis is any losses due to broken pallets (pallet network used), any possible recycling of packaging from deliveries is not included and it is all treated as waste. Recycled limestone is treated as quarried limestone. Allocation was on a mass basis.

The following assumptions have been made for the declared modules:

### A1 – A3 Production

Energy Supply and production of the basic material, processing of secondary material, auxilary material, transport of the material to the manufacturing site, emmissions, waste water treatment, packaging material and waste processing up to the landfill disposal of residual waste.

### A4 Transport

Average of 150 km, using 80% load factor, pallet network.

### A5 Construction installation

Assume 3% wastage, with waste going to landfill. Cardboard packaging to recycling and polyethylene wrapping to landfill. Use of tackifier – solvent-free acrylic polymer emulsion usage of 90 ml per $m^2$, assuming 30% solids.

### B2 Maintenance

Vacuum cleaning daily – assume 250 days per year = 0.377 kWh/$m^2$/y. Deep cleaning every six months, this would require 0.12 kg non-ionic surfactant cleaning agent and 0.005 $m^3$ of water per $m^2$ per year.

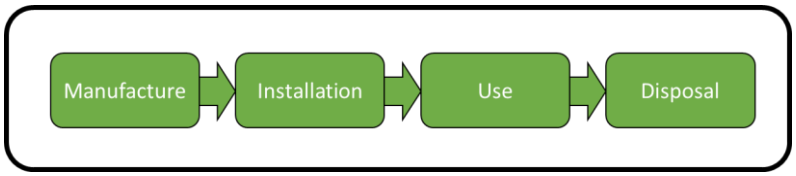
### C2 Transport

Assume 50 km to waste disposal facility.

### C4 Disposal

Landfill disposal was assumed. Other end of life scenarios are possible, such as incineration with energy recovery, or use as a fuel source for cement production.

This scenario is currently in use and is representative for one of the most likely scenario alternatives.



# Environmental performance

## Potential environmental impact

| PARAMETER | UNIT | A1-A3 | A4 | A5 | B2 | C2 | C4 |
|---|---|---|---|---|---|---|---|
| Global warming potential (GWP)L | Kg $CO_2$ eq. | 1.08E+01 | 5.44E-02 | 1.31E-01 | 5.45E-01 | 1.81E-02 | 3.52E-02 |
| Depletion potential of the stratospheric ozone layer (ODP) | kg CFC 11 eq. | 5.80E-07 | 1.09E-08 | 1.51E-08 | 2.34E-08 | 3.63E-09 | 1.02E-08 |
| Acidification potential (AP) | kg $SO_2$ eq. | 4.21E-02 | 1.42E-04 | 5.87E-04 | 2.10E-03 | 4.75E-05 | 2.28E-04 |
| Eutrophication potential (EP) | kg $PO_4^{3-}$ eq. | 1.08E-02 | 3.14E-05 | 2.22E-04 | 1.35E-03 | 1.05E-05 | 5.11E-05 |
| Formation potential of tropospheric ozone (POCP) | kg $C_2H_4$ eq. | 1.97E-03 | 8.41E-06 | 7.28E-05 | 6.07E-04 | 2.80E-06 | 1.06E-05 |
| Abiotic depletion potential – Elements | kg Sb eq. | 7.52E-06 | 1.01E-07 | 8.45E-07 | 1.98E-06 | 3.36E-08 | 5.88E-08 |
| Abiotic depletion potential – Fossil resources | MJ, net calorific value | 1.97E+02 | 8.87E-01 | 2.97E+00 | 7.66E+00 | 2.96E-01 | 8.61E-01 |
| Water scarcity potential | $m^3$ eq. | 9.90E+00 | 5.33E-03 | 1.14E-01 | 5.03E-01 | 1.78E-03 | 3.20E-02 |

## Use of resources

| PARAMETER | | UNIT | A1-A3 | A4 | A5 | B2 | C2 | C4 |
|---|---|---|---|---|---|---|---|---|
| Primary energy resources – Renewable | Use as energy carrier | MJ | 9.11E+00 | 9.86E-03 | 1.50E-01 | 3.74E+00 | 3.29E-03 | 9.01E-03 |
| | Used as raw materials | MJ | 1.95E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | TOTAL | MJ | 1.11E+00 | 9.86E-03 | 1.50E-01 | 3.74E+00 | 3.29E-03 | 9.01E-03 |
| Primary energy resources – Non-renewable | Use as energy carrier | MJ | 2.30E+02 | 9.59E-01 | 3.48E+00 | 9.50E+00 | 3.20E-01 | 9.29E-01 |
| | Used as raw materials | MJ | 7.29E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| | TOTAL | MJ | 3.03E+02 | 9.59E-01 | 3.48E+00 | 9.50E+00 | 3.20E-01 | 9.29E-01 |
| Secondary material | | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Renewable secondary fuels | | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Non-renewable secondary fuels | | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Net use of fresh water | | $m^3$ | 4.29E-04 | 0.00E+00 | 0.00E+00 | 5.00E-03 | 0.00E+00 | 0.00E+00 |

## Waste production and output flows

### Waste production

| PARAMETER | UNIT | A1-A3 | A4 | A5 | B2 | C2 | C4 |
|---|---|---|---|---|---|---|---|
| Hazardous waste disposed | kg | 6.03E-04 | 4.96E-07 | 2.02E-06 | 5.78E-06 | 1.65E-07 | 5.82E-07 |
| Non-hazardous waste disposed | kg | 8.72E-01 | 7.69E-02 | 2.69E-01 | 4.73E-02 | 2.56E-02 | 4.20E+00 |
| Radioactive waste disposed | kg | 3.06E-04 | 6.15E-06 | 8.66E-06 | 1.82E-05 | 2.05E-06 | 5.77E-06 |

### Output flows

| PARAMETER | UNIT | A1-A3 | A4 | A5 | B2 | C2 | C4 |
|---|---|---|---|---|---|---|---|
| Components for reuse | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Material for recycling | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Materials for energy recovery | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy, electricity | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy, thermal | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

# Additional information

1) EPD based upon an underlying LCA of the Ossett manufacturing facility, with operational data obtained for the period 1st January 2018 to 31st December 2018. Ecoinvent 3 (2019), with Simpapro 9.0.0.30 (2019) was used for the background data. All relevant inputs and outputs have been considered in the LCA. The neglected input flows do not exceed 1% (mass or energy) of the total individually, or 5% in total. An electricity grid mix based upon the Haven Power annual fuel mix disclosure statement was used. For characterization factors: CML baseline for the GWP, ODP, AP, EP, POCP, ADP-elements, ADP-fossil resources, CED for Primary energy resources renewable used as energy carrier and primary energy resources non-renewable used as an energy carrier, AWARE for water scarcity potential. Lower heating value was used for primary energy resources renewable/non-renewable used as raw materials. This data was obtained from the Phyllis 2 database.

2) To achieve optimal whole Life Costings, products must be correctly installed and maintained in accordance with manufacturers instructions:
https://www.burmatex.co.uk/technical/caring-for-your-carpet/

3) For End of Life Take back options please contact Burmatex on 01924 262525 or www.burmatex.co.uk/contact-us/ for more information

# References

General Programme Instructions of the International EPD® System. Version 3.0.
PCR 2012:01. Construction Products and Construction Services. Version 2.3
PCR 2012:01-SUB-PCR-F. Resilient, Textile and Laminate Floor Coverings (EN 16810:2017). Date 2018-11-22
ISO 14040: 2006 Environmental management - Life cycle assessment – Principles and Framework
ISO 14044: 2006 Environmental management - Life cycle assessment - Requirements and guidelines
ISO 14025: 2005 Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures
EN 15804: 2012+A1:2013 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
EN 15942:2011 Sustainability of construction works – Environmental product declarations – Communication format business-to-business
EN 16810:2017 Resilient, textile and laminate floor coverings. Environmental product declarations. Product category rules
CEN /TR 15941:2010 Sustainability of construction works – Environmental product declarations – Methodology for the selection and use of generic data
Construction Products Regulation, Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011

EPD®

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