Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

Burmatex®
MANUFACTURERS OF CREATIVE FLOORING

arctic® carpet tiles & planks

Thrive® matter recycled yarn BioBase™
recycled backing
Made in the UK

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	S-P-07852
Publication date:	2023-01-20
Valid until:	2028-01-19

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

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General information

Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	info@environdec.com

Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): PCR 2019:14-c-PCR-004 Resilient, textile and laminate floor coverings (EN 16810) (2019-12-20) UN CPC code(s): 272 Carpets and other textile floor coverings
PCR review was conducted by: The Technical Committee of the International EPD® System. See https://www.environdec.com/about-us/the-international-epd-system-about-the-system for a list of members. The review panel may be contacted via the Secretariat www.environdec.com/contact.
Life Cycle Assessment (LCA)
LCA accountability: Renuables Ltd [www.renuables.co.uk]
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ EPD verification by individual verifier, Dr. Hudai Kara, Metsims Sustainability Consulting [www.metsims.com] Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

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Company information

Owner of the EPD: Burmatex Limited
Contact: info@burmatex.co.uk
Description of the organisation: burmatex® is one of the UK's leading designers and manufacturers of contract carpet tiles and planks.
Name and location of production site(s): Victoria Mills, The Green, Ossett, WF5 0AN, UK. All burmatex® carpet/carpet tile/carpet plank ranges are made at its single UK manufacturing site in Ossett.

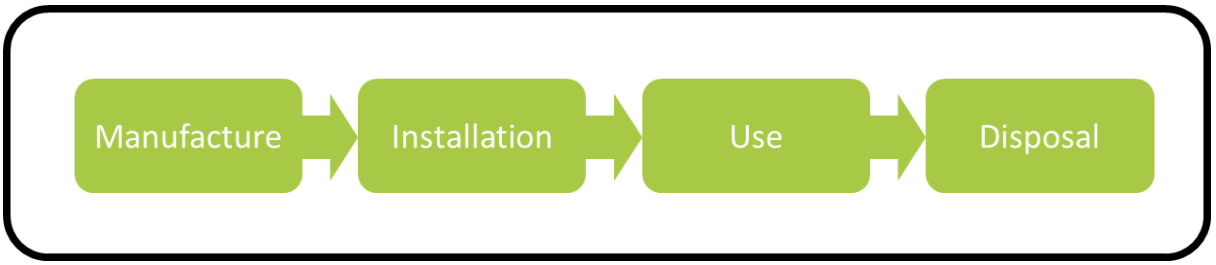
Product information

Product name: arctic
Product identification: Multi Level Loop
Product description: 50cm x 50cm tiles and 25cm x 100cm planks on a BioBase™ backing, using carbon negative yarn
UN CPC code: 272 Carpets and other textile floor coverings
Geographical scope: Global

LCA information

Functional unit / declared unit: One square metre of floor covering
Reference service life: 15 years
Time representativeness: 2021
Database(s) and LCA software used: Ecoinvent 3.7 with Simapro 9.1.0.7.
Description of system boundaries: Cradle to grave, plus module D (A + B + C + D).

System diagram:



Detail of the manufacturing stage (modules A1-A3)

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More information:

This assessment covers the life cycle stages for production, installation, maintenance and disposal.

EPD is based upon an underlying LCA of the Ossett manufacturing facility, with operational data obtained for the period 1st January 2020 to 31st December 2020. 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 for 2020 was used (year-to-year variation in primary energy mix is less than 1%). For characterization factors see: CML baseline for the GWP, AP, ADP-elements, ADP-fossil resources, ReCiPe for POCP and EP, CED for Primary energy resources renewable/non-renewable used as energy carrier, AWARE for water scarcity potential. Lower heating value was used for all calculations involving primary energy resources including PERM, PENRM and recovered energy from wastes and end of life (see https://www.environdec.com/resources/indicators for more information). 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. The GHG emissions as caclulated in the EPD are offset in a scheme as detailed in the Further Environmental Information section. The emissions associated with the nylon fibres are also offset by the manufacturer (Universal Fibers). The offsetting of emissions is not included in the EPD or underlying LCA, in accordance with the requirements of EN 15804:2012+A2:2019/AC:2021.

Modules A1-A5: 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. Transport to installation site assume average of 150 km, using 80% load factor, pallet network. 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.

Modules B1-B7: Vacuum cleaning – assume 250 days per year = 0.377 kWh/m^2/y. Deep cleaning every six months, requiring 0.12 kg non-ionic surfactant cleaning agent and 0.005 m^3 of water per m^2 per year. No repair, replacement, or refurbishment assumed during 15-year reference service life. Modules B1, B3, B4, B5, B6, B7 are not relevant during the service life of the carpet and are therefore not included although they are declared.

Modules C1-C4: Manual removal assumed. Disposal to landfill with transport distance of 50 km. Landfill disposal is considered worst case. Other end of life scenarios are possible, such as incineration with energy recovery, or use as a fuel source for cement production. It is assumed that 10% by weight of the material is sent to landfill with the remainder leaving the system boundary.

Module D: It is assumed that 90% of the carpet material is recovered at end of life and incinerated with energy recovery of the calorific content, substituting for the burning of fossil methane in a small heating plant.

Where modules have zero entries, they are not reported in the tables in order to make the information more legible. This scenario is currently in use and is representative for one of the most likely scenario alternatives.

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Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results)

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO
Specific data used	>90%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	N/A					-	-	-	-	-	-	-	-	-	-	-	N/A
Variation – sites	Single site					-	-	-	-	-	-	-	-	-	-	-	-

Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Nylon yarn	0.65	100	0
Latex	0.45	0	0
Glass fibre	0.03	0	0
Polypropylene	0.05	0	0
PET	0.12	0	0
Limestone	2.15	0	0
Bitumen	0.61	0	0
TOTAL	**4.06**	**16**	**0**
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**	**Weight biogenic carbon, kg C**
Polyethylene	0.004	0.1	0
Cardboard	0.120	3.0	0.005
TOTAL	**0.124**	**3.1**	**0.005**

Dangerous substances from the candidate list of SVHC for Authorisation	EC No.	CAS No.	Weight-% per functional or declared unit
N/A	N/A	N/A	N/A

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Environmental Information

This EPD contains information about environmental impact, use of resources and waste production in the form of quantitative indicators. The following abbreviations and have been used in the tables which quantify environmental performance:

Indicator	Abbreviation
Global warming potential (Fossil, biogenic, land use and transformation (LUT))	GWP
Depletion potential of the stratospheric ozone layer	ODP
Acidification potential	AP
Eutrophication potential	EP
Formation potential of tropospheric ozone	POCP
Abiotic depletion potential – Elements	ADPE
Abiotic depletion potential – Fossil resources	ADPF
Water scarcity potential	WSP
Primary energy resources – Renewable (use as energy carrier)	PERE
Primary energy resources – Renewable (use raw materials)	PERM
Primary energy resources – Renewable (total)	PERT
Primary energy resources – Non-renewable (use as energy carrier)	PENRE
Primary energy resources – Non-renewable (use raw materials)	PENRM
Primary energy resources – Non-renewable (total)	PENRT
Secondary material	SM
Renewable secondary fuels	RSF
Non-renewable secondary fuels	NRSF
Net use of fresh water	NUFW
Hazardous waste disposed	HWD
Non-hazardous waste disposed	NHWD
Radioactive waste disposed	RWD
Components for re-use	CRU
Material for recycling	MFR
Materials for energy recovery	MFER
Exported energy, electricity	EEE
Exported energy, thermal	EET
Particulate Matter emissions	PM
Ionizing radiation, human health	IRP
Eco-toxicity - freshwater	ETP-fw
Human toxicity, cancer effect	HTP-c
Human toxicity, non-cancer effects	HTP-nc
Land use related impacts/Soil quality	SQP

All environmental data is given for the functional unit which is 1 m^2 of floor covering with packaging.

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Environmental Information for 1m² of flooring product

Potential environmental impact– mandatory indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	B2	C2	C4	D
GWP-fossil	kg CO_2 eq.	3.18E+00	5.06E-02	1.53E-01	8.16E+00	1.69E-02	3.47E-03	-7.05E+00
GWP-biogenic	kg CO_2 eq.	2.54E-03	9.92E-06	1.84E-04	1.49E-02	3.31E-06	1.51E-06	-1.42E-03
GWP-luluc	kg CO_2 eq.	3.48E-02	1.47E-05	1.75E-04	1.21E+00	4.89E-06	1.94E-06	-2.01E-03
GWP-total	kg CO_2 eq.	3.22E+00	5.06E-02	1.54E-01	9.39E+00	1.69E-02	3.47E-03	-7.05E+00
ODP	kg CFC 11 eq.	5.60E-07	1.05E-08	1.50E-08	4.14E-07	3.50E-09	9.38E-10	-8.11E-07
AP	mol H^+ eq.	1.53E-02	1.57E-04	9.00E-04	4.64E-02	5.24E-05	2.91E-05	-1.40E-02
EP-freshwater	kg P eq.	2.64E-03	2.57E-05	2.24E-04	1.37E-02	8.56E-06	4.91E-06	-2.02E-03
EP-marine	kg N eq.	3.04E-03	3.30E-05	1.35E-04	1.38E-02	1.10E-05	9.64E-06	-1.50E-03
EP-terrestrial	mol N eq.	2.71E-02	3.59E-04	1.40E-03	8.19E-02	1.20E-04	1.05E-04	-1.54E-02
POCP	kg NMVOC eq.	9.84E-03	1.48E-04	5.43E-04	2.90E-02	4.94E-05	3.06E-05	-8.42E-03
ADP-minerals&metals*	kg Sb eq.	6.04E-06	9.36E-08	8.24E-07	2.19E-05	3.12E-08	5.48E-09	-2.52E-06
ADP-fossil*	MJ	7.86E+01	8.20E-01	3.11E+00	1.21E+02	2.73E-01	7.87E-02	-9.83E+01
WDP*	m^3	1.15E+00	4.29E-03	1.18E-01	2.02E+00	1.43E-03	2.99E-03	-1.67E-01

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

***Note:** All modules, are declared, but where there are nil entries, they are not included in the EPD to make the data more legible.*

Potential environmental impact – additional mandatory and voluntary indicators

Indicator	Unit	A1-A3	A4	A5	B2	C2	C4	D
PM	Disease incidence	7.89E-08	4.50E-09	7.71E-09	3.20E-07	1.50E-09	5.12E-10	-5.69E-08
IRP	kBq U235 eq.	1.89E-01	5.33E-03	1.31E-02	1.75E+00	1.78E-03	3.90E-04	-1.35E-01
ETP-fw	CTUe	2.98E+00	5.15E-02	8.79E-02	1.63E+01	1.72E-02	4.67E-03	-1.47E-01
HTP-c	CTUh	5.60E-11	1.87E-12	8.59E-12	6.60E-10	6.23E-13	3.30E-13	-5.95E-10
HTP-nc	CTUh	7.35E-11	1.43E-11	1.42E-11	1.11E-09	4.76E-12	1.84E-12	-4.11E-11
SQP	dimensionless	7.43E+00	9.79E-01	7.00E-01	7.76E+01	3.26E-01	1.46E-01	-4.50E+00
GWP-GHG	kgCO_2e	3.22E+00	5.06E-02	1.54E-01	9.39E+00	1.69E-02	3.47E-03	-7.05E+00

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Use of resources

Indicator	Unit	A1-A3	A4	A5	B2	C2	C4	D
PERE	MJ	1.07E+01	1.37E-02	1.35E-01	1.25E+01	4.58E-03	2.02E-03	-1.03E+00
PERM	MJ	1.95E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-3.31E+03
PERT	MJ	1.26E+01	1.37E-02	1.35E-01	1.25E+01	4.58E-03	2.02E-03	-3.31E+03
PENRE	MJ	9.00E+01	9.03E-01	3.55E+00	1.56E+02	3.01E-01	8.52E-02	-1.11E+02
PENRM	MJ	3.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-3.31E+03
PENRT	MJ	1.25E+02	9.03E-01	3.55E+00	1.56E+02	3.01E-01	8.52E-02	-3.42E+03
SM	kg	5.83E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	4.39E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Waste production and output flows

Waste production

Indicator	Unit	A1-A3	A4	A5	B2	C2	C4	D
HWD	kg	2.03E-04	3.98E-07	2.36E-06	5.88E-05	1.33E-07	5.50E-08	-1.07E-04
NHWD	kg	6.79E-01	7.33E-02	2.66E-01	5.46E-01	2.44E-02	4.03E-01	-6.21E-02
RWD	kg	8.75E-04	6.11E-06	7.78E-06	4.95E-04	2.04E-06	5.31E-07	-4.10E-05

Output flows

Indicator	Unit	A1-A3	A4	A5	B2	C2	C4	D
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	3.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E+00
EEE	MJ	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	2.97E+01

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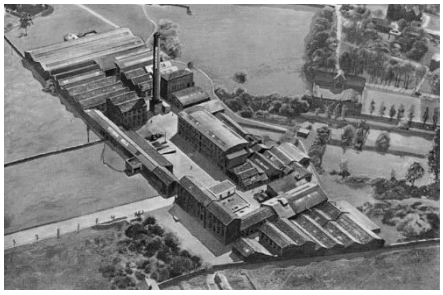
Additional environmental information

eco2matters

Our heritage

Originally established in the UK in 1917 as J&F Burrows in Ossett, UK, at our Victoria Mills site, which has been recycling for over 100 years. We began by recycling wool and cotton textile waste for resale to the textile industry, for use in the manufacturer of clothing.
With the advent of synthetic fibres, we quickly adapted to also recycle synthetic waste, eventually focusing solely on the recycling of nylon and polypropylene.
With the development of a new type of carpet, needlefelt (now called fibre bonded), we saw an opportunity to use this recycled material to produce our own finished products.
In 1967, to signal our entry into this new market, J&F Burrows was renamed **burmatex®.** For over 40 years, the careful selection, reprocessing and recycling of industrial synthetic waste, enabled use it to produce sustainable fibre bonded sheet and carpet tiles.



Today burmatex manufacturers a much broader range of products, including designer loop and low- level loop nylon carpet tiles. Still, the fundamental principles of recycling and reuse remain at the core of our operation, and form the foundations of the eco2matters sustainability ecosystem.

"Our single site operation in Ossett, UK, has been recycling for over 100 years"

Details of carbon-offsetting scheme:

Thrive Matter yarn supplied by Universal Fibers is stated to be carbon negative. Universal fibres have conducted a Product Life Cycle Assessment to determine the Thrive Matter Carbon Footprint and produced their own EPD. They have then offset 125% (-0.1 kg) of the resultant CO_2 eq. to compensate for more than the yarn Carbon Footprint.

The arctic range is net carbon neutral. This has been achieved, in partnership with Universal Fibres, by the offsetting of the 3.22 kg CO_2 eq. highlighted in this EPD.

The off-setting is arranged through the Carbon Fund, an internationally recognised offsetting organisation. Their website [https://carbonfund.org] provides details of projects in which they are involved.

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

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References

General Programme Instructions of the International EPD® System. Version 4.0.

PCR 2019:14, version 1.2 Construction products.

PCR 2019:14-c-PCR-004 Resilient, textile and laminate floor coverings (EN 16810) (2019-12-20)

EN 15804:2012+A2:2019/AC:2021 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.

ISO 14025:2006 Environmental labels and declarations — Type III environmental declarations - Principles and procedures.

ISO 21930:2017 Sustainability in buildings and civil engineering works — Core rules for environmental product declarations of construction products and services.

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

Thrive® matter Nylon 6 fiber from Universal Fibers. Environmental Product Declaration UL 101.1 (2022).